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ABSTRACT

The third part of a three-part final report on a series of studies that examined the nature, characteristics, and effects of verbal feedback to student reading miscues, this volume contains articles and unpublished manuscripts that have been written as part of the project. The 12 articles cover the following topics: (1) the place of oral reading in a develomental reading program; (2) the history of oral reading instruction; (3) teacher beliefs, attitudes, and preferred practices in oral reading instruction; (4) the relationship of theoretical orientation to reading and teacher verbal feedback during reading instruction; (5) teacher verbal feedback to the reading miscues of high and low achieving students; (6) students' beliefs and attitudes about oral reading istruction; (7) providing feedback to reading miscues; (8) characterizing teacher feedback to student miscues during oral reading instruction; (9) training for a feedback to oral reading analysis system; (10) inservice and preservice teacher feedback to student miscues; (11) guided oral reading and miscue focused verbal feedback in second grade classrooms; and (12) the effects of differentiated patterns of verbal feedback to miscues on word identification strategies and success. (JL)

Feedback to Oral Reading Miscues

Part III

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Final Report

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Technical Reports

1. Is There a Legitimate Place for Oral Reading Instruction in a Developmental Reading Program?
2. Oral Reading Instruction: A Century of Controversy (1880-1980)
3. Teacher Beliefs, Attitudes, and Preferred Practices in Oral Reading Instruction
4. A Study of Theoretical Orientation to Reading and Its Relationship to Teacher Verbal Feedback During Reading Instruction
5. Teacher Verbal Feedback to the Reading Miscues of High and Low Achieving Students: A Comparative Analysis
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12. The Effects of Differentiated Patterns of Verbal Feedback to Miscues on Word Identification Strategies and Success

Is There a Legitimate Place for Oral Reading Instruction in a Developmental Reading Program?

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Surely no one will be convinced—nor should they be—by just reading the arguments put forward here, that oral reading instruction should be considered a valuable component in a well-rounded developmental reading program. However, it is hoped that this presentation might be the beginning of a constructive dialogue and renewed research into the merits and characteristics of effective oral reading instruction.

Nila B. Smith (1965) has observed that, prior to 1918, oral reading had an undisputed claim over classroom methods. In the 1920s a radical shift toward instruction in silent reading occurred. Factors influencing this trend included a general emphasis on meaning in all aspects of education, the findings from research which indicated greater speed and superior comprehension for silent reading, and the development of standardized silent reading tests.

Despite these commonly accepted reasons for the demise of oral reading, there is ample evidence to indicate that oral reading practice has persisted to this day as a common element in most primary and remedial reading programs (Austin and Morrison 1963; Howlett and Weintraub

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1979). Further, recent classroom research offers evidence to suggest that the use of oral reading has a positive impact on reading (Anderson and Evertson 1978; Stallings, Needels, and Stayrook 1979).

These facts notwithstanding, most current methods textbooks used in the education of elementary teachers either dismiss and warn against oral reading instruction as misguided and harmful or ignore the topic altogether. One seldom hears a call for an increase in oral reading instruction. More typical are comments like Artley's: "oral reading as an exercise in word pronunciation is one of the most useless instructional practices that a teacher can carry out. It is the perseverance of a practice from the past that has no justification in a modern classroom" (1972, p. 47). The disparity between what teachers are doing and what they are being taught to do must be resolved if teachers and teacher educators are to maintain mutual credibility and respect.

Before the arguments for and against oral reading are considered, three points of clarification are necessary. First, no attempt will be made to defend the *manner* in which oral reading instruction is typically conducted in the classroom. The intent, rather, is to seek out a legitimate place for oral reading. Second, oral reading practice is viewed as only one part—albeit a significant one—in a comprehensive, balanced developmental reading program. Third, the focus will be solely on the topic of oral reading practice (what I will refer to as oral reading instruction), defined as the reading of a text aloud by a student, with the goal of developing decoding skills.

The following are some examples of oral reading instruction in a developmental program: a student reading aloud by himself with occasional monitoring by the teacher; students in a reading group taking turns reading aloud from a basal text; a group of students reading chorally from a text along with a teacher. The following are not examples of oral reading instruction: a teacher listening to a child read with the express purpose of diagnosis (as opposed to instruction); a teacher reading aloud to the class from a library book. These latter activities have their own objectives and applications which are distinct from oral reading instruction but still necessary in a comprehensive developmental program.

Arguments against oral reading instruction

Those who oppose oral reading instruction are far too numerous to mention by name. It is also not possible to trace specific criticisms to specific detractors with any real accuracy. Rather, the three major criticisms which appear most often in the literature will be presented and discussed.

1. When oral reading is stressed in a program, students have insufficient opportunities to read.

Allington's (1977) rhetorical question, "If they don't read much, how they ever gonna get good?" has become something of a rallying cry for those who believe that not nearly enough meaningful reading goes on during reading instruction. The teacher who daily leads groups of students in taking turns at oral reading in some round robin fashion is not being very efficient in giving students opportunities to read. Not only do individual students not read very much under these conditions; there is also some research evidence to suggest that some behaviors associated with "turn waiting" (e.g., inappropriate eye movements) may not lead to the formation of good reading habits (Gilbert 1940).

It is important to note that these criticisms of oral reading relate to the manner in which instruction is typically organized and not necessarily to the value of the task itself. There are contexts for oral reading instruction in which engaged time for students in reading from text is large. As one example, Guszak (1979) reported on a reading program in Weslaco, Texas, where

first-grade students daily read aloud at the same time from the same or even different texts. The teacher's role was to monitor selectively. The achievement data documented outstanding gains for students under these conditions. Support has also been found for the benefits of choral reading, impress reading, echoic reading, and repeated readings on decoding abilities.

2. While the good readers might shine during oral reading, the poor readers are typically inhibited and exposed to embarrassment.

Frank Smith (1971) developed a compelling argument, using signal detection theory, to explain how important it is that children learning to read feel free to take chances and make mistakes. The willingness to take chances is related, on the one hand, to the risks associated with making a mistake (e.g., embarrassment, ridicule) and, on the other hand, to the likelihood of being successful. Round-robin oral reading from text written at a student's frustration level operates in direct violation of these two precepts. But once again, these concerns are related to the way in which oral reading is sometimes carried out and not to the value of the task itself. It would seem advisable during oral reading instruction, especially with poor readers, that the teacher be in a position to control what happens to a student when errors are made. Further, the importance of allowing students to practice from materials which are written *at most* at their instructional level must be emphasized. Only under these conditions is success insured in what is certainly a high-risk situation.

3. Oral reading by students does not lead to good comprehension.

The finding that comprehension is poorer under oral reading conditions when compared with silent reading is well documented. Since the goals of oral reading instruction in the developmental program relate to decoding and not to higher-order comprehension skills, such evidence is interesting but misplaced in arguing against oral reading instruction. Practice in oral reading should be conducted with materials which offer little or no conceptual barriers to understanding (i.e., if the same text were read to the child it would be easily comprehended). Extensive questioning over the content of oral reading materials to develop comprehension while the student reads orally is unnecessary and is more than likely disruptive for the task of learning to decode. This is not to say that comprehension is unimportant. Indeed, it is all-important. For precisely this reason teachers should make sure that materials being read orally are easily understood when the goal is to develop decoding skills. As decoding proficiency grows, the focus can shift to comprehension skills and to a greater use of silent reading and teacher question. It is interesting to note that two of the most respected scholars in the field of reading, William S. Gray and Guy Buswell, supported this notion of a transition from oral to silent reading many years ago. Gray wrote in 1919: "Silent reading exercises can be substituted to advantage for oral reading by the end of third grade, since pupils have reached the point in their development where silent reading is a more economical and rapid process than oral reading" (p. 29).

Buswell, in *The Silent Reading Hour*, stated: "Such an extensive view [i.e., that oral reading be abolished] is entirely unwarranted. Both oral and silent reading have value, but the two processes are not at all the same. It is not the thought of this writer that silent reading should *supplant* oral reading in the primary grades, but rather that it should in an increasing degree supplement oral reading" (Buswell and Wheeler 1923, p. 3).

Arguments for oral reading instruction

Three major points will be made to sup-

port the call for oral reading instruction.

1. The aural feedback loop accompanying a student's own oral rendering of a text is likely to facilitate the development of reading abilities.

Most first-grade teachers can testify to the fact that beginning readers will often read out loud even when directed to read silently. This common practice is not simply an undesirable by-product of how students have been taught. Research and theoretical speculations on the development of inner speech, the expanding social functions accompanying and influencing the acquisition of linguistic forms, and the relationship between language and thought have led many to speculate that the oral rendering of text at early stages is developmental. As such, it contributes to, rather than impedes, growth. Piaget (1959) has categorized children's utterances relative to their function: (1) egocentric, or speech for oneself; and (2) social, or speech to communicate with another. He has demonstrated that the proportion of overt speech (i.e., audible egocentric speech) to total speech gradually decreases as a child grows older. Vygotsky (1962) argues that this egocentric speech does not disappear but simply loses its overt form to become inner speech or speech that is used to facilitate thought. In this regard, children who are confronted with a frustrating task will return to a high proportion of overt egocentric speech. That is, they will begin to talk out loud to themselves while attempting to resolve a difficult problem. Similarly, adults who are presented with a difficult problem-solving task or are reading difficult text material will exhibit a higher incidence and intensity of subvocalization (Luria 1961).

Edfelt (1960) describes the inner speech which accompanies reading as "silent speech." He found that, as readers encounter more and more difficult text, the intensity of silent speech becomes greater. Bringing language to an overt form appears to help solve a difficult language task. To prohibit a child from resorting to this strategy of "languaging" would appear to be counterproductive in the same way that Hardych and Petrinovich (1979) found that efforts to eliminate subvocalization during silent reading had a negative impact on comprehension. The oral reading which accompanies a child's early text experiences is evidence of active processing and will most likely diminish as the need for such overt behavior decreases.

2. Oral reading provides the teacher with an opportunity to employ differential feedback strategies.

The work of Goodman (1967, 1976) and his associates on oral reading performance has advanced considerably our understanding of the reading process. When analyzed qualitatively, a student's oral reading provides the astute observer with a picture of reading development and what can be termed a child's "theory of reading." Harste and Burke (1977) believe that teachers, too, have a theory of reading—or at least a theoretical orientation—which is implicit and expressed in the instructional decisions made daily by a teacher in the classroom. They hypothesize quite logically that a child's theory of reading will evolve toward the one used by the teacher. These two models—the developing one of the child and the proficient one of the teacher—come into contact during interactions accompanying oral reading instruction. A large portion of interactions that do occur during oral reading center on the miscues made by students. Feedback to these miscues can be characterized along three dimensions: (1) selectivity, or which miscues are responded to; (2) timing, or when they are responded to; and (3) form, or how they are responded to (Hoffman 1979). Implicit in this feedback is information for the student about the teacher's model of reading.

More needs to be learned about the most effective use of feedback and how teachers employ these dimensions in prac-

tice. It is hoped that, with the continued development of more sophisticated observation systems for field research (e.g., FORSIAS [Hoffman and Baker 1980]) combined with continued experimental research studies (e.g., Niles, Graham, and Winstead 1976; Jenkins and Larson 1978), more direction can be offered to teachers concerning how they might actually manipulate feedback to encourage growth in reading skills.

3. As a learning task, oral reading lends itself very nicely to effective classroom management.

The effective teacher is a good manager in the classroom. In this regard, Doyle (1979) argues that a teacher's primary responsibility during instruction is to initiate and sustain student cooperation in classroom activities. Embedded within activities are learning tasks. Student involvement in learning tasks is maintained primarily by holding the students accountable for the work that must be done. In silent reading, it is difficult for a teacher to determine how well a student has practiced decoding skills. In oral reading, however, the student's performance is easily observed. As a result, accountability for performance is possible. From a management perspective, then, oral reading gives a teacher an almost ideal setting to monitor learning.

Where do we go from here?

At the 1980 meeting of the American Educational Research Association, Stallings reported that oral reading was an instructional practice commonly relied on by the more effective teachers in secondary remedial reading programs. Chall (1980) commented that these findings related to oral reading were most encouraging and remarked that our negative attitudes toward oral reading are tied to a rather remote period in our history and are probably in need of reexamination. She stated, however, that bringing about a shift in our negative attitudes about oral reading instruction would be extremely difficult. No doubt there will be skeptics to challenge the thought that oral reading instruction has a significant place in a developmental program. Still, the need is clear for systematic research into the effects and potential benefits of various forms for oral reading instruction.

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Oral Reading Instruction: A Century of Controversy (1880-1980)

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Is There a Legitimate Place for Oral Reading Instruction in a Developmental Reading Program?

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Surely no one will be convinced—nor should they be—by just reading the arguments put forward here, that oral reading instruction should be considered a valuable component in a well-rounded developmental reading program. However, it is hoped that this presentation might be the beginning of a constructive dialogue and renewed research into the merits and characteristics of effective oral reading instruction.

Nila B. Smith (1965) has observed that, prior to 1918, oral reading had an undisputed claim over classroom methods. In the 1920s a radical shift toward instruction in silent reading occurred. Factors influencing this trend included a general emphasis on meaning in all aspects of education, the findings from research which indicated greater speed and superior comprehension for silent reading, and the development of standardized silent reading tests.

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Abstract

This review offers a brief history of oral reading instruction in American Schools from 1880 to the present. The purpose of the review is to develop an historical perspective on the source(s) of controversy with respect to the appropriate place of oral reading in instruction. Both classroom and clinical practices which rely on oral reading as an instructional component are described in detail. Major shifts in practice and the factors influencing these shifts are identified. Research studies of the effects of oral reading instruction are reviewed. The authors draw a set of conclusions regarding the current state of affairs in oral reading instruction. This is allowed by a set of recommendations for future research in the area.

Oral Reading Instruction: A Century of Controversy (1880-1980)

There is perhaps no other single activity which has maintained as continuous a role in reading instruction as teacher guided oral reading. Jeanne Chall (1967) has described oral reading as one of the eight "expectables" in the teaching of reading in American schools. The formats for oral reading have changed from time to time, as have concerns for its use, overuse, and abuse. Today, teacher guided oral reading stands as a common and integral part of instruction in regular primary classrooms (Daly and Hoffman, 1982) and clinical/remedial programs (Howlett and Weintraub, 1980). This, despite the fact the practice of oral reading instruction is routinely indicted in methods texts (e.g., Durkin, 1978) and in the professional literature (e.g., Allington, 1982). One thing seems certain, oral reading serves a very real function in instruction or it would have disappeared long ago. That function appears to be rooted deeply in tradition and the belief systems that teachers have developed toward the value of oral reading - a value which is not shared by most teacher educators (Taylor, Pickert and Chase, 1980).

Why is there this apparent disparity between popular theory and popular practice? What are the functions (real and imagined) for oral reading as it is currently used in instruction? How might the discrepancy between theory and practice in oral reading best be resolved?

The search for answers to these questions takes one first back deep into the history of American Reading instruction and from there to a consideration of recent classroom and clinical research into the characteristics and effects of oral reading instruction. In this treatment we will first present for your consideration an historical review of practices and policies which have surrounded oral reading instruction and second, propose some plausable explanations for the controversial situation we find ourselves in today.

The Recitation Lesson and Oral Reading

Up through the colonial and early post-colonial days, the chief emphasis in reading instruction in American Schools was on the recognition of symbols (the ABC's, syllables, and so on). During this early period, only a small amount of attention was given over to the skills of reading orally and/or for thought. Beginning around 1800, and continuing until the last decade of the 1800's an increasing emphasis was placed on oral reading in instruction. The method of oral reading used during this time centered on the recitation lesson drawing out of the Pestalozzian movement in Europe. Raub (1883) provides the following general description of how the student was to be prepared for the recitation lesson:

> "Before the lesson (recitation) it is a good plan for him (the teacher) to read the lesson aloud (to the students) or at least some of the most difficult parts of it, when he assigns it, calling the attention of the pupils to the new or difficult words, explaining literary allusions, referring the pupils to certain biographical or historical works to enable them to

explain such reference as is made to characters in biography or history, so they get the good thought of the author and the aid of the piece. All this will prepare them to study the selection intelligently and with interest."

Newell, in a set of readers published in 1880 offers the following as guidelines for the teacher in conducting the actual recitation portion of the lesson:

"...Ordinarily each pupil will read one paragraph...but occassionally a pupil may be required to read several paragraphs or even the whole lesson...When a paragraph presents some unusual difficulty to a pupil it is usual to require him to read it again and again until the error is corrected. But it sometimes happens that, from want of self control, or from some infirmity of temper, the pupil seems to be unwilling to make the desired correction. Under these conditions, simultaneous reading may produce the desired effect. The pupil may find himself able to do in concert with others what he was unable, or fancied himself unable to do by himself."

Newell went on to state that while reading drills are best managed by concert recitations, this form of practice should not supplant the individual recitation.

There appears to have been very little attention during the period on developing techniques to help the student independently acquire text meaning through silent reading. Hyatt (1943) relates the following anecdotal description of an actual recitation lesson in an elementary school in an Ohio Village in 1897:

"Reading was taught orally. One pupil after another read a paragraph out loud without comment or discussion. If a paragraph were read poorly, someone else was asked to read it. If it did not meet with the teacher's approval, the teacher read it to us...But what we enjoyed most was concert reading. The entire class stood in front of the room and read aloud together. In order to keep together, the length of each pause was determined by counting. A comma required a pause about as long as took to count one; a semicolon: one, two; a colon: one, two, three; a

period: one, two, three, four; and an exclamation point: one, two, three, four."

The story method, elaborated on formally by McMurry (1899) and incorporated later into many instructional programs (e.g., Coe and Christie's Story Hour Readers, 1913) offered a slight variation on the recitation procedure just described. In the story method the teacher told a story or recited a rhyme to the students over and over again until they became familiar with it and in many instances memorized it. This initial step was accompanied or followed by analysis of the story and then finally the recitation of the story itself by the students as a group or individually.

Horace Mann (1891) was an early and vociferous critic of the use of the oral reading recitation lesson during this period. At one point in his career, he attempted to learn:

> "...with some degree of numerical accuracy, how far the reading in our schools is an exercise of the mind in thinking and feeling, and how far is it a barren action of the organs of speech upon the atmosphere."

The information that he secured led him to the conclusion that:

> "...more than eleven-twelfths of all the children in reading classes do not understand the meaning of the words they read; they they do not master the sense of the reading lessons and that the ideas and feelings intended by the audience to be conveyed to, and excited in the reader's mind, still rest in the author's intention, never having reached the place of their destination."

The Roots of Discontent

Although there had been sporadic indictments of oral reading during the early and mid 1800's (e.g. Horace Mann), it wasn't until the period, from 1890 to 1908, and continuing on through the 1920's

that there arose a serious reaction against the exclusive reliance on oral reading methods. Numerous arguments appeared in the professional literature at this time calling to question the value of the oral recitation lesson. Almost, all of the critics of oral reading advocated extensive practice in silent reading as the appropriate alternative. It is difficult to ascertain which of the many arguments against oral reading carried the most weight in bringing about a shift in practice. It appears, though, that there were at least eight factors or areas of concern contributing to the movement away from oral reading toward silent reading.

One force for the movement away from oral reading came from the field of educational philosophy - in particular from the Herbartians. Here there was a general emphasis on meaning and content in all of education and a movement away from elocution and stress on the mechanics as the goals of reading. The Herbartian doctrine was introduced into America at institutes and normal schools, as well as through books on the methods of teaching. The period from 1892 to 1902 is the time during which the Herbartians were most influential (Reisner, 1930). F. W. Parker, perhaps the most influential educational philosopher in America during this period and a supporter of the Herbartian movement, was an outspoken critic of oral reading. "Reading is a mental process," he states. "Oral reading is expression, and comes under the heading of speech" (1884; p. 388).

A second force for change from oral to silent methods came from leaders in the field of educational psychology. Edmund Huey seems to have been crucial in developing arguments against oral reading within this community. Indeed, Horn (1932) points to the year 1908, the year in which Huey's landmark text on reading was first published, as marking the beginning of the actual shift toward silent reading in classrooms. Huey believed that by stressing silent reading in instruction, children would come to think of reading as the "getting or giving of thought" from what is written rather than simply as the naming of certain words.

A third factor operating toward change was tied to the shifting role or function of reading in society. Numerous writers began to point out that silent reading - not oral reading - is of importance in "the affairs of adult life" (Gray, 1917). Prior to this period "reading aloud in the presence of auditors was the first of the fine arts to develop in America's hinterland. It was the chief feature of every social gathering. Elocution or rhetorical reading was universally popular." (Minnich, 1936). S.E. Parker (cited in Wheat, 1923) describes this shift in social needs in the following manner:

> "(1) The social needs of former days required the teaching of expressive oral reading; (2) the social needs of the present require the teaching of effective silent reading.

The Former Need For Expressive Oral Reading	The Present Need For Effective Rapid Silent Reading
1. Reading material was scarce 2. Only a few were able to read 3. Communication was very slow 4. Spoken language was the chief means of communication	1. Reading material is abundant 2. Reading is universal; only a few are unable to read 3. Communication is very rapid 4. Written language is the chief means of communication"

A fourth factor was derived directly from reading research. W. S. Gray (1925) cites the findings from laboratory studies conducted prior to 1910 relating to problems in the psychology and physiology of reading associated with the practice of oral reading (e.g., eye movements and lip movements) as being influential in the change of practice. Subsequent studies reported by Pintner (1913) and Mead (1915) which claimed the superiority of comprehension in silent reading over oral reading rates offered continuing research support for the shift in classroom practice during this period.

A fifth factor was the rapid development of measurement and evaluation techniques during this period. The first silent reading tests which attempted to measure efficiency of reading instruction were devised at about this time (Brown, 1914). In Gray's 1925 review of research in reading, he reported that during 1914 and 1915 two-thirds of the studies reported related to the organization, standardization, and application of reading tests.

> "Through their use it became possible to study under classroom conditions the reading habits, achievements and difficulties of larger groups of children. By the close of 1915 scientists, administrators, and teachers were measuring the results of instruction, in reading, comparing achievements in oral and silent reading, determining the factors which made for rapid progress...and measuring the progress of pupils taught by different methods."

Less than twenty-five years prior to this time, William James (1892) had been able to state that "The teacher's success or failure in teaching reading is based, so far as the public estimate is concerned, upon the oral method" (page 422). This dramatic shift in the methods and focus for assessing reading ability and their rapid adoption by school systems across the country certainly had a major influence on the movement toward silent reading (Smith, 1965).

A sixth factor was the growing emphasis on content in reading. More and more students were completing primary grades and continuing in school through the intermediate levels. At the higher levels, the goal of reading to learn replaced that of learning to read. The content of the readers during this period was moving away, at least at these levels, from moralistic pieces to informational text. The oral recitation methods it was felt were inadequate for developing independent reading habits and were inappropriate for the varying types of materials encountered at these levels (C. T. Gray, 1929).

A seventh factor operating during this period was the beginning of a debate over the merits of intensive versus extensive reading. The tradition in the past had been toward intensive reading with students spending a considerable amount of time under teacher direction

on relatively short pieces of text. The oral reading recitation method lent itself very well to this goal of intensive practice and mastery. Many writers during this period felt the need for students to be more involved in extensive reading (Buswell and Wheeler, 1923). It was argued that silent reading was much better suited to the goal of wide reading. Oral reading recitations were better suited to large group instruction with a single text. Proponents of extensive reading emphasized the need for individualized instruction with the students free to pursue their own reading interests.

The eighth and final factor to consider, an outcome of several of the others, grew out of the findings from a series of systematic school district evaluation studies, beginning after 1910 (e.g., Gray, 1917). Directors of these evaluations were often emerging leaders in the field of reading and were also strong supporters of silent reading. They were outspoken in their criticism of the oral reading emphasis they found in schools.

What Is The Teacher's Role In A Silent Reading Method?

As the shift to silent reading took hold and gained momentum during the early 1900's, there was considerable speculation as to the appropriate role for the teacher in guiding silent reading. The method that began to evolve was closely tied to the growing popularity of the whole word method and a movement toward controlled vocabulary in readers. This focus on words as the significant unit of instruction and the controlling variable in text development gave the teacher something to focus on in preparing students for the silent reading of

contrived text. Level one of the McGuffy readers (1887), the first reading series to give serious attention to vocabulary control, offered this prescriptive advice to the teacher:

> "In this book, all new words in each lesson are given at the head of the lesson. The pupil should be able to identify these words at sight, and to pronounce them correctly before reading aloud the sentences in which they occur..."

The importance of vocabulary introduction and teaching new words before reading was easily carried over to the guiding of silent reading.

The intensive practice notion associated with the oral recitation lesson was abandoned in favor of stress on the efficiency of the first reading as being the important focal point or goal in the reading lesson. The teacher's edition of the New Barnes Readers (1916) offers the following description:

> "In our search for new roads to reading, it is strange that we seldom think of the time that would be saved if the pupils were trained to get the thought from a page at the first rapid, silent reading of it. If we can train a pupil so that at first reading of a lesson he will do it intensively and grasp the thought expressed by the printed page, it will be unnecessary for him to read it again and again, repeating the text, word for word, until the thought is impressed in his mind."

Whereas in oral reading it had been a relatively easy matter for the teacher to monitor pupil performance and hold students accountable for having completed a lesson successfully, such was not the case in silent reading lessons. The teacher using silent reading needed some means to check on whether the child had successfully recognized the words in the text and apprehended the author's message. This was accomplished through questioning over the content and oral rereading.

W.S. Gray (1918) provides the following description of a reading lesson he observed in a St. Louis middle school:

> "The lesson was introduced by (the teacher) asking the name of the story. The pupils then read the first paragraph to themselves. The teacher asked the following questions: What is meant by conquest? What is an event? The paragraph was then read aloud. Three errors were corrected. The pupils then read the second paragraph silently. Several other disconnected questions were asked. The pupils read the second paragraph orally, and were severly criticized by the teacher."

It appears that this practice of using oral reading to check on the accuracy of word perception after silent reading was quite popular. It should be noted that this is a far different practice from that of the oral recitation lesson described earlier. The practices for guiding reading described by Gray above, were not defended nor had they even been advocated in the literature. In fact, there were a number of texts published during this time which advocated different methods of guiding silent reading (e.g., Germaine and Germaine, 1922; Watkins, 1922). The recommended methods for primary levels put forward in books of this type typically consisted of presenting sentences which required action responses on the part of students. There is no evidence that such methods were ever adopted into classroom instruction or commercial materials on a large scale.

When Is The Best Time To Introduce Silent Reading?

In addition to the question of the role of the teacher in guiding silent reading, a second major issue during this period of change was when to introduce silent reading. In reviewing the writings on this question it is fairly clear that the arguments for increased emphasis

on silent reading by the major forces in the field were focused on intermediate and not primary levels. With very few exceptions, the major writers and researchers of this period defended the use of oral reading in primary grades. Judd (1918) stated that oral reading is the natural form of primary reading. Stone (1922) stated that "The great majority of scientific students of the reading problem regard the oral method as the appropriate and indispensable method in the primary reading lesson." He asserted that the development of smooth, fluent oral reading in the primary grades is an important aid in the development of the proper eye movement habits in silent reading. He believed that vocalization is a natural tendency of the beginning reader and cited Freeman (1916) as evidence for the fact that such sub-vocalization has important connections with the apprehension of meaning.

Buswell (1923) stated the following:

> "Such an extensive view (i.e., that oral reading should be abolished) is entirely unwarranted. Both oral and silent reading have values, but the two processes are not at all the same. It is not the thought of this writer that silent reading should supplant oral reading in the primary grades, but rather it should in an increasing degree supplement oral reading." (p. 3).

Despite such arguments to the contrary, it appears that in practice oral reading was being replaced by silent reading in the primary as well as intermediate grades. McGaughly (1924) reported the following results of a survey related to the uses of silent and oral reading in schools:

1. Overall, oral reading was more prevalent than silent reading;
2. Larger cities however, had a greater use of silent reading than oral reading;
3. 6/7 of the larger cities used silent reading in the first grades (only 1/2 of the smaller ones reported this).

The Report of the National Committee on Reading (1925) recommended that "pupils should be taught from the beginning to read both orally and silently, and that as a rule, approximately an equal amount of class time should be devoted to each type of reading in the first grade." Hyatt (1943) reported that her study revealed that oral reading was not being emphasized in many schools after 1925.

These data and the available anecdotal descriptions of classroom practices would seem to suggest, (1) that silent reading was rapidly replacing oral reading as the principal focus for instruction during this period, and (2) that the form of oral reading instruction in use had changed from the recitation lesson format to a means of checking on word perception during silent reading.

A Spirited Reaction

Beginning around 1930 and continuing through the next decade there was a discernible movement in the professional literature for reinstating the role of oral reading in the primary grades. Much of the commentary was focused on the loss of the art of teaching oral reading although it is not evident that "the art" was ever common

practice in classrooms past. Simpson (1929) stated:

> "During the past ten years...the art of oral reading has either been abandoned by the school as unimportant, or else neglected to such an extent that we frequently find the exceedingly wasteful practice of one pupil, say, in a class of twenty, waiting his turn to read aloud, in the meantime 'keeping the place' while his nineteen classmates read" (p. 137).

Simpson called for a return to the practice of the teacher offering a good oral model for the pupils to follow. The teacher's purpose in reading aloud was"...to set up an ideal of reading...(showing that)... oral reading should always be the expression of assimilated thought" (p. 138).

Paul (1932) attributed the poor results of programs which appeared to stress oral reading on: (a) inadequate classroom practices, (b) vague, indefinite objectives, (c) except for securing better mechanics, no knowledge of workable techniques, (d) the entire unsuitability of material used for oral interpretation, and (e) the lack of interest and preparation on the part of teachers. She cited the following as significant roles of oral reading:

1. Developing and testing comprehension
2. Gaining control in the use of language
3. Developing literary appreciation
4. Personality development
5. Cultural growth
6. Socialization (group experience)

Paul advocated oral reading both as a means to an end (efficient silent reading) and an end unto itself (expression).

Moore (1932) presented the following almost philosophical retrospective on the silent/oral debate:

> "Almost all new movements in human progress display to some extent a destructive tendency. They attempt to establish themselves more rapidly and surely by stressing the defects and weaknesses of current beliefs and practice. Quite commonly it is made to appear that there is something essentially antagnostic between the old and the new. This may be true, but it has frequently happened that things of value have been cast out altogether or unduly neglected which should have been interpreted in the light of new discoveries and presented in better form. Even where the advocates of a new movement have no desire to bring about a complete substitution, there is apt to be extreme emphasis on the new theory or discovery while it is getting a foothold...the field of education furnishes many examples of this sort of wasteful confusion. One of the latest is the false antagonism that has grown up in many minds regarding the respective merits of oral and silent reading." (p. 83)

Moore went on to point out the many areas of the curriculum where oral and silent reading could work together in a complementary fashion.

Despite these sometimes impassioned calls for the return of oral reading to primary reading programs, no such movement developed.

The McDade Non-Oral Method

If there was a movement in practice during the 1930's, it was toward the total elimination of oral reading. The principal advocate of this extreme position was McDade in his non-oral method. In this method, all reading was taught silently from the very beginning. He described the approach as being based on two cardinal rules: (1) The positive rule was that there must always be an association of the printed word and its meaning (e.g., every time the child would read 'door', the door itself (or a picture) must be dealt with in some fashion, touched, pointed to, opened, etc.); and (2) The negative

rule was that there must never be an association of the printed word with the vocal word (McDade, 1944). McDade described the psychology of the approach in the following terms:

> "In non-oral reading we avoid at the beginning sandwiching speech between the print (V) and its meaning (M) as oral reading does:
>
> visual print ----> oral words ----> meaning
> V O M
>
> Instead we persistently and undeviatingly associate visual print (V) with meaning (M):
>
> V ----> M
>
> ...when the child has read for meaning only for (say) two years, he has formed - we hope for life - the basic habit of finding meaning immediately in print. When he then reads orally, the psychology of his oral reading follows the correct form in which meaning comes before saying:
>
> visual print ----> meaning ----> oral words"
> V M O

McDade conducted a number of different experiments with this method. The first experiment (1935) was in a single first grade classroom where the approach was tried for a year. The results were regarded as so good to McDade that two other classes were identified and tested for comparison purposes. The non-oral class was found far superior in achievement as compared to traditional classes. During the ten year period from 1935 to 1945 the Chicago Puboic Schools carried on a ten year experiment in non-oral reading. The following gives a breakdown of its use: 1935 (1 class); 1936 (11 classes); by 1939 (470 classes); by 1945 (137 of the 346 elementary schools). All together there were more than 70,000 pupils taught in this way.

The method also received heavy criticism. Rohrer (1943) wrote a devastating critique of the methodology used in McDade's first study and stated that its conclusions were meaningless. Rohrer argued that the non-oral method violated the psychological principle of the motor theory of consciousness. Basically, this theory holds that it is impossible to have thinking, and hence learning, unless there is bodily movement. Rohrer argued that in the beginning stages of learning to read there should be a maximum of oral activity. Pronouncing is important for the beginner; not only because of the link with speech, but because of the fullest range of motor expression is a tremendous asset in all childhood learning. Buswell (1945) reported on an attempt to evaluate the effectiveness of McDade's non-oral approach in Chicago public schools. Although the approach was used only through grades three, Buswell focused the evaluation on students who were in grade six arguing that if differences in performance could be found at this point then the effects of the method were indeed substantial. He identified students who had come through one approach (non-oral) or the other (traditional) and then set up a matched set comparison for the two groups on achievement and lip movement during silent reading. No statistically significant differences were found on any of these measures. Interest in the non-oral method dissipated rapidly after this point.

The Basal Consensus

The turmoil of the 1930's led into a quiescent 40's. By the early 1950's a time of consensus in American reading instruction had

been reached (Chall, 1967). The basal approach assumed a dominant position in primary grade instruction and most basal systems tended to look a lot alike. Rigorous control over vocabulary in readers had become a finely tuned science with complicated formulae for the rate of introduction and repetition patterns. The content of readers consisted almost exclusively of "realistic" fiction. The teacher's role in guiding reading followed by in large the principles set forward in the Directed Reading Activity by Betts (1946). Oral reading was relegated in principle within the basal approach to a relatively minor role. In practice, it appears that oral reading remained popular as a means of checking on word perception during silent reading. Horn and Curtis (1949) offer the following description and commentary on this practice:

> "Oral reading is frequently taught in a manner detrimental to the development of either the abilities common to oral and silent reading or the abilities peculiar to each. For example, pupils who have made little or no preparation to read to other members of their class who sat with books open, following the reader's progress word by word - often to detect a mispronunciation or other petty mistakes."

The results of Austin and Morrison's (1963) survey of instructional practices offer convincing evidence that this "round-robin" procedure was the dominant method for guiding oral reading in classrooms across the country through the 50's and 60's. The data from a survey by Artly (1972) suggests similar patterns through the late 60's and early 70's. Thirty-seven percent of the teachers surveyed in his study indicated that the major justification for oral reading instruction was to stress precision in word perception. With respect

to the practice of taking turns in a group, teachers (47%) said that it gives all children a chance to practice their word recognition skills. Teachers (47%) reported that the best way to evaluated the quality of oral reading was to count errors.

A survey of oral reading practices in regular classroom settings reported by Daly and Hoffman (1982) indicates that similar patterns of use and beliefs about oral reading continue to this day. They report that the vast majority of classroom teachers regard oral reading as a valuable part of the instructional program for both the good and the poor reader. The dominant pattern for practice is turn-taking with the teacher monitoring for accuracy.

What Are the Effects Of Oral Reading on Pupil Learning As It Is Practiced In "Typical" Classrooms?

Other than the data documenting the frequency and characteristics of oral reading practice in classroom settings we have no strong evidence from classroom research regarding its effects on pupil learning as compared to silent reading. Stallings (1980) has reported the results of a study which favored oral over silent reading practice in terms of reading achievement. This study focussed, however, on remedial junior high school classrooms. There has been classroom research which suggests - that within existing practices of oral reading - some elements are more positively related to growth in students' reading achievement than others. Anderson, Evertson, and Brophy (1979) have reported the results of an experimental study with first grade students which suggests that teachers can have a positive

effect on pupil achievement by calling on students for oral reading "in turn" rather than at random. They also found that students who practiced oral reading in easier material did better in terms of achievement gains than those who practiced in more difficult material.

Hoffman (et.al., 1982) reported findings from a study of oral reading in second grade classrooms which again suggests that the easier the practice materials for oral reading the greater the amount of achievement gain. They also report a negative relationship between teachers giving the words when students make errors and growth in achievement.

In an earlier study, Hoffman and Clements (1981) reported the findings of a study which suggested specific ways in which the patterns of teacher responses to the errors of high and low achieving students are related to the students' reading strategies. They speculate on the ways in which the teacher responses offered to the oral reading errors of poor readers contribute to continued patterns of failure.

Oral Reading In Clinical And Research Settings

In contrast to the somewhat tainted view of oral reading in regular classrooms that has evolved over the past century, the uses of oral reading in clinical and laboratory research settings have been accepted by a broad spectrum of researchers and practitioners alike. The use of multisensory and language experience based approaches which contain a heavy emphasis on oral reading have been a significant part of instructional programs for disabled readers since the founding of Grace Fernald's remedial clinic at UCLA in 1921. Over the past

fifteen years, efforts to use oral reading in remedial instruction have received increasing attention in the research literature.

Neville (1965) reported the results of an exploratory study in which significant differences on word recognition and comprehension measures were found for oral methods. The method relied on echoic reading with the teacher reading text aloud and the student emulating the model in turn with his or her own reading. Neville (1968) in extending this line of research argued that the association of meaning with printed words is facilitated through oral response. After repeated practice, the meaning then becomes directly related to the printed form. As the pronunciation of words becomes superfluous, he proposed, vocalization during silent reading should decrease, and by the process of cue reduction, skill in silent reading would gradually develop. He criticized the look-say approach for its focus on single words and suggested that a focus on larger units which include intonation patterns is more appropriate. In this follow-up to the 1965 study, he found that a group taught through echoic response techniques had a reduction in vocalization over a silent reading group. He also found that the echoic approach group achieved greater fluency of reading over a simple oral reading group. No differences were found in this second study with respect to word recognition or comprehension between groups.

Heckleman (1968) reported on the use of an oral reading technique termed the Neurological Impress Method (NIM) with disabled readers. This is a system in which there is unison reading between the teacher

and the student. The teacher uses his/her finger as a locater. Heckleman reports outstanding success with disabled readers in clinical settings using this approach. Cook (1976) investigated the effectiveness of the neurological impress method with remedial reading students and found statistically significant differences on oral and silent reading comprehension tests and a word recognition test in favor of NIM.

Keislar and McNeal (1968) found in their research that an oral method (i.e., speaking the words aloud while learning) was superior to a silent learning program even though the criteria consisted of silent reading. This was an extended replication of an earlier study with similar results.

The method of Assisted Reading (Hoskisson, 1975; and Hoskisson, Sherman, and Smith, 1974) has also been used with success in clinical settings. In this method someone reads phrases or sentences in a story one at a time, and the child repeats each phrase or sentence after the reader. This procedure, similar to the echoic method reported on by Neville (1965, 1968), is continued through an entire story. As an alternative to sentence patterns and repetition a story may be read and reread a page at a time.

Lovitt and Hanson (1976) reported success with a technique which included continuous oral practice to criterion levels of rate and comprehension on passages. Their treatment involved both skipping and drilling on passages. In some cases where students were making rapid success, they were allowed to skip to higher levels. In cases

where there was difficulty, there was intensive rereading (drill) on passages before moving on.

Chomsky (1978) reported "remarkable" success in a clinical setting with a story type method of guided oral reading. The researcher would read passages to students providing a model and then students would attempt to follow the model as they read the passage aloud.

Samuels (1979) reported success with a method called "repeated readings" in which the children were required to read and reread short meaningful passages several times until satisfactory levels of fluency were reached. Then the practice was repeated with a new passage. Samuels provided empirical evidence showing the method results in increased speed and in a reduction of word recognition errors not only for the given passages, but also for new passages.

Why Do Oral Methods of This Type Work?

Why oral methods work in this context has been a popular area of speculation. Samuels interprets the growth in reading ability that takes place under repeated reading conditions in terms of Laberge and Samuel's automaticity theory (1974). The focus on fluency in repeated readings encourages automatic or rapid assimilation of text; thus reducing the load on cognitive attention at the decoding level. The student is then free to attend more to the meaning of the text.

Schreibner (1980) suggests that the reason programs of these types are so successful is that they facilitate the discovery of the appropriate syntactic phrasing in the written signal. It is

through the mapping of the prosodic features of language (pitch, stress, and juncture) onto the text that the reader is led to discover its richness.

Bill Martin (1974) rationalizes a story type oral method in his popular Sounds of Language series on many grounds. One obvious advantage of this method as evidenced in these materials is that the text contains rich language and meaning for children since there are no specific vocabulary controls in operation. With this approach, the stories are not only fun and therefore motivating, they have predictable patterns of language which are useful to students in reading them independently.

Many have suggested that oral reading is a natural stage for the beginning reader in moving toward silent reading proficiency (see Hoffman, 1981). The oral feedback loop is reinforcing to the beginning reader in his/her efforts to decode text. As the oral mechanism becomes superfluous, it disappears on its own. The argument is similar to that proposed by Vygotsky (1962) on the evolution of inner speech for thought from a purely oral language stage.

From a task analysis and management perspective - an area of great concern for teachers - oral reading may be better suited to classroom instruction than silent reading. In particular, when the goals are specific to the development of decoding efficiency. Teachers are in a much better position to monitor and provide formative feedback to actual performance during oral reading.

From a sociological perspective, oral reading is a social activity

which has inherent facilitating effects (Zajonc, 1965) if success is insured. The social nature of oral reading is rooted deep in the earliest literary experiences of many children when their parents read to them. Reading for the early reader is both a social and a personal event.

From a language development perspective, it seems that oral methods - with their focus on large units of discourse like a story or rhyme - reflect closely the "whole language" environment in which oral skills are first developed in children. Oddly enough, it was this very same argument that was used to explain the superiority of the "word" method over the ABC and phonic methods in the nineteenth century. However, research over the past two decades in language acquisition has clearly shown that the word is not the significant unit in language development. It is the word embedded and experienced in language use that is crucial. All levels of language - the phonetic, syntactic, prosodic, semantic, and pragmatic - are acquired simultaneously through the child's interaction with the whole language. Certainly all of these reasons, and there are likely many more, help explain why oral methods such as those described earlier are effective in promoting growth in reading.

Conclusions and Recommendations

We have reviewed oral reading instruction in two environments -- the classroom and the clinical setting. The former has demonstrated the staying power of oral reading; the latter, the success of several approaches. What conclusions can be drawn?

First, guided oral reading practice has the apparent potential to contribute significantly to growth in reading ability. Specifically, teacher guided practice can develop (a) reading fluency through focus on the prosodic features of language and on units of language discourse larger than the word and (b) comprehension through the reduced cognitive attention to decoding and the emphasis on the reader's interpretation and communication of the author's intended message.

Second, effective practice in oral reading includes elements such as the following:

A. The use of text which is rich in language in terms of rhythms, patterns, and quality of expression;

B. The modeling of appropriate oral reading by the teacher;

C. The opportunity to rehearse text by students;

D. The opportunity to perform orally in both individual and audience contexts;

E. Sustaining/formative feedback by the teacher to the student's performance;

F. Teacher guided analysis of text - in terms of language usage and author's intended meaning;

G. An emphasis on oral reading which expresses the author's intended meaning.

H. High standards for pupil performance before moving on to new text.

This enumeration should not be interpreted to mean that there is a single best oral reading method, but that there are likely many effective formats which may stress one or another of these features depending on the specific instructionsl objective(s) being addressed.

Third, the dominant use of "round-robin" type oral reading in schools today is a result of:

A. The need for an accountability/monitoring system on the part of teachers to check whether students are recognizing words and to insure that all students have been exposed to the content;

B. The stilted and controlled language of the basals which does not lend itself to interpretative or expressive reading;

C. The focus in reading instruction on the accurate pronunciation of the word as being the most important variable in learning to read.

Recommendations

We recommend extensive research into the efficacy of oral reading programs of the types just described in regular classroom settings. We are not advocating a nostalgic return to the "good old days" of long ago, simply suggesting that oral reading methods that were dropped in the early 1900's only to be rediscovered in clinical settings over the past 15 years are deserving of attention. To indict oral reading for the way in which it is currently practiced is to misdirect attention. These indictments only serve to antagonize and further widen the gap between theory and practice. We need to actively promote effective oral reading and de-emphasize the need for oral reading as an accountability check on silent reading. We should avoid creating a false antagonism between oral and silent reading. Studies which compare advantages of silent vs. oral reading are ill advised and

serve only to divert attention from a much larger issue of the desperate need for more practice (i.e., reading from connected text) in all phases of our reading programs. Both silent and oral practice are valuable. Oral reading lends itself to intensive practice with a great deal of input and direct instruction from the teacher. Silent reading lends itself to extensive reading with a minimum of teacher guidance. Unfortunately, with the basal approach as it is currently used in classrooms, these conditions are hopelessly confused. We now have a stress on intensive teacher involvement in guiding silent reading to the point that a "silent" reading lesson today - during the guided reading portion - is a fractured experience described recently by the seven-year-old son of a colleague as "start-stop reading."

It is our hope that a resurgence of effective oral reading practices in classrooms will bring with it two related developments. First, a return to the use of quality literature in the developmental reading program (of the type found in the Sounds of Language series). And second, greater emphasis at early levels on independent silent reading in trade books by students with a minimum of teacher direction. Oral and silent reading must work together if the research of the past fifty years is to result in a qualitative change in the American classroom.

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"Teacher Beliefs, attitudes, and preferred practices in oral reading instruction"

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Feedback to Oral Reading Miscues

Part III

A Study of Theoretical Orientation to Reading and Its Relationship to Teacher Verbal Feedback During Reading Instruction

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A Study of Theoretical Orientation to Reading and Its Relationship to Teacher Verbal Feedback During Reading Instruction

James V. Hoffman and Cherry L. Kugle

There is a current and intriguing notion in reading education that many, if not all, teachers operate from a theoretical orientation or conceptual framework when instructing (Harste & Burke, 1977; Duffy & Metheny, 1979; Kamil & Pearson, 1979). This basis for instruction is viewed as an implicit product of a given teacher's set of assumptions, beliefs, and knowledge about reading. Such a theoretical base influences all instructional decisions made by a teacher, from lesson planning to behavioral interactions with students during instruction. Most teachers are likely unaware that they operate from a consistent theoretical base in the manner just described, and would have difficulty articulating their own theoretical orientation in any explicit or formal manner.

The relationship between theoretical orientation and observed behaviors, as well as that between implicit understanding and explicit awareness which guides action, can be explicated by analogue to an approach to understanding language use. With this approach, psycholinguists have attempted to relate a native speaker's knowledge (language competence) of the rule structure (grammar) of a language to the use of this knowledge in generating speech and communicating (language performance). It is only as the result of considerable study, introspection and inference that we can begin to make explicit statements about the characteristics of this language grammar. Such statements must be of sufficient rigor and precision to allow one to make predictions about language behaviors and then seek out confirmation of the predictions in naturally existing phenomenon. While researchers have had only limited success in specifying the exact gramatical characteristics of given languages, the

Methods and Procedures

Instruments

TORP. The TORP consists of 28 items reflecting belief-systems felt to be operating during reading instruction. Items are responded to on a scale of one to five, with lower ratings indicating more agreement with the statement. The total scores calculated for each respondent are felt by the author to be a general indicator of the respondent's theoretical orientation to reading. Scores in the lower range (0-65) indicate a phonics orientation, in the middle range (65-100) a skills orientation, and in the high range (100-140) an orientation toward whole language.

PRI. The PRI consists of 45 items reflecting five conceptions of reading: basal text, linear skills, interest-based, natural language, and integrated curriculum. Respondents indicate strength of agreement or disagreement on a five-point scale. The nine items reflecting the five conceptions listed above are totaled separately, resulting in five "subscale" scores for each respondent; lower scores indicate more agreement with the conception of reading reflected by the subscale.

FORMAS. The FORMAS taxonomy is a low inference coding instrument designed to represent the salient characteristics of teacher verbal feedback to student miscues (Hoffman & Baker, 1980; 1981). This instrument provides information relative to five major clusters of teacher-pupil verbal interactions which surround the mistakes made during oral reading (Figure 1). These are: (I) the characteristics of the miscue itself; (II) the way in which the student initially attempts to deal (if at all) with his or her own miscues; (III) the characteristics of teacher verbal feedback if offered; (IV) the feedback offered by other students in the reading groups; and (V) whether and, if so, by whom the correct word is identified.

Procedures. The subjects for this study were 35 experienced second and third grade school teachers whose group oral reading instruction had been either audio or video recorded in their actual classrooms. The reading groups were composed of four to eight students, with a broad range of ability levels represented. The tapes were coded using the FORMAS taxonomy. Coders were trained experts in the FORMAS system; reliability between the coders was checked periodically using procedures established by Hoffman, Gardner and Clements (1980) and found to be in excess of .80 levels of agreement on all major categories coded.

After the tapes had been coded, the participating teachers were individually administered the TORP and PRI instruments. Nine of the second grade teachers and five of the third grade teachers were invited to the research center for individual interviews. During these interviews the teachers reviewed and commented on their taped interactions in the reading group with the researchers.

Results

Table 1 shows the means and standard deviations for the scores on the TORP and the five cluster scores for the PRI. In addition, correlations among the scores are presented. As shown in the table, there was a significant positive relationship between scores on the TORP and the linear skills conception on the PRI. There was a significant negative relationship between the scores on the TORP and the natural language conception on the PRI. These results are as expected since higher scores on the TORP represent an orientation toward a whole language conception, while higher scores on the PRI subscales represent disagreement with that subscale. Thus, the positive correlation between the TORP and the PRI linear skills conception is interpreted as follows: teachers who agree with a natural language

orientation (high TORP scores) disagree with a linear skills approach, (high PRI linear skills scores). In the same manner, the negative correlation obtained indicates that teachers who have a whole language approach to reading as measured by high scores on the TORP tend to agree with (i.e., have lower scores on) the natural language conception of the PRI. Conversely, lower TORP scores, which indicate a phonics orientation, are associated with disagreement to the items reflective of a natural language orientation on the PRI.

As described previously, there were three hypotheses of interest in the current study. These were that teachers with a higher meaning orientation on the TORP and whole language subscale of the PRI should:

(1) ignore more student miscues which result in little meaning change than teachers who have a skills or phonics orientation;

(2) wait longer to respond to miscues which change meaning than teachers who have a skills or phonics orientation, thus providing the student with an opportunity to self-correct his/her own miscues; and

(3) respond to student miscues with contextual clues as opposed to focusing student attention on the grapho-phonic level of the text word.

In order to examine the first question, a percentage of the number of times no feedback was given to miscues with low meaning change was calculated for each teacher (No feedback/LMC). Similarly, the measure of interest for question two was the percentage of times the teacher waited longer than three seconds to respond to miscues with high change in meaning (Wait/HMC). Finally, the number of times the teacher gave contextual cues to miscues, relative to all instances of sustaining feedback, was calculated (Context/SF). In all

these measures, the number of miscues which the student immediately self-corrected was subtracted from the denominator since in these cases the teachers had no opportunity to give feedback. These measures of interest were correlated with the scores from the TORP and PRI; the results are presented in Table 2. It should be kept in mind that the actual frequencies upon which these percentages are based may be relatively small. For example, teachers offered sustaining feedback to miscues on an infrequent basis. When this type of feedback is further classified by form (i.e., attending, grapho-phonic, or context) the numbers become reduced even further.

As can be seen in Table 2, the only teacher feedback variable which was significantly associated with teacher beliefs was the tendency to wait to give feedback to miscues with high meaning change. This variable was positively correlated with scores on the PRI linear skills component, and negatively correlated with the PRI natural language and integrated curriculum scores. This implies that those teachers who respond to the PRI items in a manner which indicates their orientation toward a whole language (or meaning-driven) approach to reading instruction are more likely to wait to give feedback to student miscues which change the meaning of the text. Teachers who agree with a linear skills approach are more likely to give immediate feedback to miscues which violate the meaning of the text.

A subsample of the teachers were invited for follow-up interviews based on availability and their physical proximity to the research center. The individual interviews with the teachers were organized around a review of the audio or video taped interactions with their own reading groups. The teachers were informed that the purpose of the interview was to have them comment on their interaction strategies in order to shed light on what they might have been thinking about or what they were motivated by in choosing

specific actions. The playback of the tapes was stopped at each miscue point (if there was no verbal feedback) or at the point of feedback if it was offered to the miscue. The following set of questions were then posed to elicit teacher comments:

1. Why did you choose to (or choose not to) respond to that mistake?
2. Why did you respond at that point in the text?
3. Why did you respond in the manner you did?

In responding to Question 1, almost all of the teachers revealed a sensitivity to the meaning change characteristics of miscues in determining ones to which they would give feedback. Ignored miscues were explained by such comments as "It didn't change the meaning," "It wasn't an important mistake." Conversely, miscues which were responded to were described as "important," "significant," or "words which would be encountered again in the story." Another interesting phenomena concerning teacher selection of miscues to which they would respond was the perceived degree of teacher activity. This perceived teacher activity factor was clearly related to the ability level of the student and sometimes superseded the meaning change criterion. Teachers working with poor students sometimes explained letting a significant meaning change miscue go by because they felt they had been too active or had been interrupting too much. Teachers working with high ability students sometimes explained their feedback to relatively minor miscues by saying that "they hadn't said anything in a while."

The timing of verbal feedback (when offered) was the focus for the second question posed to the teachers. Delayed feedback was a rare occurrence for most teachers. When feedback was delayed it was usually with a high ability reader and the teachers typically explained their behavior as offering an opportunity for the student to self-correct. Immediate feedback--particularly with the poorer readers--was explained as an effort to help the student before (s)he became very frustrated.

Interesting and consistent explanations for the choice of overt feedback offered were found. Almost all of the teachers used both sustaining and terminal types of feedback. The choice between these two was most often explained in terms of the reader's abilities or behaviors rather than as a function of teacher beliefs. Terminal feedback was associated with poor readers in trouble and explained by such statements as: "I wanted to build up his rate." "We needed to keep up the pace of the lesson." "He doesn't know that word anyway." The choice of sustaining feedback was explained by such statements as: "He can figure out the word with a little help." "He just wasn't paying close attention."

The form of sustaining feedback (in particular, context versus grapho-phonic prompts) seemed to be, more so than any other behavior, tied to the teacher's belief system. In commenting on these types of prompts, teachers came closest to talking about what they "thought" about reading. Teachers who relied on context emphasized the importance of meaning and comprehension goals. Teachers who relied on grapho-phonic prompts emphasized decoding. Unfortunately, the relatively few instances of sustaining feedback in the sample reduced the power of the statistical tests to reveal the relationships implied by the teachers' comments.

After listening to and commenting on the tapes, the teachers were asked how they had arrived at the feedback strategies they used in the classroom. Not one teacher reported having been given guidance in either preservice or inservice teacher training programs. All teachers reported that they had arrived at their strategies based on personal experience and a developing sense of what worked best for them. Despite the fact that all of the teachers relied on guided oral reading as a regular part of their program, few felt at all confident that their feedback strategies were as good as

they should be. In the course of the interviews it became clear that most of the teachers had a basic feedback routine (or more precisely a set of routines) which they relied on during guided oral reading. The particular routine used was a function of (1) student or group ability performance characteristics and (2) teacher beliefs about reading. How these two factors interact with one another to produce specific types of behavior during oral reading instruction is unclear at this point.

Conclusions

It would be easy to conclude that for most teachers there is no strong relationship between teacher beliefs and teacher behaviors. It would be more reasonable based on the findings from the focused interviews, however, to bring to question the notion that we can validly assess beliefs through a paper-pencil type task. At best we are looking at what teachers think they should be doing or how teachers perceive we would like them to respond. At worst, we are artificially forcing teacher beliefs to fit one or another conceptual model for the teaching of reading. Many teachers found the completing of the TORP and PRI instruments a frustrating experience. The most common response to an item was "it depends." That is, beliefs are situational and relate in complex ways to the context of instruction. The data from the focused interviews is far more enlightening with respect to teacher beliefs as they relate to teacher actions than either the TORP or the PRI. Here, there seemed to be clear areas of relationship between teacher beliefs and feedback particularly with respect to timing and form of sustaining feedback. The fact that timing was significantly related to two of the subscales in the PRI suggests that it has strong explanatory power. The fact that the form of sustaining feedback--in particular context versus grapho-phonic cues--was explained most often in the interviews in

terms of teacher beliefs as they relate to student needs points to another potential tie between conceptions and practice. Hopefully, future research in this area of theoretical orientation will come to focus more on the systematic observations of teachers engaged in situational teaching, complemented by focused interviews. As we grow to better understand the relationship between conceptions of teaching and situational teaching behavior, we will be in a much better position to examine relationships between teacher orientations and pupil learning as well as to embark on enlightened programs of teacher education.

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Table 1

Correlations among the TORP and PRI scores

		PRI				
		BASAL	LINEAR SKILLS	INTEREST-BASED	NATURAL LANGUAGE	INTEGRATED CURRICULUM
	TORP	.17	.49**	-.11	-.47**	-.06
MEANS+	74.3	18.5	18.7	23.9	24.7	19.6
STANDARD DEVIATIONS	11.2	4.7	3.8	4.1	3.9	3.7

** $p < .01$ N = 35 df = 33

+ These values are expressed as percentages.

Table 2

Correlations Among the Teacher Belief and Teacher Feedback Variables

FEEDBACK VARIABLES:	1 No FDBK/LMC	2 WAIT/HMC	3 CONTEXT/SF
TORP	-.01	-.08	-.08
PRI: Basal	-.18	.06	.18
Linear Skills	-.09	.29*	-.02
Interest-Based	-.12	-.16	.14
Natural Language	-.21	-.27*	.06
Integrated Curriculum	.12	-.33*	-.08
MEAN+	65.5	5.0	24.9
STANDARD DEVIATION	31.1	8.9	27.7
N (of teachers)	33	34	33

* $p < .05$

+ These values are expressed as percentages.

Feedback Variables:

1 = Number of times teacher gave no feedback/number of low meaning change miscues (No FDBK/LMC)

2 = Number of times teacher waited longer than 3 seconds/number of high meaning change miscues (WAIT/HMC)

3 = Number of times teacher gave contextual cues/number of times teacher gave sustaining feedback (CONTEXT/FS)

I. Miscue

A. Type: insertions; omissions; hesitations; substitutions; mispronounciations; calls for help; and repetitions.

B. Meaning change: high and low.

C. Syntactic acceptability: high; same; and low.

D. Grapho-phonic similarity: high and low.

II. Reaction (student's immediate behavior following miscue)

A. Type: repeated attempt; continuation; immediate self-correction; pause; call for help; and no opportunity.

III. Teacher Verbal Feedback

A. Type: no verbal; terminal (giving the text word); and sustaining (helping student to identify text word).

B. Form of sustaining: attending (noncue focusing); simple grapho-phonic (i.e., grapho-phonic followed by context); and, complex content (i.e., context followed by grapho-phonic).

C. Timing of teacher feedback: immediate (less than 4 seconds); delayed (more than 4 seconds).

D. Point of teacher feedback: before the next sentence break; at the next sentence break; or after the next sentence break.

IV. Student Verbal Feedback

A. Type: none; solicited; unsolicited.

B. Timing: less than 3 seconds; more than 3 seconds.

C. Point: before the next sentence break; at the next sentence break; after the next sentence break.

V. Resolution: teacher identified text word; student identified text word; or miscue left unidentified.

Figure 1. Five major clusters of teacher/pupil interactive behaviors.

Teacher Verbal Feedback to the Reading Miscues of High and Low Achieving Students: A Comparative Analysis

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Abstract

The purpose of this study was to describe the characteristics and effects of the verbal feedback offered by teachers to the miscues of high and low skilled readers during group oral reading instruction. The subjects were eight second grade teachers and their regular reading groups. Two teachers had one reading group each, four teachers had two reading groups, and two teachers had three reading groups, making a total of 16 reading groups. Each group was videotaped on four separate occasions. Miscue focused interactions were coded using the FORMAS taxonomy. Guided oral reading was found to be a significant part of reading instruction. Teacher verbal feedback to miscues occurred with some frequency with both the high and low ability groups. High and low skilled readers were found to be significantly different in their miscue patterns and subsequent reaction strategies. Teachers were found to be significantly different in their verbal response patterns to the two groups. The findings are interpreted in terms of a mutually adaptive cycle between teacher and groups which serves to reinforce existing patterns of behavior. Implications for instruction and future research in this area are drawn.

Teacher Verbal Feedback to the Reading Miscues of High and Low Achieving Students: A Comparative Analysis

Field based research on the teaching of reading is in its infancy. Up to just a few years ago the only information we had relative to what was actually going on in classroom reading instruction was derived from anecdotal reports and uncorroborated survey data. This is no longer the case. Based on the work of such instructional researchers as Anderson, Evertson, and Brophy (1979), McDermott (1977), Stallings (1980) and many others, a picture of classroom reading instruction is beginning to emerge.

On the positive side, the findings emitting from this line of research suggest that teachers can and do make a difference. There appears to be a significant relationship between the quantity and quality of instruction offered and the progress made by students in terms of learning outcomes. Teachers who express high levels of self-efficacy in their own ability to teach reading, provide ample opportunity for student involvement, engage in direct instruction, and adjust tasks to the needs and abilities of students are effective in promoting student learning (Duffy, 1980).

On the negative side, we have found that there doesn't appear to be a great deal of instruction of this type going on with any regularity in typical classrooms (Durkin, 1979). Even more disturbing is the finding that low achieving students--i.e., those in greatest need--seem to receive less than a fair share of the small amount of quality instruction that is going on in classrooms (Berliner, 1981). There is additional evidence suggesting that within instructional contacts the qualitative characteristics of interactions between teacher and student(s) are different for the low and high achiever (Rist, 1973; Weinstein, 1976). This is clearly a problem area which deserves careful scrutiny.

The principal focus for the study to be reported was on the nature, characteristics and effects of the verbal feedback offered by teachers to the miscues of high and low skilled readers during group oral reading instruction. The selection of oral reading as the focus for the study was based on a consideration of four factors. First, group oral reading instruction is a very common element in most primary reading programs (Austin & Morrison, 1963; Howlett & Weintraub, 1979). The topic of oral reading instruction, therefore, is one of practical concern. Second, oral reading instruction has clear and well-defined task characteristics about which most teachers share a common understanding (Doyle, 1979). In this regard, the task of oral reading is highly amenable to classroom observation. Third, recent advances in the study of oral reading by Goodman (1967) and his associates (Goodman & Burke, 1972) point to the wealth of qualitative information imbedded in a student's oral reading performance. This qualitative information is likely indicative of a child's developing competence in reading as well as reflective of the instruction the child has received (Harste & Burke, 1977). Fourth, and finally, the conceptual framework for studying teacher feedback to oral reading proposed by Hoffman (1979), as well as the development and validation of an observation system for characterizing this feedback (Hoffman & Baker, 1981) provide a direct means for analyzing the verbal interactions that are associated with student miscues during oral reading instruction.

Background of Research into Feedback During Oral Reading

Overall, past research into teacher feedback during oral reading instruction has been infrequent and limited in scope (Niles, 1980). As background, the principal studies that have been conducted in this area will briefly be

reviewed with the goal of highlighting some of the findings which are relevant to the current research.

Epstein and Lynch (1974) reported the results of a study comparing a five-step cueing strategy to "typical response patterns" used by teachers in offering feedback to student oral reading errors. The students had been selected randomly from a pool of educable mentally retarded children. Teachers taught groups of five students each in two oral reading lessons--first under a control condition, then a week later under an experimental condition using the prescribed cueing strategy. During the control condition teachers were asked to make their "normal responses" when responding to pupil miscues. The pretest measure was the errors made during a student's oral reading turn. The posttest measure was the number of errors made by the student when rereading the same story aloud to the researcher the next day. The performance of students was better under the experimental (prescribed cueing) condition in terms of accuracy on the posttest and the difference between pre- and posttest scores. The authors concluded that slightly retarded children learn more new words from teacher responses to miscues which are highly consistent and structured than when teachers use "the normal variety of cueing schemes."

Niles, Graham, and Winstead (1976) conducted a study comparing the effects of an immmediate-teacher-feedback condition to a no-verbal-feedback condition upon the oral reading miscues of fourth grade pupils. Each student subject read to the same randomly assigned preservice teacher for ten to fifteeen minutes on each of four consecutive days in materials chosen by the teacher under an "uninterrupted" condition, while the other group read under an "immediate interruption" condition where miscues were brought to a student's

attention using a set of ten prescribed response patterns which were tied to specific types of miscues (e.g., student error = omission → teacher responses = "You skipped a word.") On the fifth day, all students read from the same story (fourth grade difficulty level). Reading performance for each student was calculated according to the Reading Miscue Inventory (Goodman & Burke, 1972). Results indicated that the miscues of students who had received immediate feedback were graphically and phonically similar to the expected responses and grammatically more acceptable than were miscues of students under the uninterrupted condition. Miscues of students under the experimental condition, however, changed the meaning of the text to a lesser degree. Scores of the uninterrupted group were also higher on the oral retellings. The authors concluded that teachers must prudently consider if and when and how teacher feedback should be provided during oral reading. An attempted replication of the Niles et al. study reported by Pany, McCoy, and Peters (1981) did not yield similar findings, however. In their study, no significant differences were found relating to either comprehension or miscue characteristics.

Terry and Cohen (1977) studied the effects of various prompting strategies of special education preservice teachers on the response patterns of a group of "mildly handicapped low level" readers. Ten categories of teacher prompts and two categories of pupil responses to prompts were used to code observed teacher and pupil response behaviors. The preservice teachers had instruction through a prompting module which recommended responding only to misuces that changed the text's meaning, using structural analysis, attention, pattern, phonics, or context prompts. The authors of the observation system

(OROS) used in this study (Brady, Lynch & Cohen, 1976) classified four of the teacher prompt categories as look-prompts, four as social prompts, and two as meaning prompts. The results indicated that the percentage of time the five recommended prompts were given by teachers differed relative to the reader's ability level, with the higher readers receiving a greater number of attention prompts and the lower ones more context and pattern prompts. It was also found that the success a child had with decoding a word immediately following a prompt varied according to the child's reading level. The better readers decoded words more successfully with a wider variety of teacher prompts.

Allington (1978, 1980) examined the interruption behaviors of primary grade teachers to clarify whether or not the miscues of "good" and "poor" readers were responded to differently. Teacher interruption behaviors were categorized according to "point" and "direction" of interruption. The point of interruption categories included: no interruption, at error, and two post error categories. The direction of interruption categories included graphemic, phonemic, semantic, and syntactic teacher pronunciation. It was reported, based on an analysis of tape-recorded teacher interactions with their reading groups, that (1) poor readers were more likely to be interrupted at the point of error than good readers; (2) regardless of grade level or "place" in the learning to read process, the most common type of interruption behavior was for the teacher to provide the word; and (3) the teacher tended to cue poor readers to graphemic cues slightly more than they did good readers. Allington suggests that the differential treatment afforded to poor readers might be a contributing cause to their disability.

Pflaum, Pascarella, Bostwick, and Auer (1980) reported findings from a study of teacher pupil interaction patterns during oral reading. They were

interested in discovering if the reason teachers were interacting differently with low and high ability readers had to do with different oral reading behaviors exhibited by the two groups. They compared teacher feedback responses as they related to pupil status variables (e.g., sex and reading achievement) and pupil miscue characteristics. They found that twice as much of the variance in teacher behavior is accounted for by pupil miscue characteristics than pupil status variables. They caution that future research in this area be open to consider how pupil behaviors affect teachers and how teacher behaviors affect pupils.

Corporately, the findings from these studies suggest that feedback during oral reading instruction can have a significant impact on student performance and that teachers may differentiate their feedback strategies based on certain student characteristics (e.g., ability). Unfortunately, due to numerous methodological limitations, these studies do not provide much in the way of specific information about specific feedback patterns and pupil performance, nor, with the exception of Allington's and Pflaum et al.'s research, are the patterns generalizable in clear ways to practicing teachers in regular classrooms. It was out of this concern for increased specificity and generalizability that this present study was initiated.

The goals of this study were three-fold:

(1) To characterize teacher verbal feedback to oral reading miscues in terms of distributive patterns of teacher behavior.

(2) To determine the ways in which teachers may or may not consistently vary feedback between students in different ability groups.

(3) To infer toward possible relationships between teacher feedback patterns and student performance characteristics.

Methods and Procedures

Subjects

The unit of analysis for this study was the reading group. There were eight teachers included in the study. Two teachers had one reading group each, four teachers had two reading groups, and two teachers had three reading groups. There were 16 reading groups in all. There were a total of 116 S's with an average of 7.25 per group (11 max., 3 min.). While each teacher naturally dividided their students into reading groups according to the reading ability of the individual student, students were, unfortunately for the research design, assigned to teachers in some degree by their reading ability. This means that the low reading group in one class might be made up of better readers than a high reading group in another class. For this reason reading groups were classified as high or low readers on the basis of the average of the individual's pre/post reading achievement test. The 16 reading groups were divided into two groups of eight reading groups with the highest achieving groups being in Group 1 and the lower achieving groups being in Group 2. There were 63 S's in the higher group and 53 S's in the lower group. The high group achievement scores had a mean percentile score of 74.54 while the low group mean was 28.50. The fact that the teachers are unevenly assigned to groups creates certain problems for analysis which will be discussed later.

Data Collection

The data for this study comes from videotaped reading groups. These reading groups were videotaped as a part of a larger study designed to allow an indepth examination of reading instruction in the field. Videotapes were then coded in the laboratory using the FORMAS coding system (Hoffman & Baker, 1981).

This system of analysis identifies five major clusters of teacher pupil behaviors which are miscue focussed (see Figure 1). Cluster I specifies the type of miscue as well as qualitative characteristics (i.e., meaning change and grapho-phonic similarity) of certain miscues. In Cluster II the first behavior of the student following the miscue is recorded. The characteristics of teacher feedback are addressed in Cluster III in terms of feedback type, form, timing, and point. Input from students other than the one making the miscue are specified in Cluster IV. The final cluster (V) is used to record who ultimately (if anyone) identifies the miscue. In addition to this miscue information, the students were monitored for number of words read correctly and rate of reading. Research team members served as coders of videotapes.

The coders were trained to criterion levels using the procedures outlined in the FORMAS training manual (Hoffman, Gardner, & Clements, 1981). All coded sheets were reviewed for consistency and a random sample tested for inter-coder reliability by at least one other trained coder. Agreement levels exceeded .85 levels in all clusters of the taxonomy.

Data Analysis

There are many analyses possible given the complexities of the FORMAS. The analyses used for this paper were carried out in three phases. In each phase the high versus low reading groups were included as a factor.

The dependent variable used in each of the analyses described below is miscue rate for each category. This was calculated for each group by dividing the number of miscues made in a category by the total number of words read by that group and then multiplying by 100.

Phase I. In Phase I the major categories in the FORMAS clusters were analyzed separately (cluster IV is not included in this paper). In cluster

I a two way between-within analysis of variance was run with ability groups as a factor and the miscue categories as the within group factor. In Cluster II a similar analysis was run for reaction categories. Repetition miscues are omitted from the analysis. In Cluster III feedback categories replaced reaction categories and in Cluster V resolution categories were analysed. Repetition miscues and immediate self-corrections are omitted from the latter two analyses.

Phase II. In this phase the subcategories in Cluster I and III were analysed. For Cluster I this implied two analyses. In the first there were three factors; 1) reading ability, 2) miscue category (insertions, omissions, substitutions), and 3) degree of meaning change. The second analysis also had three factors; 1) reading ability, 2) miscue categories (substitutions and mispronouncements), and 3) grapho-phonic similarity.

In Cluster III there were three analyses in this phase. First, sustaining and terminal feedback were broken down for timing of feedback. Second, these two categories were broken down into the point of feedback. The third analysis looked only at sustaining feedback which was broken down into the form of the feedback. As before, reading ability was included each time as a factor. Again repetitions and immediate self-corrections are omitted from these analyses.

Phase III. In this phase two different clusters are included in the same analysis in the order that they occured in time. This means that the analysis discussed above for Clusters II, III, and V would be rerun, this time including miscue categories and subcategories as factors in the analysis. Clusters III and V were then reanalyzed including reaction categories as a factor with repetitions omitted from the analysis, and Cluster V was reanalyzed

including feedback and its subcategories as factors with repetition and self-correction omitted from the analysis.

The readers will note that the analyses are divided in the way described to fit the logic of the coding system. In each set there will be some analyses duplicated. These analyses will be ignored. The reader should also note that while each set of analyses examines the same body of miscue data, the distribution of miscues within the clusters are independent of each other.

Limitations. There are two problems inherent in this analysis. It has already been mentioned that there is a confound between the ability grouping used and teachers. The seriousness of this problem should not be underestimated, but it was felt that the alternative which was to make teacher the unit of analysis would not improve the interpretability of the findings since some of the teachers did have groups which spanned the high to low ability boundary. The results of this analysis which concern reading ability must be considered as suggestive only. Many of the results which will be discussed, however, do replicate previous work in this field.

The second problem of these analyses has to do with the dependent variable. Rate measures are not constant interval variables nor are they normally distributed; therefore, they do not meet the required assumptions for an analysis of variance. While there are transformations appropriate for rate data (e.g., $\log$), the consequences of not transforming is a loss of power in most instances. It will be seen shortly that any loss in power is not crucial to the hypothesis tested. In addition, this type of transformation

is difficult to use in this case because of the occurrence of zeroes in the data set. In all of the transformations a zero must be made into an arbitrary number. If this were done, it would be very difficult to interpret analysis which contained zero rates.

Results and Discussion

Of the classes videotaped in the original sample, teacher guided oral reading was found to be present with sixteen different reading groups, or 63% of the total number observed. While the total number of reading sessions in which oral reading occurred was equal for the high and low groups, the total amount of time spent in actual group instruction was significantly different ($p < .01$) for the high (331 minutes) and the low (270 minutes). Within these reading groups, approximately 68% of the time for both the high and low readers was spent interacting directly with the story. The low group spent about 66% of their time reading aloud, 15% discussing the story, 11% receiving verbal feedback to miscues, and the remaining 8% in activities unrelated to reading. The high groups spent 52% of their time reading orally, 37% discussing the stories, 9% receiving verbal feedback to miscues, and the remaining 2% in activities unrelated to reading.

Approximately 1,000 miscues were observed and coded. There was a statistically significant difference in reading accuracy between ability groups ($p < .001$) with students in the low reading groups demonstrating a higher miscue rate (11 miscues per 100 words) than the students in the high reading groups (5 miscues per 100 words). Reading rate in words per minute was also significantly greater in the high reading groups. The overall correlation between group miscue rate and reading achievement was $r = -.75$.

These early findings suggest first that oral reading is indeed a significant part of reading instruction at the second grade level. Second, that while low skilled readers spend a greater portion of their reading group time reading aloud, they have less time to begin with, are reading slower, and making many more errors than the high skilled readers. Third, that teacher verbal feedback to miscues occupies a significant portion of the time spent in guided oral reading.

The findings from the analyses of the miscue focussed interactions will be reported in four major sections which correspond directly to four of the five clusters delineated in the FORMAS taxonomy: (1) miscue characteristics, (2) student reactions, (3) teacher verbal feedback, and (4) miscue resolution. There were so few instances of "other student feedback" to miscues that the data from this cluster was eliminated from consideration.

Miscue Characteristics

There was a statistically significant difference among the miscue types [$F(5,70) = 23.5204$, $p < .01$] across all students. This indicates that at least six of the miscue categories (i.e., insertions, omissions, substitutions, mispronunciations, hesitations, and repetitions) have different characteristic rates of occurrence. There were so few instances of "call for help" miscues that this category identified in the FORMAS taxonomy was dropped from consideration. There was also an ability by miscue type interaction [$F(5,70) = 11.8138$, $p < .01$], indicating that high and low groups differed with respect to the rate of certain kinds of miscues. The rate for substitution miscues was approximately equal for the two ability groups. The readers in the low groups were more likely than those in the high groups to make hesitation and mispronunciation type miscues while the readers in the high groups were more likely than those in the low to make repetitions, omissions, and insertions.

Substitutions, mispronunciations, omissions, and insertions were further analyzed for the degree to which the miscues affected the meaning of the text being read. There was an interaction between ability groups and meaning change [F(1,14) 20.96, p .01], with high skilled readers found to be making more low meaning change miscues and low skilled readers making more high meaning change miscues. This difference replicates findings from numerous other studies which have compared high and low ability readers using miscue analysis techniques.

Substitutions and mispronunciations were analyzed for the degree of grapho-phonic similarity between expected and observed responses. There was a significant three-way interaction for groups by miscue type by grapho-phonic similarity [$F(1,14) = 10.97$, $p < .01$]. With substitutions the low group tended to make a greater proportion of high grapho-phonically similar substitutions than the high group (73% vs. 60%). This finding parallels what we have known from earlier miscue studies. When mispronunciations are considered, however, an interesting paradox comes to light. A very high proportion of the high group's mispronunciations were grapho-phonically similar to the expected response (83%) while for the low group, there was a lower proportion of grapho-phonically similar mispronunciations (60%). This finding is similar to that reported by Biemiller (1979) in an experimental study of miscue patterns for high and low readers reading from text of increasing difficulty. One explanation for the behavior of the high skilled readers is that while they generally focus on meaning in reading, they do have good decoding skills. On those occasions where they are unable to quickly retrieve a semantically appropriate response and are therby forced to rely on their decoding skills, they do so quite well. The behavior of the low skilled readers is explained in part as a decoding weakness and in part as an artifact of coding. That is, as these students encounter very difficult words,

their limited decoding skills don't get them far enough into the word to earn a high grapho-phonic similarity score (i.e., the reader must produce at least two of the three parts of the word to earn this high similarity rating). Low skilled readers are attending only to the first part of the word when they mispronounce, thus earning only a low similarity score.

Miscue Reactions

To review, the miscue reaction cluster specifies the reader's first behavior immediately following the miscue. There are six categories of reactions: continuation, repeated attempt, pause, self-correction, call for help, and no opportunity to react. So few instances of calls for help were observed that these were eliminated from analysis. Self-corrections of repetitions (a mandatory coding in the reaction cluster) were removed because they tend to artificially inflate the immediate self-correction category.

There was a statistically significant main effect for student reaction type [$F(4,56) = 10.0651$, $p < .01$]. That is, the student reaction types are not equally distributed. Specifically, continuation and no opportunity are the most frequent reaction categories, with self-corrections next, and repeated attempts and pauses being the least frequent categories. There was an interaction between ability groups and reaction type ([$F(4,56) = 15.0662$, $p < .01$], indicating that the pattern of student reactions is different for low and high reading groups. For the high group continuations appeared most often (47% of the time) with self-corrections (24% of the time) the next most frequent. For the low group, no opportunity (52% of the time) was by far the most common reaction. What this means is that over one-half the time the low skilled readers were interrupted by the teacher before they were able to demonstrate any of the other types of reactions.

The data related to typical reaction patterns to omission, insertion, substitution, mispronunciation, and hesitation miscues are presented in Figure 2. Omission, insertion, and substitution miscues are further broken down by the degree of meaning change. This figure and a number of others depict contingencies between pupil behaviors (and sometimes teacher behaviors) across various clusters of the FORMAS taxonomy. In Figure 2 we find, for example, that low meaning change insertions occurred at an average rate of .3375 times per 100 words read for the high skilled readers. As a proportion of all their miscues, low meaning insertions accounted for 7.8% of the total number of miscues made. Reading across the figure we find that the primary reaction pattern to this miscue type for high skilled readers was to continue reading (95% of the time). Looking at the same miscue type for low skilled readers, we find that low meaning change miscues occurred at a rate of .07875 per 100 words read accounting for .8% of these students' total number of miscues. The primary reaction to this type of miscue for the low skilled readers was again to continue reading but only 58.7% of the time. Quite frequently readers in this group were afforded no opportunity to react before the teacher came in (23.8%) or made repeated attempts at the text word (17.5%).

In examining these figures, the reader should keep in mind that the self-correction category in the reaction cluster only refers to immediate self-corrections. Delayed self-corrections where the student ultimately identifies a miscue without interruption by the teacher will be discussed in a later section dealing with the resolution of miscues. The data in this reaction cluster analysis seems to suggest that the low skilled readers "tend" toward a similar pattern as high skilled readers in continuing to read

following miscues which affect text meaning only slightly. Unlike the high skilled readers, however, it is very unlikely for the low skilled readers to continue on after a miscue which substantially affects text meaning. Whether this is a strategy they don't have, or one which the teachers will not allow them time to exercies because of their immediate interruption, is unclear.

Teacher Verbal Feedback

In analyzing the data relative to teacher feedback, repetition miscues and all other miscues immediately self-corrected were eliminated from consideration since in these instances there was no clear opportunity for teacher feedback. Terminal feedback was the most common type of feedback found (50%), followed by no verbal feedback (35%) and then sustaining (14%). There was, however, a statistically significant interaction ($p < .01$) between high and low ability groups. For the high group, the most common type of feedback was no verbal feedback (73%) followed by terminal (16%), then sustaining (11%). For the low group, the most common form of feedback was terminal (64%) followed by no verbal feedback (20%), then sustaining (16%).

Figure 3 presents the type of feedback offered by teachers broken down by miscue type for the high and low ability readers. The most dramatic difference is with respect to substitution miscues where the dominant pattern for high skilled readers is no verbal feedback (75%) while for the low skilled readers the dominant pattern is terminal feedback (57%).

The type of teacher feedback was then examined as a function of meaning change with insertion, omission, and substitution type miscues. A statistically significant effect ($p < .01$) was found for feedback type as a function of meaning change (Figure 4). High meaning change miscues were more likely to be responded to than low meaning change miscues in both groups. The low

skilled readers' miscues, whether high or low meaning change, are still more likely though to be given an overt response by the teacher. In addition, low skilled readers are still more likely to receive a terminal response over sustaining kinds of feedback.

The analysis of form of sustaining feedback did not yield any statistically significant findings. We suspect that the small number of instances of sustaining feedback overall (High Ability=.0892 miscues per 100 words; Low Ability=.2393 miscues per 100 words) is the primary reason for not reaching statistical significance. The proportions for the three forms of sustaining feedback--attending (High skilled, 46%; Low skilled, 35%), grapho-phonic (High skilled, 30%; Low skilled, 52%) and contextual (High skilled, 24%; Low skilled, 13%)--suggest that the poorer readers are receiving more grapho-phonic cues and less attending and contextual cues than the better readers. It will take a larger data set to provide the necessary support before drawing any firm conclusions, however.

Overt verbal feedback, which includes both terminal and sustaining types, was offered to students in less than three seconds after the occurrence of a miscue over 85% of the time. There was a statistically significant interaction ($p < .01$) between ability groups and timing with the low skilled groups more likely to receive feedback in less than three seconds than the high groups. The timing of feedback was also examined relative to the degree of meaning change with insertion, omission, and substitution type miscues. A statistically significant three-way interaction ($p < .01$) was found which indicated that with the high skilled group there was greater likelihood for feedback to be delayed with low meaning change miscues while with the low skilled group no differences in timing for meaning change were in evidence.

The point at which feedback was offered was also found to be significantly related to the ability group ($p < .01$). For the low group readers, 96% of the overt verbal feedback was offered before the next sentence break. The pattern for the high group was 81% offered before the next sentence break, 13% at the next sentence break, and 6% following the next sentence break. The instances of delayed feedback for the high group were generally associated with omission and insertion type miscues. An examination of point of feedback relative to meaning change revealed a statistically significant three-way interaction for reading groups similar to that found for timing ($p < .01$). With the high group readers there was greater likelihood for the point of interruption to be delayed if the miscue resulted in little meaning change. For low group readers no differences for point of interruption were found related to the degree of meaning change. Wait time apparently varied by teachers as a function of meaning change for the high group, but not so for the low level readers.

Miscue Resolution

The final area of analysis focussed on the resolution of the miscue, i.e., whether it was identified by the student who made the miscue, the teacher, another student, or simply left unidentified. In Figure 5, the data for resolution of miscues by miscue type are presented. Again, there was a statistically significant interaction ($p < .01$) for resolution by ability group. The dominant resolution patterns for the high ability group were student identification or leaving the miscue unidentified. The dominant pattern for the poor readers, with the exception of mispronunciations, was teacher identification of miscues.

Resolution was finally examined as a function of the form of sustaining feedback. A statistically significant main effect was found with no interaction by ability. Attending feedback led to student identification of the

miscue 85% of the time, contextual feedback almost 80% of the time, but grapho-phonic feedback only 68% of the time. Approximately 25% of the miscues given grapho-phonic feedback were ultimately identified by the teacher.

Summary and Interpretation of Findings

The poorer readers in this study were found to be experiencing less teacher contact, less engaged time, and less task success than the better readers during guided oral reading. The fact that these three variables have shown up repeatedly in research on teaching as strong positive correlates of effective teaching, points to the serious nature of the problem facing the poor reader.

Further, there appears to be little redeeming for the poor reader in the quality of the interaction during guided oral reading. That is, there appear to be quite distinct patterns in teacher/pupil interactive behaviors over miscues during guided oral reading as a function of ability. Creating a composite based on the data from this study we see the good reader as one who makes mainly substitution type miscues which affect meaning only slightly and do not resemble the grapho-phonic characteristics of the text word. The good reader is most likely to continue reading in the text without interruption from the teacher and without bothering to self-correct later on. With more difficult words, the good reader is likely to mispronounce and then immediately self-correct or make repeated attempts at the word, again, without interruption from the teacher until the word is successfully identified.

The composite for the poor reader is also one of a reader who primarily makes substitution miscues; however, these miscues do resemble the grapho-phonic features of the text word and also substantially affect text meaning. In such instances the teacher is likely to interrupt almost immediately or after

the student has paused briefly to give the correct word. With even more difficult words the poor reader is likely to hesitate and all but wait for assistance which the teacher quickly obliges by giving the text word.

The behaviors of both teachers and students in this study offer support for Doyle's (1980) notion of "reciprocity" as it operates in instructional interactions. That is, both teachers and students are each influencing the behavior of the other. Consideration of this phenomenon helps to explain not only the findings of this study of verbal feedback but also those of Allington (1978, 1980) and Pflaum et al. (1981). The patterns in the data we have observed, however, suggest something more than just reciprocity, i.e., the behaviors of teachers and students appear to be adaptive with each accommodating information from the other source to modify their own behavior to some state of equilibrium or balance. Both teacher and students appear to share the common goal of completing the activity in as efficient a manner as possible.

The driving force behind the adaptive behavior may be, to borrow Duffy's (1982) term, smooth activity flow through the curriculum. Interviews with the teachers conducted while viewing the videotapes of their interactions in this study (reported in Hoffman & Kugel, 1981) indicated that the responses to student miscues in the low groups were explained as often by group management constraints and need for curriculum coverage as they were explained in terms of student need or belief in what is good instructional practice.

Imbedded in the fixed curricula that teachers are expected to cover are a variety of learning tasks. Guided oral reading from a basal is just one example. Students perform and may or may not succeed in the curriculum as a function of their own ability and the difficulty of the task. The teacher also plays a role in assuming responsibility for sustaining the students through these tasks. During instructional interactions, teachers might be thought of as attempting

to maximize the amount of instruction with minimum disruption to the activity flow. Teachers and students negotiate (McDermott, 1977) toward an equilibrium which is optimal for them and ultimately results in stable and mutually reinforcing behaviors. Once achieved, the equilibrium takes the form of routines (Clark and Yinger, 1979) or mental scripts (Abelson, 1976; Shank and Abelson, 1977) in which teachers and students behave in consistent and predictable ways.

In the case of the feedback patterns observed in this study, the negotiation process which leads to the development of routines appears to occur at a group rather than at an individual level. This finding is contrary to popular beliefs (Rosenbaum, 1980) but consistent with the findings of other literature on teacher decision making which suggests that once groups have been formed, teachers make planning and interactive decisions based on group characteristics, not those of individuals (Shavelson & Stern,1981). That the behaviors of teachers in the same type of activity is different across ability groups indicates that the negotiation process toward an equilibrium can reach different ends. The existence of routines is not the issue. In fact, they may be a necessary part of efficient instruction. What is at issue is the qualitative nature of the routines that are established. In guided oral reading, there is little in what is being done by the teacher to encourage the poor reader to begin to look like the good, nor is there anything in the good reader's behavior which encourages the teacher to behave as she or he does with the poor.

Implications

The implications of this adaptive cycle for teachers are clear--the routines for the low skilled readers must be modified if they are ever to become

like the high skilled readers. Routines, however, by their very nature, are not easily changed. Shavelson and Stein (1981) suggest that resistance to change can be attributed to teachers who have made judgments over time and have discovered through experience that a given routine works better than other known alternatives. The goal of changing routines in guided oral reading is, therefore, not to be easily realized. We can speculate about three areas of change which either alone or more likely in combination might have positive effects on the development of poor readers.

Adjusting the task. There are at least two ways in which the task of guided oral reading might be adjusted to begin to break the routines: the first relates to text difficulty and the second to the procedures used.

In this study we found the error rate for children in the low group to be slightly greater than 10% while for the high group students it was less than 5%. Guided oral reading in very difficult materials for developing readers is in fact a very different task from that of high readers in easy material. By placing students in materials where the error rate is considerably lower, it is likely that the performance of the students will become more like that of the good in terms of miscue characteristics (Biemiller, 1979; Blaxall & Willows, 1980; Williamson & Young, 1974). The teacher will then be in a more natural position to adapt his or her responses accordingly.

A second way in which the task can be adjusted is to modify the procedures for guiding oral reading away from a round-robin/turn-taking format. In the round-robin context the teacher faces the dual demands of meeting the reader's needs and maintaining group attention. When the constraints associated with group instruction are removed, the teacher is free to make decisions

and respond according to individual need. We would suggest that, at early primary levels, as an alternative to round-robin reading, teachers allow students to read stories at their own rate in a quiet voice. The teacher can then selectively monitor and feedback to individuals. Guszak (1980) reports data on a similar procedure that indicates this is an effective way to maximize the amount of reading students accomplish and enhance the rate of growth in reading achievement.

Teaching explicit strategies. There is a growing body of instructional research suggesting that we can teach poor readers to use the strategies of good readers through direct instruction. Specific to guided oral reading we would suggest that teachers train or at least talk to students about strategies for dealing with their own miscues. (In terms of the FORMAS taxonomy this relates to the reaction cluster.) Students could be given an explicit sequence of steps to follow after they make a miscue such as reading on to the end of the sentence or beginning the sentence again. Students could be taught to make meaningful substitutions for unknown words as "place holders" that can be returned to later on if necessary after more text has been processed.

Modifying verbal feedback. This is probably the area where the most direct break in the routines can be made. Based on our observations of many teachers and students in miscue focused interactions and the findings of this study, we would offer the following guidelines: first, be accepting/tolerant of miscues which do not affect greatly the meaning of text; second, if feedback is to be given, delay the interruption at least until the next sentence break and preferably until the end of a paragraph; third, focus the initial response to the miscue on the meaning level, asking the student to

re-read the sentence with the miscue and/or asking if what the student has said makes sense.

We would caution that while attempts at varying feedback may appear to be the most direct way to break routines, it is not likely to be successful in the long run if suggestions offered regarding adjusting the task and teaching explicit strategies are not followed.

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re-read the sentence with the miscue and/or asking if what the student has said makes sense.

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Figure Captions

Figure 1. Major divisions of the feedback to oral reading miscue analysis system (FORMAS) taxonomy.

Figure 2. Reactions to miscues separately for good and poor readers.

Figure 3. Teacher feedback to pupil miscues for good and poor readers separately.

Figure 4. Teacher feedback to good and poor reader miscues as a function of meaning change.

Figure 5. Typical resolutions to pupil miscues for good and poor readers separately.

CLUSTER

I. MISCUE (THE OBSERVED RESPONSE IN RELATION TO THE EXPECTED RESPONSE)
   A. TYPE: INSERTIONS, OMISSIONS, HESITATIONS, SUBSTITUTIONS, MISPRONUNCIATIONS, CALLS FOR HELP, REPETITIONS
   B. MEANING CHANGE: LITTLE AND SUBSTANTIAL
   C. GRAPHO-PHONIC SIMILARITY: HIGH AND LOW

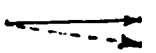
II. REACTION (STUDENT'S FIRST BEHAVIOR FOLLOWING THE MISCUE)
   A. TYPE: REPEATED ATTEMPT, CONTINUATION, IMMEDIATE SELF-CORRECTION, PAUSE, CALL FOR HELP, NO OPPORTUNITY

III. TEACHER VERBAL FEEDBACK (FIRST TEACHER BEHAVIOR IN RESPONSE TO A MISCUE)
   A. TYPE: NO VERBAL, TERMINAL (GIVING A TEXT WORD OR CALLING ON ANOTHER STUDENT) AND SUSTAINING (PROVIDING OPPORTUNITY OR HELPING THE STUDENT TO IDENTIFY THE TEXT WORD)
   B. FORM OF SUSTAINING: ATTENDING (NON-CUE FOCUSING), GRAPHO-PHONIC AND CONTEXTUAL
   C. TIMING OF TEACHER FEEDBACK: IMMEDIATE (LESS THAN 3 SECS) AND DELAYED (MORE THAN 3 SECS)
   D. POINT OF FEEDBACK: BEFORE THE NEXT SENTENCE BREAK, AT THE NEXT SENTENCE BREAK, OR FOLLOWING THE NEXT SENTENCE BREAK

IV. OTHER STUDENT VERBAL FEEDBACK
   A. TYPE: NONE, SOLICITED AND UNSOLICITED
   B. TIMING: IMMEDIATE (LESS THAN 3 SECS) AND DELAYED (MORE THAN 3 SECS)
   C. FORM: ATTENDING (NON-CUE FOCUSING), GRAPHO-PHONIC AND CONTEXTUAL

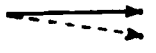
V. RESOLUTION
   A. TYPE: TEACHER IDENTIFIED TEXT WORD, STUDENT IDENTIFIED TEXT WORD, ANOTHER STUDENT IDENTIFIED TEXT WORD, OR MISCUE LEFT UNIDENTIFIED

HIGH READERS



Insertion (Low Meaning Change) (.3375)* (7.8%)	CONTINUE (95.2%)
Insertion (High Meaning Change) (.06875) (1.6%)	CONTINUE (78.2%) Repeated Attempt (10.9%), Self-Correct (10.9%)
Omission (Low Meaning Change) (.61250) (14.2%)	CONTINUE (75.9%) Self-Correct (17.1%)
Omission (High Meaning Change) (.16750) (3.9%)	SELF-CORRECT (44.0%), CONTINUE (33.6%) No Opportunity (14.2%)
Substitution (Low Meaning Change) (1.1312) (26.2%)	CONTINUE (67.3%) Self-Correct (11.4%), Repeat (10.2%), No Opportunity (9.9%)
Substitution (High Meaning Change) (.80125) (18.5%)	CONTINUE (32.1%), NO OPPORTUNITY (25.6%), REPEAT (24.6%) Self-Correct (17.6%)
Mispronunciation (All) (.6238) (14.4%)	SELF-CORRECT (60.1%) Repeated Attempt (20.3%), No Opportunity (11.1%)
Hesitation (All) (.58) (13.4%)	NO OPPORTUNITY (44.8%), SELF-CORRECT (29.3%) Continue (12.9%), Pause (11.64%)

LOW READERS



Insertion (Low Meaning Change) (.07875) (.8%)	CONTINUE (58.7%) No Opportunity (23.8%), Repeat (17.5%)
Insertion (High Meaning Change) (.09875) (1.0%)	NO OPPORTUNITY (60.8%) Continue (25.3%), Repeat (13.9%)
Omission (Low Meaning Change) (.27875) (3.0%)	CONTINUE (48.9%) No Opportunity (35.9%)
Omission (High Meaning Change) (.07875) (.8%)	SELF-CORRECT (46.9%), REPEAT (41.3%) Continue (12.7%)
Substitution (Low Meaning Change) (1.17125)(12.2%)	NO OPPORTUNITY (44.3%), CONTINUE (37.8%) Self-Correct (13.6%)
Substitution (High Meaning Change) (2.6875) (28.0%)	NO OPPORTUNITY (57.02%) Continue (20.9%), Self-Correct (13.9%)
Mispronunciation (All) (1.5838) (16.5%)	NO OPPORTUNITY (35.6%), SELF-CORRECT (35.6%) Repeated Attempt (19.02%), Continue (9.79%)
Hesitation (All) (3.6276) (37.8%)	NO OPPORTUNITY (73.6%) Pause (15.0%)

* Mean Number of Miscues/100 Words Read

 Primary Reaction  Secondary Reaction

HIGH READERS

Miscue	Reaction
Insertion (.12879)* (11.4%)	NO FEEDBACK (99.6%)
Omission (.2033) (18.2%)	NO FEEDBACK (87.3%)
Substitution (.5313) (47.5%)	NO FEEDBACK (74.2%) Terminal (13.6%), Sustaining (12.2%)
Mispronunciation (.1163) (10.4%)	NO FEEDBACK (58.1%) Terminal (26.9%), Sustaining (15.1%)
Hesitation (.1388) (12.4%)	TERMINAL (42.6%), NO FEEDBACK (38.4%) Sustaining (18.9%)

LOW READERS

Miscue	Reaction
Insertion (.0658) (2.4%)	NO FEEDBACK (55.1%) Terminal (38.0%)
Omission (.0971) (3.5%)	NO FEEDBACK (55.4%) Sustaining (38.2%)
Substitution (1.155) (41.4%)	TERMINAL (56.6%) No Feedback (27.5%), Sustaining (15.9%)
Mispronunciation (.3529) (12.6%)	TERMINAL (61.7%) No Feedback (22.2%), Sustaining (15.9%)
Hesitation (1.1198) (40.1%)	TERMINAL (74.2%) Sustaining (17.4%)

* Mean Number of Miscues/100 Words Read

——→ Primary Reaction - - - - → Secondary Reaction

HIGH READERS

Low Meaning Change Miscues (.61)* (73%) → NVF (85%); Sustaining (8%)

High Meaning Change Miscues (.23) (27%) → NVF (70%); Terminal (17%)

LOW READERS

Low Meaning Change Miscues (.45) (33%) → NVF (49%); Terminal (40%)

High Meaning Change Miscues (.92) (67%) → TERMINAL (63%); NVF (23%)

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* Mean Number of Miscues/100 Words Read

 Primary Reaction

 Secondary Reaction

HIGH READERS

Insertion (.10625)* (9.6%)	→	UNIDENTIFIED (78.2%)
	⇢	Student (21.8%)
Omission (.20156) (18.0%)	→	UNIDENTIFIED (55.2%)
	⇢	Student (35.0%)
Substitution (.47375) (42.6%)	→	UNIDENTIFIED (42.7%), STUDENT (42.2%)
	⇢	Teacher (11.7%)
Mispronunciation (.21844) (19.7%)	→	STUDENT (75.5%)
	⇢	Teacher (12.4%)
Hesitation (.11052) (10.0%)	→	STUDENT (48.3%), TEACHER (40.1%)
	⇢	Other (11.6%)

LOW READERS

Insertion (.049375) (2.0%)	→	TEACHER (38.0%), UNIDENTIFIED (34.2%), STUDENT (27.8%)
Omission (.09) (3.7%)	→	UNIDENTIFIED (39.6%), TEACHER (30.9%), STUDENT (29.5%)
Substitution (1.0041) (40.9%)	→	TEACHER (52.7%)
	⇢	Student (28.15%), Unidentified (17.6%)
Mispronunciation (.40094) (16.3%)	→	STUDENT (50.6%), TEACHER (41.9%)
Hesitation (.91156) (37.1%)	→	TEACHER (75.0%)
	⇢	Student (21.7%)

* Mean Number of Miscues/100 Words Read

→ Primary Reaction

⇢ Secondary Reaction

NRC, Students' Beliefs and Attitudes About Oral Reading Instruction
Disk 47, File 3, Galley 3d, mss. 306-309

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STUDENTS' BELIEFS AND ATTITUDES ABOUT ORAL READING INSTRUCTION

The child learning to read in the context of the classroom approaches instructional tasks with a complex set of beliefs and attitudes. According to Brophy and Evertson (1981), beliefs are statements about something or someone thought to be true whether or not they are. Attitudes are affective or emotional reactions to events or people. There is a substantial—though not particularly enlightening—history of research into attitudes and reading. Most of the research in this area has focused on attitude formation and its relationship to success in learning to read. More recently, there has emerged a line of research exploring children's beliefs or conceptions of reading at various stages of proficiency (Downing, 1969; Johns, 1970). The results of these studies seem to indicate distinct patterns of belief systems which are in part developmental and in part a reflection of the environmental influences of home and school.

The study to be reported in this paper examines student beliefs and attitudes toward oral reading in a specific instructional context—teacher guided oral reading. It was hoped that the insights gained from such an investigation might ultimately lead to more enlightened classroom practices. Teacher guided oral reading has been and remains a common part of the classroom routine at primary levels (Austin & Morrison, 1967; Howlett & Weintraub, 1980). Teacher guided oral reading typically takes the form of "round-robin" or "barbershop" reading. The practice has been indicted from many sides and for many reasons (Artley, 1972; Spache & Spache, 1977). One of the most common charges is that it is unfair to students—in particular low ability readers—exposing them to ridicule and embarrassment. The results of a survey by Daly and Hoffman (1981) of classroom practices and teacher attitudes toward guided oral reading would seem to indicate that teachers do not share this belief. Most primary teachers regarded guided oral reading as a valuable instructional activity for both good *and* poor readers. They do not view the task as unfair or embarrassing to poor readers. They do, however, perceive the activity as boring for both the teacher and the students. Teachers, by and large, seem to take the position that it doesn't have to be fun to be good for you.

METHOD

The research site was a moderate sized school district located in the south central region of the United States. The developmental reading program in this system could best be described as traditional with a basal orientation and an emphasis on ability grouped instruction. All teachers of students in the classroom studied reported frequent use of group guided oral reading as part of their instructional program. The data to be reported were collected as one part of a comprehensive investigation of teacher-pupil interactions during oral reading.

Subjects

Students from the high and low reading groups (N = 207) is 23 second grade classrooms in this district's ten elementary schools participated in the study. There were a comparable number of males and females in the sample.

Procedures

The data for this project were collected during weekly visits to the research site over a three month period in the fall of the year. The students in each group were selected at random. All tests and interviews were conducted individually outside of the classroom seting. Students were first administered the Slosson Oral Reading Test (SORT) to provide an estimate of reading achievement levels. This brief testing period was followed by an extensive interview session.

Instrumentation

The interview instrument consisted of 80 questions presented orally to students in a closed response format. Some of the items required the student to respond with a "yes" or "no" (e.g., "Do you enjoy reading?). Others required the students to state a preference (e.g., "Would you rather read out loud or read silently?"). No item contained more than two choices from which the students were to select. Six of the items were repeated exactly in other parts of the interview to check for response consistency. The items were clustered into six major sections related to the following themes: I. Attitudes; II. Perceived Ability; III. Proficiency Constructs: IV. Teacher's Role; V. Social/Evaluation Context; and VI. Models.

The items within each section had been developed and pilot tested as part of an earlier study (Hoffman, Kastler, and Nash, 1981). The first set of ten items in the Attitudes section explored students' feelings about reading in general, and the second set of ten items examined feelings toward oral reading in particular. The Perceived Abilities section had a similar breakdown with nine items focused on their silent reading ability and ine items on their oral reading ability. In the Proficiency Construct section there were five items designed to explore what the respondent knew about good oral reading performance and another five items over what the respondents knew about poor oral reading performance. The Teacher's Role section contained five items covering what the students liked the teacher to do when they made a mistake or otherwise encountered difficulty in oral reading. The Social/Evaluation Context section contained fifteen items related to how the respondents felt about others observing or judging their oral reading performance. The final section of the instrument contained five questions related to what models of oral reading the respondents are exposed to both in and out of the school setting.

RESULTS

A preliminary analysis was conducted to test the reliability of student response patterns. Tetrachoric correlation coefficients were computed for the six pairs of repeated items in the interview. The average correlation for all six pairs of items was .79. Each of the individual correlations was statistically significant at the $p<.001$ level.

Correlation matrices for each of the six major sections of the interview instrument were then computed as a test of construct validity. Separate matrices were formed for the general vs. oral reading attitudes section and the silent vs. oral reading perceived abilities section. The most highly correlated items within each section were then selected as the basis for computing a composite score on each subsection. There were no significant correlations between any of the items in the proficiency construct section so no composite score was created for this section. The Social/Evaluation Context section was broken down based on item content and inter-item correlation patterns into two new areas of audience effects and negative affect toward oral reading performance. The following areas were thus identified: (1) General Attitude (3 questions); (2) Oral Reading Attitude (5 questions); (3) Perceived Ability—silent reading (4 questions); (4) Perceived Ability—oral reading (4 questions); (5) Teacher's Role (3 questions); (6) Audience Effects (3 questions); (7) Negative Affects (3 questions); and (8) Home Reading Models (2 questions).

A multiple regression analysis was then performed using the SORT achievement test scores as the criterion variable and the eight composite scores as the predictors. The multiple R was found to be .37 ($p<.001$). This figure meets Cohen's (1977) criteria for a moderate effect size. Three of the eight composite scores were found to explain most of the variance. These were: perceived ability in oral reading; teacher role; and audience effects. A reduced multiple regression using just these three predictor variables yielded a multiple R of .34 with an adjusted R^2 of .10. The Beta weights for the three composite variables were .22 for perceived oral reading ability ($p<.002$); .20 for teacher role ($p<.004$); and .13 for enjoyment/audience effects ($p<.07$). The questions subsumed in each of these three composite variables are presented in Figure 1.

A subsample of high and low ability readers was identified next for purposes of performing an item analysis comparison of response patterns. The high ability reader group ($N=77$) consisted of readers assigned to a high reading group in their classrooms and scoring higher than the 3.5 grade level on the SORT. The low ability reader group ($N=50$) consisted of readers assigned to a low reading group in their classroom and scoring less than the 2.5 grade level on the SORT. Only the most striking points of contrast in response patterns will be presented in this summary.

The responses of students in both the high and low groups reflected positive feelings about reading in general. Questions which made either direct or indirect comparisons of silent and oral reading tasks revealed that both groups hold a more positive view of silent reading than oral reading. A majority of high readers (70%) reported that reading out loud is fun, while the majority of low readers (52%) reported that it was not fun. Both groups responded overwhelmingly (95% to 5%) that their teachers thought of them as good silent readers. The figure remained almost the same (93% yes) for the high group when asked whether their teacher thought of them as good oral readers. In the low group, though, the percent of students who reported that their teacher did not think of them as good oral readers rose to 25%. Only half of the low group regarded themselves as good oral readers whereas 83% of the low group regarded themselves as good silent readers. For the high group, 87% regarded themselves as good oral readers and 95% as good silent readers.

Both groups overwhelmingly preferred that the teacher help them figure out unknown words over giving them the word (89% vs. 11%). When asked whether they liked for the teacher to call on other kids to help with words, 73% of the low group regarded the practice favorably as compared to only 56% of the high group.

A vast majority (90%) of the high group readers reported that they like to read out loud in their reading group. 44% of the low group readers responded that they did not like to read out loud in their groups. This difference is in contrast to the congruent pattern of responses to the question of whether they enjoyed reading out loud to the teacher when they were alone (83% *yes* for the high group and 74% *yes* for the low group). Students in both groups revealed sensitivity to the evaluative aspects of reading orally in groups. They agreed that oral reading performance affected placement in high or low reading groups. Most students in both groups reported that they tried hard not to make mistakes when reading orally. The majority of students in both groups also reported feeling nervous when reading orally with others listening.

DISCUSSION

The findings from this study suggest that even by the beginning of second grade students have some developing beliefs and attitudes toward oral reading instruction. These beliefs and attitudes are clearly tied to reading ability. The three composite variables (i.e., perceived ability in oral reading, teacher's role, and audience effects) identified through the multiple regression analysis point to those areas where beliefs and attitudes are strongest. The better the reader the greater the enjoyment regardless of the social or performance context. Also, the better the reader the greater the desire for the teacher to assume a low profile in helping when difficult words are encountered. The poorer the reader the less the enjoyment and the greater the desire for teacher involvement. It is also interesting that the variable perceived ability in oral reading relates (i.e., predicts) reading achievement much better than does perceived ability in silent reading. Valid or not, oral reading performance seems to be the best gauge for students to use in evaluating their own ability.

The analysis of specific items relative to extreme ability levels adds additional evidence to suggest that, at least for poor readers, oral reading is a stressful and anxiety producing part of the classroom instructional routine.

ACKNOWLEDGEMENTS

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FIGURE 1

Perceived Ability in Oral Reading

Are you a good oral reader?

Do you read out loud very well?

Do other kids think you are a good oral reader?

Does your teacher think you are a good oral reader?

Teacher's Role

Do you like for the teacher to tell you words when you don't know them?

Do you like for the teacher to call on other kids to help you with the words?

Do you like for the teacher to help you figure out words you don't know?

Audience Effects

Do you like to read out loud when the teacher calls on you in the reading group?

Do you like to read out loud to the whole class?

Do you like to read out loud to your teacher when you are alone together?

ON PROVIDING FEEDBACK TO READING MISCUES

by James V. Hoffman

ABSTRACT

The author examines the potential for oral reading with individual students at their instructional level as a means for developing basic word recognition strategies. Three dimensions of feedback are identified with respect to the teacher's crucial role of providing feedback during such reading interactions. The first dimension of selectivity relates to how teachers determine which miscues they will or will not make an overt response to. The second dimension of timing addresses the question of when such feedback should be offered. And the final dimension of form considers the actual characteristics of the prompt itself.

Both teachers and their students have a theoretical orientation toward reading i.e. " . . . a particular knowledge and belief system (which) . . . operates to establish expectancies and strongly influences a whole host of decisions made . . . relative to reading" (Harste & Burke, 1977). While this orientation is often implicit in that neither the teacher nor the student may be aware of its form, it is possible to infer about the characteristics of a particular model based on observations of performance. For a teacher, this may mean examining patterns in instruction such as materials, management procedures and so on. For a student, this may involve extensive qualitative analysis of reading performance. Harste and Burke propose that a student's theoretical orientation toward reading is at least in part a product of that individual's instructional history. In other words, a student's model of reading will tend to evolve toward the teacher's orientation as a result of instructional interactions. If this argument is valid then it would seem imperative that teachers devote considerable time in

analyzing the theoretical orientation implicit in materials and procedures they presently use.

Perhaps the most immediate manner in which teachers vent their theoretical orientation during instruction is through the form of feedback provided to students while they miscue during oral reading. Such interactions not only allow teachers to study a student's model of reading, but perhaps more importantly they allow students the opportunity to examine the teacher's model vis a vis the prompts which are provided. Students are then free to accommodate the information gained through interactions with a mature, "proficient" model of reading to adapt and refine their own.

What do we know about the dynamics of the interactions which take place between teacher and student under such circumstances? Surprisingly very little, when we consider the amount of instructional time devoted to oral reading exercises in primary classrooms. We hear critics repeatedly attack the all too common abuses of oral reading in the classroom such as "round robin" exercises, yet seldom are teachers counseled as to how they might constructively incorporate oral reading into an instructional program. Advocates of purposeful oral reading, where success is insured, rehearsal allowed, and an audience provided, generally emphasize the opportunity to develop interpretive purposeful oral reading, where success is insured, rehearsal allowed, and an audience provided, generally emphasize the opportunity to develop interpretive and performance skills. It is this author's contention that oral reading at a student's instructional level with a teacher present to provide feedback to miscues also has great potential for the development of basic word recognition skills. The purpose of this brief article will be to identify and examine some dimensions of feedback both from a research and applied perspective as they relate to oral reading. No attempt will be made to formulate specific prescriptions as to what teachers should do in various contexts. Hopefully, though, enough information will be presented to make teachers first aware of the major variables in operation and second to consider what patterns of feedback are consistent with their own theoretical orientation.

Dimensions of Feedback

Kulhavy (1977) has proposed that feedback aims at two main goals in learning. First, it provides the learner with information about the accuracy with which he is performing a task. Second, feedback can affect errors by telling students when they occur, and then allowing them to engage in corrective activity. In terms of accuracy two things can occur when students read orally: (1) They can confirm our expectations by responding with the words as we perceive them in the text, or (2) they can miscue, i.e., respond in some way which deviates from our

expectations. This second category would also include those occasions in which the observed response is no response (e.g., the student stops reading, asks for assistance, and so on).

Overt feedback for a correct or an expected response by the teacher is atypical in most situations. Apparently, it is assumed that the intrinsic reinforcement present in correct identification combined with an absence of a negative response provide together a sufficient level of positive reinforcement. How and under what conditions teachers respond to miscues varies considerably and is dependent on their specific rules for feedback. Such rules specify both the conditions under which they are put into operation as well as the range of alternative response strategies. There appear to be at least three identifiable dimensions to these rules as they relate to oral reading: selectivity, timing, and form. Each of these dimensions will be in turn considered and analyzed.

Selectivity of Feedback

Decisions as to the most appropriate form and timing of responses are meaningless without first developing guidelines as to which deviations they should be applied to. The selectivity dimension specifies those conditions under which the response component of the feedback mechanism is put into operation. How selective our feedback strategies are may range from an absolute criterion level where each and every deviation is given a response to a highly selective level where a decision to intervene is based on a consideration of complex situational variables.

The tendency in controlled research studies into the effects of prompting and feedback on learning has been to measure performance only in binary terms which thereby elicit a reaction solely on the basis of incorrect or unanticipated responses. Such a practice certainly oversimplifies the relationship between feedback and learning; and, more importantly, does not reflect the complex reality of learning environments where such interactions typically occur. Although a miscue and an oral reading error might share a common operational definition, there are qualitative characteristics in which they can differ greatly. Analogously, while there may be any number of incorrect responses to a straightforward literal level question, some answers may be more "right" than others. So too with miscues, some deviations from the text are simply more acceptable than others. When one adopts a unidimensional mechanism of . . . if deviation then response . . . one reflects a notion that reading is an all or nothing mastery task rather than a progressive movement toward proficiency.

A response mechanism which is keyed toward this notion of movement toward proficiency will identify and attempt to build on

how well the reader is performing relative to his own needs. It would be a difficult though feasible task to identify and weight any number of situational variables which might influence one's decision to respond or not respond including such factors as the student's ability level, the difficulty of the text, and the purpose of the reading exercise. The greater the number of variables one might incorporate into a decision making scheme, however, the more complicated the matrix to be manipulated. So complicated in fact, that due to our limited processing capabilities, we very quickly render our feedback strategies inoperative. This is not to suggest that we abandon the principle of selectivity altogether, rather that (at least initially) we must severely limit the variables that are considered if the system is to be kept manageable.

One promising approach would be to key the decision to respond primarily to qualitative characteristics of the deviations or miscues themselves. K. Goodman (1967) and Y. Goodman & Burke (1972) have provided us with both a theoretical framework as well as practical models for such analyses. Applying these principles, even at a very informal level, we can make valid and reliable judgments as to a miscue's grapho-phonic, syntactic, and semantic appropriateness. While there has been little research into the effects of differentiated prompting based on such an analysis, there have been relevant findings related to miscue characteristics and student's self-correcting behavior.

Goodman (1973) in examining the correction strategies of low, average, and high ability readers found that no one group corrected more than 38% of its miscues. It was found, however, that across these ability groups some forms of miscues were more likely to be corrected than others. There was a strong tendency, for example, to correct miscues which result in unacceptable or partially acceptable semantic and syntactic structures. There was also a tendency not to correct miscues with low grapho-phonic similarity if the criteria for semantic and syntactic acceptability were met.

It has been suggested that the self-correcting strategies employed by more proficient readers might form reasonable guidelines with respect to selecting which types of miscues might require direct feedback (Goodman & Burke, 1974; Recht, 1976; Hoffman, 1977). These authors suggest that teachers respond with some form of feedback only when miscues fail to meet the criteria of syntactic and semantic appropriateness. Such a condition for selectivity not only has greater theoretical appeal and research support than responding to each and every miscue, but also is a more realistic alternative to those who suggest we consider every variable under the sun before deciding whether to respond or not.

Timing of Feedback

Once the decision to respond has been made, consideration must be given to the time frame in which it is offered. Feedback can be given immediately or it can be delayed for some period (e.g. after the student has finished a sentence or paragraph). The concept of wait-time as proposed by Rowe (1972, 1974) in studies of teacher/student questioning behavior can be readily adapted to an understanding of the effects of timing of feedback during oral reading. Rowe (1974) identifies two varieties of wait-time: the time allowed to a student to begin a reply to a teacher's question and the time following a student statement prior to a teacher's reaction (Figure 1). Rowe (1972), in a study of teachers trained to increase wait-time, identified changes in student performance including an increase in the length of responses and a decrease in the number of failures to respond. Changes in teacher behavior included an increase in response flexibility and greater variety in questioning patterns.

Applying this same structure to an analysis of feedback during oral reading, we can identify and define two classes of wait-time (A) the time allowed to the student between his last correct response and the next one, and (B) the time following a student miscue prior to a teacher's reaction (see Figure 2). Although there has been little research to date investigating the effects of changes in wait-time intervals on oral reading performance, it is possible to speculate on the possible outcomes.

Adopting Smith's (1971) perspective from signal detection theory we would expect that as wait-time A increases, the number of miscues as well as the number of correct identifications will increase. Smith argues that these two possibilities are tied directly together. That is, if our objective is to increase the number of correct responses we must encourage and be willing to tolerate an increase in the number of miscues.

Insight into the effects of an increase in wait-time B can be gained through a consideration of the Delay Retention Effect (DRE). This effect occurs when learners have feedback delayed for some period. Subjects for whom feedback is delayed, generally show greater recall than for those who are given immediate feedback. Kulhavy (1977) explains that "When a student makes an error and receives feedback immediately, the chances of interference between correct and incorrect choices are high, simply because the item stems are identical and the response antagonistic" (p. 223). However, when a delay is placed between the error and feedback incorrect responses are forgotten and the likelihood is greater that the correct answer will be remembered. DRE research has also demonstrated that feedback not only works to identify errors, but in appropriate tasks leads subjects to correct them-

selves (Kulhavy & Anderson, 1972). Similarly, as wait-time B is increased in oral reading, accuracy should be effected positively through an increased opportunity for student self-correction as the force of context grows stronger. An added benefit of an increase in wait-time B is that the observer is given more time both to consider selectivity criterion (i.e. whether to respond or not) as well as more time to reflect on the most appropriate form of feedback.

Form of Feedback

The form of feedback provided by teachers to oral reading miscues typically range from a simple "no" or unacceptable response to the presentation of substantial corrective information in the form of prompts. Duell (1968) defines prompting as the pairing of a cue, the stimulus that is to control, with a prompt, a stimulus which already controls or partially controls the desired response. The goal is to shift control of the response from the prompt to the cue with which the prompt is paired.

Research reported by Anderson, Brophy, and Evertson (1977) as part of a larger study into general characteristics of teacher effectiveness (Anderson & Brophy, 1976; and Ogdon, Brophy, and Evertson, 1977) offers insight into the effects of various forms of prompting. They classify prompting strategies into two general types: terminal and sustaining. Terminal feedback during oral reading would include such actions as the teacher giving the appropriate word, the teacher asking another student to supply the word, or another child calling out the word before the teacher can respond. Sustaining feedback includes teacher actions which call for the student to try alternatives based on closer examination of cues such as initial and final letters, word length, the meaningful context, and so on. Their study was designed to investigate the effects of these two different forms of teacher feedback behavior as related to residual gain scores in reading achievement over a one year period. They found that terminal feedback to inappropriate responses (in the form of supplying the correct response) was negatively related to learning. Sustaining feedback (in the form of clues or helping with simple questions) was positively related to gains.

The specific form of sustaining feedback to be offered can be further delineated in terms of the "level" of response being cued. That is, where is it that we are asking the student to focus attention? Allington (1978) identifies and provides examples of three levels of what could be termed sustaining prompts:

> "Graphemic – teacher comments which direct the reader to attend to a visual aspect of the word . . . (e.g.) What's the first letter?

> Phoneme – teacher comments which direct the reader to attend to a grapheme-phoneme correspondence . . . (e.g.) Sound it out.
>
> Semantic and Syntactic – teacher comments which direct the reader to attend to either syntactic or semantic aspects of the sentence . . . (e.g.) Does that make sense?" (p. 6)

It is Allington's contention that the level of sustaining responses serves to orient and focus students' attention. If this is the case then the level at which a teacher *begins* the prompt seems to be most critical. Here teachers have an opportunity to exercise decisions based on specific diagnosis of an individual student's strengths and weaknesses. Perhaps the most basic consideration in determining the level of response is to examine the criteria used in the dimension of selectivity. In other words, those miscues we choose to respond to gives us considerable guidance as to *how* we should respond. If selectivity is keyed to characteristics of the miscue (e.g. violating semantic constraints) then it would seem logical to begin sustaining feedback at that level.

Summary

The effects of feedback during oral reading on the development of reading proficiency are too important to be left to simple intuition. There is perhaps no other moment in instruction where a teacher's and student's models of reading come into closer contact. Recognition of this fact requires that teachers place under careful scrutiny their own prompting strategies. Three dimensions of feedback have been identified in this article which should allow teachers to begin to formulate such an analysis: selectivity, timing and form.

Rather than begin with an attempt to develop a theoretically perfect or ideal model for intervention and then attempt to put it into operation all at once, a more realistic approach would be for each teacher to analyze their current strategies with respect to each of the dimensions presented. Once this is accomplished, it is suggested that changes in strategies be incorporated on one dimension at a time so the effects in student performance can be directly observed and evaluated.

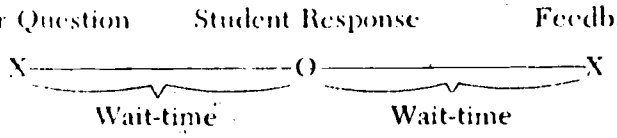

Figure 1 Wait-time in teacher questioning behavior

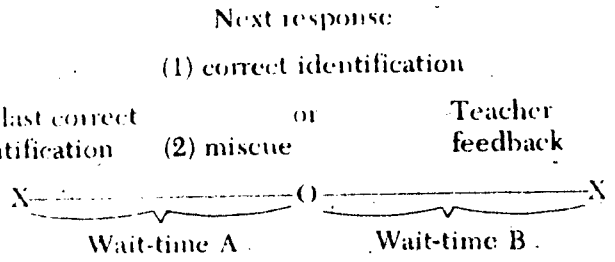

Figure 2 Wait-time in teacher prompting during oral reading

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Characterizing teacher feedback to student miscues during oral reading instruction

Charting your teacher/student interactions helps you see how you're responding to different types of student miscues and how the miscue is resolved.

James V. Hoffman
Christopher Baker

We have made remarkable strides over the last decade in our understanding and appreciation for the information embedded in student's oral reading miscues. The work of Kenneth Goodman (1967), Yetta Goodman and Carolyn Burke (1972), and Kenneth Goodman and Carolyn Burke (1973) has provided us with the tools, techniques and conceptual framework for analyzing oral reading performance in qualitative terms. While this approach has had substantial impact on reading education in many areas, to date we have largely ignored the fact that oral reading occurs more often as part of an instructional interaction between teacher and student than as purely diagnostic exercise.

In an instructional context, oral reading becomes a dialogue in which information is exchanged between teacher and student. This verbal interaction typically arises from the teacher's efforts to give students feedback about their miscues. Consider the following examples:

Example 1

Text:	They didn't lack supplies.
Student:	"They didn't (pause) lack supplies."
Teacher:	"Short *a*, rhymes with back."

Example 2

Text:	Mr. Brown finished the newspaper.
Student:	"Mr. Brown finished the na-ear-sp-na."
Teacher:	(Pointing to picture) "What's he reading?"

Example 3

Text: The apples were hanging from the branches.
Student: "The apples were hanging from the bushes."
Teacher: (Says nothing to the student)

Example 4

Text: The train streaked through the tunnel.
Student: "The train stretched through the tunnel."
Teacher: "That word is 'streaked.'"

In each instance we see evidence for different kinds of processing by the students. The miscues are revealing of the strategies each student tends to rely on when difficulties arise. Similarly, the feedback offered by the teachers is revealing of distinct orientations to the reading process. Telling the student a word, directing the student to sound out a word, focusing the students' attention on meaning, and ignoring a miscue are markedly different approaches. Which is the most effective approach? In what ways will repeated exposure to one strategy or the other affect the development of reading skills?

This article will offer no simple answers to these questions. What will be presented is a systematic procedure for teachers to examine the characteristics and effects of their own feedback to oral reading miscues. Specifically, this procedure should enable teachers to analyze their feedback patterns, assess the impact of their preferred feedback strategies on student reading performance, and explore how alternative strategies might affect students differently.

FORMAS—feedback to oral reading miscue analysis system

The FORMAS coding procedure has been developed as a simple means for resenting teacher and student raction about miscues during l reading instruction. The version of the FORMAS taxonomy presented here is a modification of a more elaborate instrument (Hoffman and Baker, 1980). It allows teachers to chart student miscues and their own feedback to the student.

The FORMAS taxonomy can be presented on a chart or coding sheet. The miscues (both expected and observed responses) are to be written in at the far left. The five-cluster analysis of each miscue is then simply checked off, moving from left to right across the sheet. (Portions of the coding sheet and each cluster will be presented as they are discussed.)

The chart

The starting point for using FORMAS is a tape recorded sample of oral reading instruction. This can be a group lesson or one in which the teacher is working with a single student. After the sample is collected, the teacher locates each student miscue on the tape and in the text, and lists both the *expected* and *observed* responses in sequence on the coding sheet, as shown.

Miscue number (order of occurrence)	Expected Response (and its location in text)	Observed Response (and identification number of student reading)
1	RESCUED (15)	SAVED (1)
2	A (20)	ONE (1)
3	THE (90)	A (1)
4	LONELY (89)	ALONE (1)
5	EXHAUST (60)	— (1)
6	WASN'T (76)	WAS (1)
7	PENETRATE (89)	PENTRATE (1)

In depth analyses of each miscue and its corresponding feedback follow, as the teacher checks items under five major clusters of behavior on the coding sheet. Each cluster will be explained here in its turn, with frequent references to the set of definitions presented at the end of the article. (The small number for each heading in the Figures corresponds to the related definition.)

Cluster I: The miscue

In this cluster we first identify which of seven *types* of miscues the student has made (items 5-12).

Cluster I														
4 Miscue														
5 Type								13 Characteristics						
6 Insertion	7 Omission	8 Substitution	9 Mispronunciation	10 Don't know	11 Hesitation	12 Repetition		14 Little change in meaning	15 Substantial change in meaning	16 High graphophonic similarity	17 Low graphophonic similarity			
		X						X			X			
		X						X			X			
		X						X			X			
		X						X			X			
					X			—	—	—	—			
	X								X	—	—			
			X						X	X				

For certain types of miscues (i.e., insertions, omissions, substitutions, and mispronunciations) we then determine under *characteristics* (items 13-17) the degree to which the miscue changed the meaning of the text and tne degree to which the observed response resembles the expected response graphophonically. Only substitution and mispronunciation miscues are analyzed for graphophonic similarity.

We have found in working with teachers that it is much easier if only single word miscues are coded. Complex miscues involving two or more consecutive text words are very difficult to code since it is often hard to tell which miscue the teacher is responding to. We suggest that complex miscues be tallied below the chart in a space labeled *multiple miscues* but that they not be analyzed across the coding sheet.

Cluster II: Student reactions

Here we address how the student is attempting to deal (if at all) with his/her own miscue prior to any intervention from the teacher or another student.

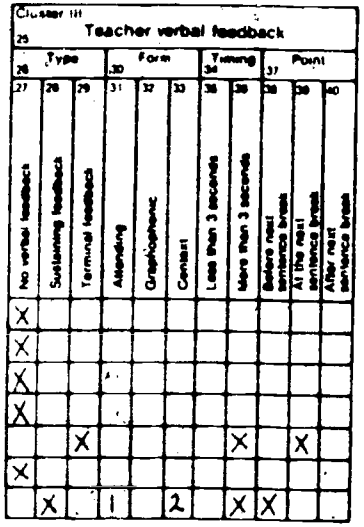
Cluster II Student reactions						
18						
19 Continuation	20 Repeated attempts	21 Pause	22 Call for help	23 No opportunity	24 Immediate self-correction	
X						
X						
X						
X						
	X					
		X				
		X				

The first behavior manifested by the student following a miscue is coded here. If feedback is offered by the teacher or another student so quickly as to preclude any opportunity for reaction by the student, then this cluster is coded as *no opportunity*.

Cluster III: Teacher verbal feedback

The teacher's verbal response to the miscue provides the focus for the third cluster. His/her initial response determines which of the three *types* is coded (items 26-29). Among these, *sustaining verbal feedback* means the teacher encouraged the student to identify part or all of the target word (e.g., the teacher said "Try again" or "Does that make sense?"). In these cases, the specific form of sustaining feedback used must be identified,

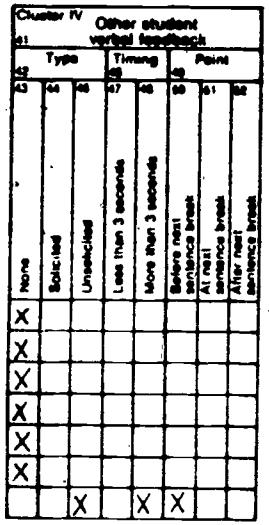
under *form* (items 30-33). If combinations of the categories under *form* are used, the teacher can record numbers rather than crosses to indicate the sequence of sustaining feedback behaviors used.



The final two categories of Cluster III capture the *timing* (rapidity) and *point* (location in the sentence) of the teacher's initial response to a miscue. Note that these categories are also to be coded when the teacher's initial response to a miscue is to give the child the text word or call on another student (*terminal feedback*).

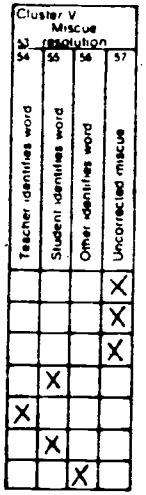
Cluster IV: Student verbal feedback

The cluster of *other student verbal feedback* behaviors is used only when coding group instruction. It records any student behavior other than the reader's that is miscue directed. The *time* and *point* categories for student rruption within this cluster paral- xactly the categories for teacher rruption in Cluster III.



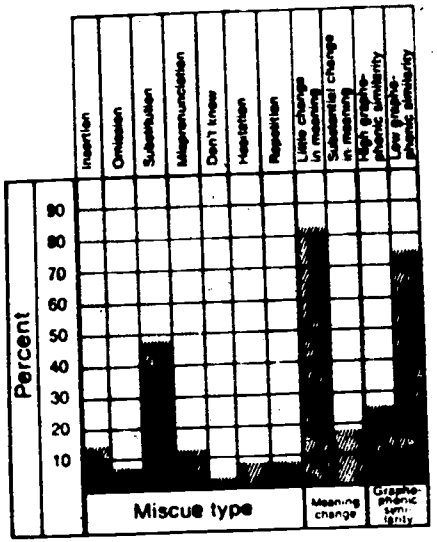
Cluster V: Resolution

The final cluster focuses on what happens ultimately to the observed miscue. The four categories (53-57) specify who identifies the text word or whether the miscue is left uncorrected.



Interpretations

Once the miscues and feedback have been coded, percent distributions within each cluster can be computed to develop a profile of teacher/pupil interactive behaviors. The profile becomes a visual representation of preferred strategies on both the teacher's and readers' parts. For example, in Cluster I a percentage profile charted as below indicates that approximately half the miscues recorded for a group of students were substitutions which generally conveyed the author's intended meaning and were not graphophonically similar to the expected responses. Further interpretations can be gleaned from a percentage profile of each cluster.



Potential uses and implications for research

The verbal interactions which occur between teacher and student are central to the instructional process. Zintz (1980) suggests that a close examination of these patterns can lead to more effective instruction—awareness being the first step toward improvement. In addition to providing teachers with insight into their own interactive patterns, this observational system permits examination of the stability of behaviors—either teacher or student—across different instructional contexts. For example, teachers might be interested in looking at how their patterns differ during instruction with a good group of readers versus a poorer one. Teachers might also use the profile from this observational system as an index of their current behavior and then systematically make slight changes in their behavior to observe the effects of these changes on student behaviors. For example, a teacher might want to work on extending the time s/he waits between the occurrence of a miscue and the initiation of feedback. Recordings of subsequent instructional episodes could be used to analyze teacher success in extending this wait-time as well as examine changes in student behaviors (e.g., an increase in the number of student self-corrections).

To the researcher, the observation of oral reading instruction using this system offers great potential for enhancing our understanding of classroom processes both in terms of how teacher behavior affects pupils and how pupil behavior affects teachers. Field studies using a process/product type of research paradigm could identify and isolate factors associated with specific student outcomes.

(A complete training manual for use of the FORMAS taxonomy is available on request from The Research and Development Center for Teacher Education, The University of Texas at Austin, Manual No. 5085, Austin, TX 78712, USA.)

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Definitions for categories on FORMAS
(Number coded and listed in the order they appear on the coding sheet/chart)

1. Miscue number - the sequence for each miscue in relationship to other coded miscues.
2. Expected response - a text word and/or its numerical position in the sequence of text words.
3. Observed response - a student response and/or the identification number of the student reading.

Cluster I - Miscue

4. Miscue - an observed response that differs from an expected response.
5. Miscue type - classification scheme for observed miscues.
6. Insertion - the reader inserts a word or an affix which is not present in the text.
7. Omission - the reader omits a word or an affix which is present in the text.
8. Substitution - the reader substitutes a word or an affix for one which is present in the text.
9. Mispronunciation - the reader substitutes a partial or complete nonsense utterance for a word or affix which is present in the text.
10. Don't know - the reader stops before attempting a word and verbally requests teacher assistance.
11. Hesitation - the reader pauses before attempting a word for at least 3 seconds or the teacher intervenes before the 3 second period elapses.
12. Repetition - saying a text word or set of adjacent text words two or more times.
13. Miscue characteristics - qualitative features of each particular type of miscue.
14. Little change in meaning - the miscue alters the author's intended meaning only slightly.
15. Substantial change in meaning - the miscue alters the author's intended meaning significantly.
16. High graphophonic similarity - at least 2 of the 3 parts of the observed response conform to the expected response.
17. Low graphophonic similarity - less than 2 of the 3 parts of the observed response conform to the expected response.

Cluster II - Student reactions

18. Student reactions - how the reader initially deals with his/her miscue.
19. Continuation - student continues reading with no apparent attention to the miscue.
20. Repeated attempts - the reader makes repeated attempts at identifying the text word.
21. Pause - student stops reading for at least 2 seconds after the miscue occurs.
22. Call for help - reader explicitly requests teacher assistance after miscue has been made.
23. No opportunity for reaction - teacher or another student intervenes within 2 seconds of the miscue and before any other reaction by the student is evidenced.
24. Immediate self-correction - student self-corrects the miscue immediately.

Cluster III - Teacher verbal feedback

25. Teacher verbal feedback - initial verbal teacher behavior that follows a miscue and reader's reaction to the miscue and relates to the expected or observed response.
26. Feedback type - the general nature of teacher feedback.
27. No verbal feedback - teacher displays no verbal feedback strategy which is directly related to the identification of the target word.
28. Sustaining feedback - teacher verbal feedback that provides the reader with the opportunity to identify part or all of an expected response.
29. Terminal feedback - teacher identifies target word or calls on another student.
30. Feedback form - specific characteristics of sustaining teacher feedback.
31. Attending - sustaining feedback which is noncue focusing, e.g., "Try again."
32. Graphophonic - a sustaining prompt which relates to visual and/or sound-related characteristics of the miscue and/or the expected response.
33. Context - a sustaining prompt which relates to the surrounding semantic (meaning) or syntactic (structural) features.
34. Timing of teacher feedback - the time (in seconds) that elapses between the miscue and the initiation of feedback.
35. Less than 3 seconds - time elapsing between the occurrence of a miscue and teacher feedback.
36. More than 3 seconds - time elapsing between the occurrence of a miscue and teacher feedback.
37. Point of feedback - sentence position, relative to the miscue, at which the teacher provides feedback.
38. Before the next sentence break - teacher feedback is offered before the student completes reading the sentence containing the target miscue.
39. At the next sentence break - teacher feedback is offered when the student completes reading the sentence containing the target miscue.
40. After the next sentence break - teacher feedback is offered when the student has read beyond the sentence containing the target miscue.

Cluster IV - Other student verbal feedback

41. Other student verbal feedback - verbal behavior of a student other than the reader relating to the expected or observed response.
42. Student feedback type - the general nature of other student verbal feedback.
43. None - no other student offers verbal feedback directly related to the miscue.
44. Solicited - a student's verbal feedback is requested by the teacher.
45. Unsolicited - verbal feedback is volunteered by a student and not requested by a teacher.
46. Timing of student feedback - the time (in seconds) that elapses between the miscue and the initiation of a student's feedback.
47. Less than 3 seconds - time elapsing between the occurrence of a miscue and student feedback.
48. More than 3 seconds - time elapsing between the occurrence of a miscue and student feedback.
49. Point of feedback - sentence position, relative to the miscue, at which a student provides feedback.
50. Before the next sentence break - other student feedback is offered before the reader completes the sentence containing the target miscue.
51. At the next sentence break - other student feedback is offered when the reader completes the sentence containing the target miscue.
52. After the next sentence break - other student feedback is offered after the reader has progressed beyond the sentence containing the target miscue.

Cluster V - Miscue resolution

53. Miscue resolution - whether or not the miscue is corrected, and the individual correcting the miscue.
54. Teacher identifies word - teacher identifies word (or corrects a student's miscue).
55. Student identifies word - reader self-corrects the miscue.
56. Other identifies word - person other than the teacher or student reading identifies target word.
57. Uncorrected word - student continues reading with miscue left uncorrected.

Multiple miscue

58. Multiple miscue - a tally of student generated miscues that involve two or more consecutive text words which are not attended to individually either through self-correcting or teacher feedback.

FORMAS

MISCUE NUMBER	EXPECTED RESPONSE	OBSERVED RESPONSE	CLUSTER I MISCUE: TYPE — INSERTION	OMISSION	SUBSTITUTION	MISPRONUNCIATION	DON'T KNOW	HESITATION	REPETITION	CHARACTER-ISTICS — LITTLE CHANGE IN MEANING	SUBSTANTIAL CHANGE IN MEANING	HIGH GRAPHIC-PHONIC	LOW GRAPHIC-PHONIC	CLUSTER II REACTIONS — CONTINUATION	REPEATED ATTEMPTS	PAUSE	CALL FOR HELP	NO OPPORTUNITY	IMMEDIATE SELF CORRECTION	CLUSTER III TEACHER VERBAL FEEDBACK — TYPE: NO VERBAL FEEDBACK	SUSTAINING FBK	TERMINAL FEEDBK	FORM: ATTENDING	GRAPHO-PHONIC	CONTEXT	TIMING: LESS THAN 3 SEC.	MORE THAN 3 SEC.	POINT: BEFORE NEXT SENTENCE BREAK	AT THE NEXT SENTENCE BREAK	AFTER NEXT SENTENCE BREAK	STUDENT VERBAL FEEDBACK — TYPE: NONE	SOLICITED	UNSOLICITED	TIME: LESS THAN 3 SEC.	MORE THAN 3 SEC.	POINT: BEFORE NSB	AT NSB	AFTER NSB	RESOLUTION — TEACHER CENTERED WSL	STUDENT CENTERED WSL	OTHER CENTERING WSL	UNCORRECTED MISCUE
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PERCENT 50																																								
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PERCENT 20																																								
PERCENT 10																																								
			MISCUE TYPE							MEANING CHANGE		GRAPHO-PHONIC SIMILARITY		STUDENT BEHAVIOR FOLLOWING MISCUE						FEEDBACK TYPE			FEEDBACK FORM			FEEDBACK TIMING		POINT OF FEEDBACK			FEEDBACK TYPE			FEEDBACK TIMING		POINT OF FEEDBACK		MISCUE RESOLUTION			

GROUP _____ STUDENT(S) 1 6 7 8 9 10 _____ DATE _____ TEXT _____

FORMAS--Feedback to Oral Reading Analysis System Training Manual

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Research and Development Center
for Teacher Education

The University of Texas at Austin

Manual No. 5085

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FORMAS--Feedback to Oral Reading Analysis System

Training Manual

Introduction

This manual is designed to prepare you to use the FORMAS coding system (Hoffman & Baker, 1980). The only training materials you will need are this booklet, a stopwatch, and the accompanying audiocassette tape. The average training time necessary to achieve recommended proficiency levels is approximately ten hours.

Background

FORMAS is a low-inference coding system developed to characterize the verbal interactions which transpire between teacher and students during oral reading instruction. Oral reading instruction is defined as student(s) reading aloud from a text with the goal of improving decoding skills and a teacher in a position to monitor performance. The setting may be either group guided or individual tutorial.

Five major clusters of behaviors are represented in the coding system. Cluster I focuses on the characteristics of the miscue itself. Following Goodman (1969), a miscue is defined as an observed response which differs from an expected response. Only single word miscues are coded in the system. Miscues which involve two or more contiguous text words are tallied in the system but not analyzed.

Cluster II specifies the ways in which the student is attempting to deal with the miscue just made. For example, the student may keep on reading with no apparent attention to the miscue, or the student may stop and make repeated attempts at identifying the text word. Only the first behavior of the student following the initial miscue is coded in this cluster.

Clusters III and IV address the verbal feedback to the student's miscue. In Cluster III teacher verbal behavior directed toward the student is classified in terms of the type, point, and timing of overt feedback, if offered. Cluster IV is coded when group oral reading instruction is being observed. In this cluster, the verbal feedback to the miscue offered by other students in the group is represented.

The final cluster (V) informs us as to the resolution of miscues. The miscue may be left uncorrected, or the teacher, another student, or the student who made the miscue may finally identify the correct word.

There are two points which the potential user of the system should keep in mind. First, while the system is designed to be "low-inference," there are decisions you will be forced to make in certain categories. We will clearly label these gray areas in our discussion of the system. When making coding decisions in these areas, strive for consistency. That is, that at a minimum you would make the same decision again given similar circumstances. Second, as with any coding system, it is very important that we achieve high levels of agreement (reliability) between different coders. You should be able, after training in this system, to code a given instance of oral reading instruction with substantial agreement with any other trained coder. This degree of expertise will come only as a result of (1) knowledge of the system, (2) practice in coding with the system, and (3) consistency in all coding decisions.

There are six lessons in this manual--one lesson for each of the five clusters of the taxonomy and one covering additional information required by the coding system. The two part pattern for each lesson is the same across all clusters. In Part 1 you will be given a narrative description of the cluster with the appropriate operational definitions. In Part 2,

you will listen to a taped oral reading session and practice marking the text and coding, and then compare your marked text and codes with the correct ones. Upon completion of the six lessons you will be given extended practice coding three additional reading sessions until criterion levels of agreement are reached.

Lesson 1 Cluster I The Miscue

Part 1: Introduction

Definition of MISCUE (4)*: An observed response which differs from an expected response.

Miscues are coded in this system in a sequence which reflects their order of occurrence. The "miscue number" (1) relates to the ordinal position of that miscue in the interaction that is being coded. The "expected response" (2) refers to the text word that is involved in the miscue. The text word for each miscue should be written directly on the coding sheet. The "observed response" (3) refers to what the student did (or did not do) in making the miscue. The observed response for each miscue should be written directly on the coding sheet. Next to the observed response the coder should record the I.D. number to specify the student who made the miscue. This I.D. relates to the "turns" record found at the bottom of the coding sheet. The "turns" record will be explored in detail in Lesson 6 of the manual.

Once the general miscue information has been recorded for a given miscue the coder must classify the miscue by its type (5). There are seven basic types of miscues specified in the FORMAS taxonomy.

Definition of INSERTION (6): The reader inserts a word or an affix which is not present in the text.

Example 1

Miscue at

Text The girl hit ^ the ball.

*The number in parenthesis found after FORMAS terms are keyed for easy reference to the FORMAS coding sheet (Appendix A) and to a summary list of definitions (Appendix B).

Example 2

Miscue s

Text The girl hit the ball.

If the student inserts a phrase (i.e., two or more words) into the text it is also coded as a single insertion miscue.

Example 3

Miscue big round

Text The boy hit the ball.

Do not code an insertion when the student changes a word by adding a letter(s) which affects the root of the word.

Example 4 (not an insertion)

Miscue [substitutes] their

Text The boy hit the ball.

Definition of OMISSION (7): The reader omits a word or an affix which is present in the text.

Example 5

Miscue [omits "the"]

Text The elephant ate (the) peanuts.

Example 6

Miscue [omits "s"]

Text The elephant ate the peanut(s).

If the student omits a phrase (i.e., two or more contiguous words) from the text it is not coded as an omission miscue. Miscues which involve two or more contiguous text words are tallied as MULTIPLE MISCUES (64) and not coded in the taxonomy. Also, do not code an omission when the student changes a word by leaving off a letter(s) which affects the root of the word.

Example 7 (not an omission)

Miscue [substitutes] at

Text The elephant ate the peanuts.

Definition of SUBSTITUTION (8): The reader substitutes a word or an affix for one which is present in the text.

Example 8

Miscue piece

Text James placed a block of wood in the water.

Example 9

Miscue es

Text James placed a block of wood in the water.

A substitution miscue must be reasonably recognizable as a meaningful word. The following is not an example of a substitution miscue.

Example 10 (not a substitution)

Miscue /slaced/

Text James placed a block of wood in the water.

Definition of MISPRONUNCIATION (9): The reader substitutes a partial or complete nonsense utterance for a word or affix which is present in the text.

Example 11

Miscue /plox/

Text Kay looked in the box and called him.

Example 12

Miscue /K. /

Text Kay looked in the box and called him.

Example 13

Miscue /...ft/

Text Kay looked in the box and called him.

Definition of DON'T KNOW (10): The reader stops before attempting a word and verbally requests teacher assistance.

Example 14

Miscue (DK) [S: What's this word?]

Text They all wanted to feed the pet.

Don't knows are marked in the text with a (DK).

Definition of HESITATION (11): The reader pauses before attempting a word for at least three seconds or the teacher or another student intervenes before the three second period elapses.

Example 15

Miscue (H) [4 seconds]

Text David was watching the children swim.

Example 16

Miscue (H) [1 second; T: Look at the first letter.]

Text David was watching the children swim.

Hesitations are marked in the text with a (H).

Definition of REPETITION (12): Saying a text word or set of adjacent text words two or more times.

Example 17

Miscue [repeats "smiled"]

Text He smiled at his father.

Example 18

Miscue [repeats "he smiled"]

Text He smiled at his father.

A repetition is the only type of miscue coded in the FORMAS system which can involve contiguous text words. Repetitions are marked in the text with a ~~~ under the repeated elements.

Most miscues are coded in the FORMAS scheme relative to certain qualitative characteristics (13). The first characteristic is meaning change. The coder must decide whether a miscue results in little or substantial meaning change.

Definition of LITTLE MEANING CHANGE (14): The miscue alters the author's intended meaning only slightly.

Example 19

Miscue harm

Text The dog won't hurt you.

Definition of SUBSTANTIAL MEANING CHANGE (15): The miscue alters the author's intended meaning significantly.

Example 20

Miscue help

Text The dog won't hurt you.

Hesitations, don't knows, calls for help, and repetition type miscues are not coded relative to meaning change. Mispronunciations are almost always coded as substantial meaning change.

The second qualitative characteristic of miscues is the degree of grapho-phonic (sound-to-symbol) similarity between the observed and expected responses. The procedure for determining grapho-phonic similarity has been

designed in some ways to follow the procedures suggested by Goodman & Burke (1972). First divide the expected response into three parts. Next, divide the observed response into three parts. Compare these parts for commonalities.

Definition of HIGH GRAPHO-PHONIC SIMILARITY (16): At least two of the three parts of the observed response conform to the expected response.

Example 21

Miscue went

Text want

Example 22

Miscue /alifator/

Text alligator

Definition of LOW GRAPHO-PHONIC SIMILARITY (17): Less than two of the three parts of the observed response conform to the expected response.

Example 23

Miscue treat

Text twinkle

Example 24

Miscue a

Text that

Insertions, omissions, don't knows, hesitations, and repetitions are not coded relative to grapho-phonic similarity.

Lesson 1 Cluster I

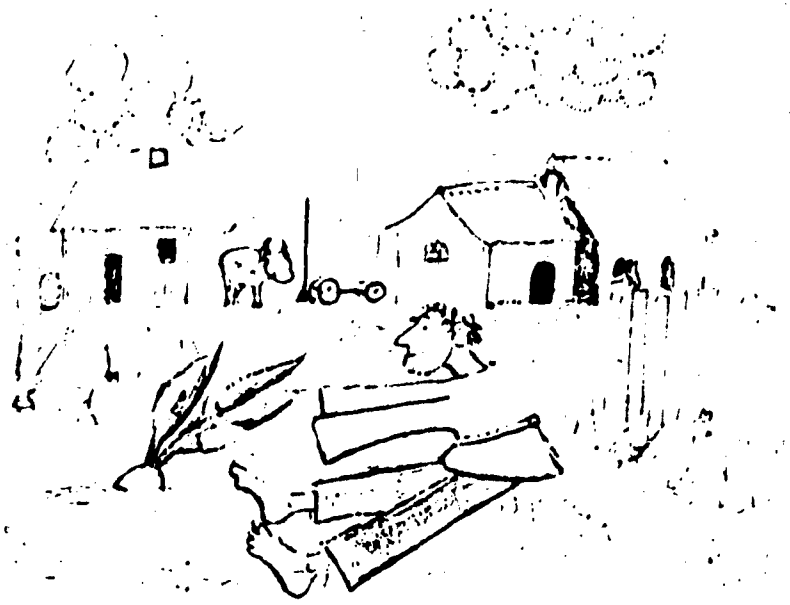
Part 2: Practice

For your initial practice in coding Cluster I, you will listen to an audiocassette tape of a session of oral reading. During your first auding of the tape, indicate the miscues you hear on the page of accompanying text, using the standard miscue marks in the examples in Part 1 of this lesson. Each time a child is called on to read, enter the name (59) at the bottom of FORMAS in the slot beside his or her sequential turn (58) in the session. Next, enter this student's I.D. number (for this example use 01, 02, 03...) (60). Following the instructions and definitions in Part 1, code FORMAS for the types and characteristics of the miscues you have marked in the text in the order in which they occur, indicating the reader's I.D. number in parentheses beside each miscue made by that reader. You may wish to mark the miscues in the text first and then code FORMAS during a second audition of the tape, or do both during a single hearing. Use whichever procedure works most efficiently for you, and listen to the tape as many times as you deem necessary.

The first section of this reading session is somewhat tricky to code because of the large number of errors and because it is read over several times. While this particular situation is unusual, you will find many "tricky" passages when you code oral reading in natural settings. It is in dealing with these that consistency in coding is important.

When you have finished coding the segment of tape under Cluster I on FORMAS, turn to the next page of the manual, where you will find a marked text and the correct codes for that segment, with marginal comments. Compare your markings and codes with the correct codes. Where your marking and codes differ from the ones given, refer back to the definitions and the examples in

Part 1, and to the marginal comments. Listen to the tape again if necessary, until you are sure you understand the rationale for each code.



The Big Turnip

It was summer.
A mother asked her boy to bring her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and met the mother.
"Will you help pull?" the mother asked

The man said, "Yes, I will help.
You and the boy and I will pull up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher _____ Group _____

FORMAS

Time Code	1 Miscue Number	2 Expected Response	3 Observed Response	4 Cluster: Miscue	5 Type: 6 Insertion	7 Omission	8 Substitution	9 Mispronunciation	10 Don't Know	11 Hesitation	12 Repetition	13 Characteristics: 14 Little Change in Meaning	15 Substantial Change in Meaning	16 High Grapho-Phonic	17 Low Grapho-Phonic
	1														
	2														
	3														
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58 Turn	59 Name	60 I.D.
1		
2		
3		
4		
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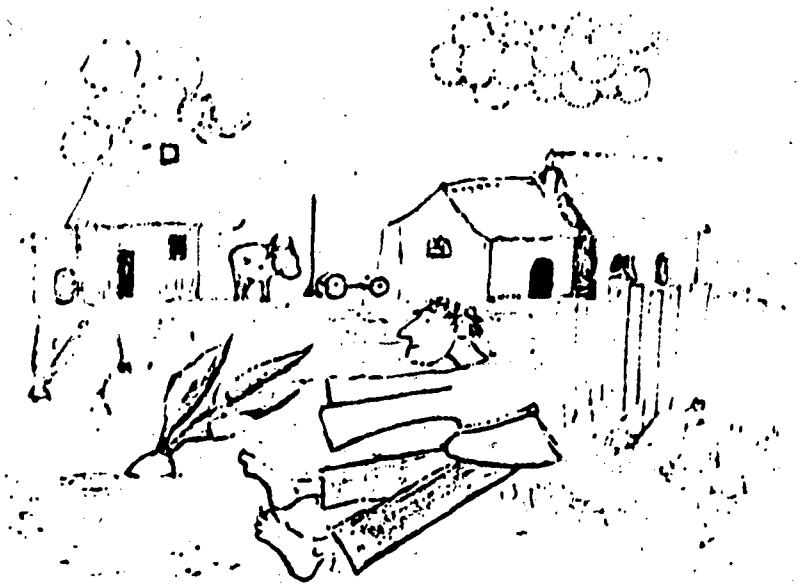
6		
7		
8		

Date _____

Tape no. _____

Text



The Big Turnip

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The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and met the mother.
"Will you help pull?" the mother asked.

The man said, "Yes, I will help.
You and the boy and I will pull up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher _____

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster: Miscue — Type: Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Characteristics: Little Change in Meaning	Substantial Chng in Meaning	High Grapho-Phonic	Low Grapho-Phonic
	1	Summer	so (01)			X	X					X		X
	2	mother	mu... (01)				X					X		X
	3	her	hi... (01)				X					X		X
	4	boy	– (01)						X			X	X	
	5	turnip	turn (02)				X					X		X
	6	for	f... (02)				X					X		X
	7	her	hi... (02)				X					X		X
	8	bring	– (02)						X					
	9	but	– (01)						X					
	10	that	they (03)			X						X	X	
	11	then	they (03)			X					X	X	X	
	12	his	her (03)			X					X	X	X	
	13	as	ass (03)				X					X	X	
	14	the	s... (03)				X					X	X	
	15	asked	ask (03)		X						X	X	X	
	16	–	and (03)	X							X			
	17													
	18													
	19													
	20													
	21													
	22													
	23													
	24													
	25													

58 Turn	59 Name	60 I.D.
1	Becky	01
2	Nathan	02
3	Becky	01
4	Tim	03
5	Nathan	02
6		
7		
8		

Date _____

Tape no. _____

Text Sun and Shadow

Miscue No.

2. An attempt at a word which results in a nonsense utterance is coded as mispronunciation. Always coded as substantial meaning change.

4. Although miscues 3 and 4 fall on contiguous words, do not code them as multiple miscue since there is teacher feedback between the two miscues. Meaning change and grapho-phonic similarity are not coded on hesitation miscues.

5. Not coded as omission because "ip" is not an affix--part of root word is missing.

6. Not a multiple miscue because the contiguous word ("turnip") is self corrected immediately.

13. Misprounnciation; since the reader has correctly pronounced /z/ in "his" we know "ass" is not reflective of his speech pattern. Compare with /mudder/ for mother and /dey/ for "they," that are not coded as misprounnciations because of speech problem with /ð/.

15. Omissions <u>are</u> coded for meaning change.

16. Insertions <u>are</u> coded for meaning change.

"Period" is not coded, since punctuation, intonation, and expression are beyond the scope of this taxonomy.

Note that there are no multiple miscues in this passage. Multiple miscues are not coded in Cluster I, but are simply tallied elsewhere on FORMAS.

Lesson 2 Cluter II Reactions

Part 1: Introduction

Definition of REACTION (18): How the reader initially deals with his own miscue.

In most instances, the reaction cluster is coded to indicate the student's first behavior following a miscue. There are six categories of behavior identified in this cluster.

Definition of CONTINUATION (19): The student continues reading with no apparent attention to the miscue.

Example 25

Miscue any →

Text Jill found a number of coins

The continuation is marked with a small arrow next to the miscue. It is important to note that the student need read only the next word in the text for the reaction to be coded as a continuation. The exceptions to this rule are in the case of insertions and omissions.

Example 26

Miscue their →

Text They continued walking in the sand.

In this case it would be necessary for the student to read as far as the text word "in" for the reaction to be coded as a continuation.

Example 27

Miscue →

Text The horse jumped (over) the fence.

In this case it would be necessary for the student to read as far as the text word "fence" to be coded as a continuation.

Definitions of REPEATED ATTEMPTS (20): The reader makes repeated attempts at identifying the text word.

In a repeated attempt, the reader's first reaction is to try again at the text word. Repeated attempts are noted below the original miscue. There are four kinds of repetition reactions which can be illustrated with examples.

Example 28

Miscue 1. racing
2. racing

Text Sally's mother came running from the house.

This is an exact repetition where the reader simply repeated the original miscue.

Example 29

Miscue 1. roping
2. locking

Text Sally's mother came running from the house.

This is a random repetition where the reader makes a repeated attempt which apparently does not bring him close to identifying the text word.

Example 30

Miscue 1. r...
2. ran

Text Sally's mother came running from the house.

This is a progressive repetition where the reader makes a repeated attempt which is apparently bringing him/her close to the identification of the text word.

Example 31

Miscue 1. r...
2.

Text Sally's mother came running from the house.

This is a recycling repeated attempt where the reader, after the initial miscue, has gone back to read from an earlier portion of text.

Repeated attempts is a reaction category and should not be confused with the class of repetition miscues in Cluster I. Repetitions involve the exact rereading of a word or phrase.

Definition of PAUSE (21): The student stops reading for at least two seconds after the miscue occurs.

Example 32

Miscue /Frid/ (P)

Text Freddie was getting ice from the freezer.

Pauses which follow a miscue are marked in the text with a (P). It is best to use a stopwatch to determine if a pause has occurred. Pauses which follow a hesitation miscue require a total of five seconds of silence: three for the hesitation miscue and a minimum of two for the pause reaction.

Definition of CALL FOR HELP (22): The reader explicitly requests teacher assistance after a miscue has been made.

Example 33

Miscue stroping (CH)

Text The boats are not stopping.

Calls for help are marked in the text with a (CH).

Definition of NO OPPORTUNITY (23): The teacher or another student intervenes within two seconds of the miscue occurring and no other reaction by the student is in evidence.

Example 34

Miscue careful (NO) [T: Careful]

Text Be careful. He might bite.

No opportunities are marked on the text with a (NO). This is the only reaction category which is not reflective of the behavior of the student making a miscue. If the student continues reading after a miscue and the teacher comes in before two seconds code the reaction as a continuation. No opportunity is coded only when the teacher comes in before two seconds and the student has indicated no other reaction.

Definition of IMMEDIATE SELF-CORRECTION (24): The student self-corrects the miscue immediately before showing evidence of any other reaction.

Example 35

Miscue /rick/ (SC)

Text We had better get rid of him.

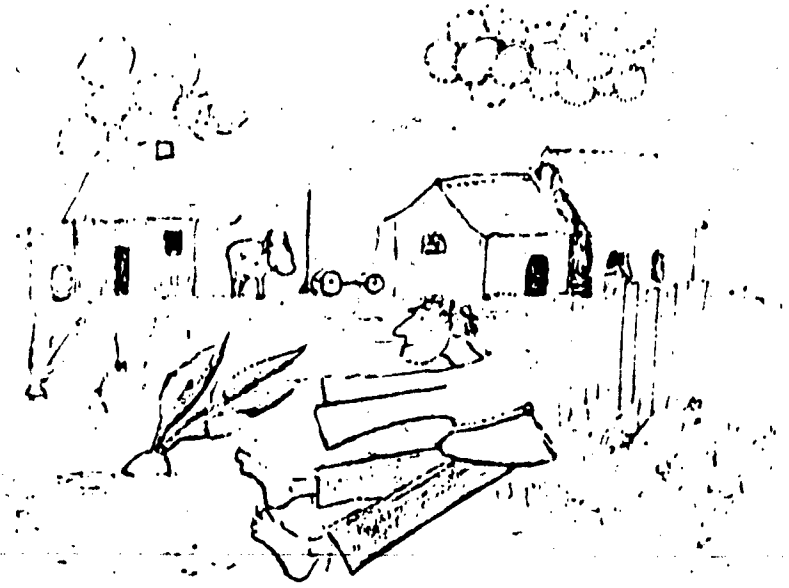
Immediate self-corrections are marked in the text with an (SC) after the miscue. If the student shows any other initial reaction (e.g., a continuation) before self-correcting, it is not coded as an immediate self-correction. In that case, it makes no difference that the student self-corrected in less then two seconds; the first reaction should be coded. Repetition miscues are always coded as self-corrections in Cluster II.

Lesson 2 Cluster II

Part 2: Practice

For your initial practice in coding Cluster II, you will code the students' reactions to their own miscues during the same oral reading session you heard in Lesson 1. Listen to the tape as many times as necessary and follow the instructions and definitions in Part 1 of Lesson 2. A copy of the text correctly marked for the miscues follows this page. As you listen to the tape again, mark the text for Cluster II, following the examples. Code Cluster II on the following FORMAS, which already lists the miscues and is correctly coded for Cluster I.

As in the previous lesson, when you have finished coding, turn to the next pages where you will find the correctly marked text and the correct codes for Cluster II, with marginal comments. Compare the marks and correct codes with your own. Where your codes differ from the ones given, refer back to the definitions and examples in Part 1 of this lesson, and study the marginal comments. Listen to the tape again if necessary until you understand why each miscue was coded as it was.



The Big Turnip

It was summer.

A mother asked her boy to bring her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and met the mother.
"Will you help pull ?" the mother asked.

The man said, "Yes, I will help.
You and the boy and I will pull up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher C Group 4

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response
	1	Summer	so (01)
	2	mother	mu... (01)
	3	her	hr... (01)
	4	boy	– (01)
	5	turnip	turn (02)
	6	for	f... (02)
	7	her	hi... (01)
	8	bring	– (01)
	9	but	– (01)
	10	that	they (03)
	11	then	they (03)
	12	his	hee (03)
	13	as	ASS (03)
	14	the	s... (02)
	15	asked	ask (02)
	16	–	and (02)
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		

CLUSTER I — MISCUE

TYPE

6 Insertion	7 Omission	8 Substitution	9 Mispronunciation	10 Don't Know	11 Hesitation	12 Repetition
		X	X		X	
			X			
			X			
					X	
			X			
			X			
			X		X	
					X	
		X				
		X				
		X	X			
			X			
	X					
X						

CHARACTERISTICS

14 Little Change in Meaning	15 Substantial Change in Meaning	16 High Graphophonic	17 Low Graphophonic
	X		X
	X		X
	X		X
	X	X	
	X		X
	X		X
	X		
X			X
	X	X	
X		X	
X			
X			

CLUSTER II — REACTIONS

18 Continuation	20 Repeated Attempts	21 Pause	22 Call for Help	23 No Opportunity	24 Immediate Self Correction

58 Turn	59 Name	60 I.D.
1	Becky	01
2	Nathan	02
3	Becky	01
4	Tim	03
5	Nathan	02
6		
7		
8		

Date

Tape no.

Text Sun and Shadow

The Big Turnip

It was summer.

A mother asked her boy to bring her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and met the mother.
"Will you help pull ?" the mother asked.

The man said, "Yes, I will help.
You and the boy and I will pull up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher O'[illegible] Group 4

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Little Change in Meaning	Substantial Change in Meaning	High Grapho-Phonic	Low Grapho-Phonic	Continuation	Repeated Attempts	Pause	Call for Help	No Opportunity	Immediate Self Correction
	1	Summer	so (01)			X						X		X		X				
	2	mother	mu... (01)				X					X		X						X
	3	her	hr... (01)				X					X		X		X				
	4	boy	- (01)						X								X			
	5	turnip	turn (03)				X					X	X							X
	6	for	f... (01)				X					X		X						X
	7	her	hi... (01)				X					X		X						X
	8	bring	- (01)						X								X			
	9	but	- (01)						X								X			
	10	that	they (03)			X						X	X							X
	11	then	they (03)			X						X	X		X					
	12	his	hee (03)			X					X			X						X
	13	AS	ASS (03)				X					X	X		X					
	14	the	s... (02)				X					X	X							X
	15	asked	ask (02)		X						X		X		X					
	16	-	and (03)	X							X				X					
	17																			
	18																			
	19																			
	20																			
	21																			
	22																			
	23																			
	24																			
	25																			

Turn	Name	I.D.
1	Becky	01
2	Nathan	02
3	Becky	01
4	Tim	03
5	Nathan	02
6		
7		
8		

Miscue Number

8. Coded as pause because 7 seconds elapse before reader tries "pull" for "bring" (3 seconds = hesitation + 2 seconds = pause).

9. Coded as pause (even though reader finally correctly says "but") for same reason as above.

11. Coded as continuation because reader gives the next word before identifying the miscue. Reader's self-correction will be picked up in Cluster V.

24

153

Date _____

Tape no. _____

Text Sun and Shadow

Lesson 3 Cluster III Teacher Verbal Feedback

Part 1: Introduction

Definition of TEACHER VERBAL FEEDBACK (25): The initial teacher behavior that follows a miscue and reader's reaction to the miscue and relates to the expected or observed response.

The teacher's verbal response to a miscue is coded in this cluster. The type (26) of feedback is the first major classification made within this cluster. Three types of feedback are specified.

Definition of NO VERBAL FEEDBACK (27): The teacher displays no verbal feedback strategy which is directly related to the identification of the target word.

Example 36

Miscue

Text "See the tree in the forest?" / asked Tim.

In the case where there is no verbal feedback, the text is marked with a /NVF.

Definition of SUSTAINING FEEDBACK (28): Teacher verbal feedback that provides the reader with the opportunity to identify part or all of an expected response.

Example 37

Miscue

Text I want to trade | my wagon for a bike.

The teacher response is noted verbatim as near the miscue as space permits. The various forms of sustaining feedback will be delineated in a subsequent section.

Definition of TERMINAL FEEDBACK (29): The first response of the teacher is to identify the target word or call on another student.

Example 38

Miscue dis (P) Disappointed

Text He looked disappointed.

Example 39

Miscue dis (P) Mary can you help

Text He looked disappointed.

The form (30) of feedback coded in the following cluster relates only to sustaining feedback.

Definition of ATTENDING (31): Sustaining feedback which offers the reader another response opportunity but provides the reader with no new information and is noncue focusing.

Example 40

Miscue Now → Look again.

Text Next Christmas | you can have one.

Example 41

Miscue Now → Now ?

Text Next Christmas | you can have one.

Definition of GRAPHO-PHONIC (32): Sustaining feedback which relates to visual and/or sound related features of the miscue and/or expected response.

Example 42

Miscue — h. (CH) ilar

Text The ships pulled into the harbor.

Example 43

Miscue — h. (F) Divide the word in syllables.

Text The ships pulled into the harbor.

Definition of CONTEXT (33): Sustaining feedback which relates to the surrounding semantic (meaning) or syntactic (structural) features.

Example 44

Miscue — take → Does gum take good?

Text The gum didn't taste good.

Example 45

Miscue — take → Let's go back and read that sentence again

Text The gum didn't taste good.

The area of form of feedback is the only category in FORMAS where we recommend that the coder use numbers rather then X's to record teacher behavior. The use of numbers permits the coder to record the sequence in which combinations of attending, grapho-phonic, and context feedback have been offered.

Example 46

Miscue — Semed → 1. Sound 2. Look at the vowels.

Text It seemed that they had been waiting a long time.

This example shows attending feedback (1) followed by grapho-phonic (2). This example also illustrates an important point about attending feedback. For attending feedback to be coded the teacher must allow time for the student to try again at the word. If the teacher were to say, "No. Look at the vowel sounds," and give no opportunity for the student to respond between "No" and the next sentence then this would simply be coded as a grapho-phonic prompt (1). If the teacher paused after "No," offering the student time to correct himself before giving out the next sentence then the coding would be attending (1) grapho-phonic (2).

Definition of TIMING (34): The time in seconds that has elapsed between the miscue and the initiation of feedback.

The timing dimension is dichotomized into less then three seconds (35) and more then three seconds (36).

Example 47

Miscue very (P) Very?

Text We will go visit our aunt next week.
+3

The text is marked with either a -3 or +3 below the line. It is important to remember that timing begins after the initial miscue and not after the reaction. The estimation of timing can also be somewhat confusing in the case of hesitation miscues. Begin timing after the three seconds allowed for the hesitation miscue. Use a stopwatch.

The point (37) at which the teacher initiates verbal feedback is also coded in this cluster. Point is specified in terms of the sentence position relative to the miscue at which teacher feedback is offered.

Definition of BEFORE THE NEXT SENTENCE BREAK (38): Teacher feedback offered before the student completes reading the sentence containing the target miscue.

Example 48

Miscue stopping (No) Read the sentence again.

Text The cars are not stopping now. It's not safe to cross.
-3

The point of feedback is indicated in the text with a vertical line. The timing is marked below the text next to the vertical line.

Definition of AT THE NEXT SENTENCE BREAK (39): Teacher feedback offered when the student completes reading the sentence containing the target miscue.

Example 49

Miscue stopping → Read the sentence again:

Text The cars are not stopping now. | It's not safe to cross.
-3

Definition of AFTER THE NEXT SENTENCE BREAK (40): Teacher feedback offered when the students has read beyond the sentence containing the target miscue.

Example 50

Miscue stopping → Is that stopping?

Text The cars are not stopping now. It's not | safe to cross.
+3

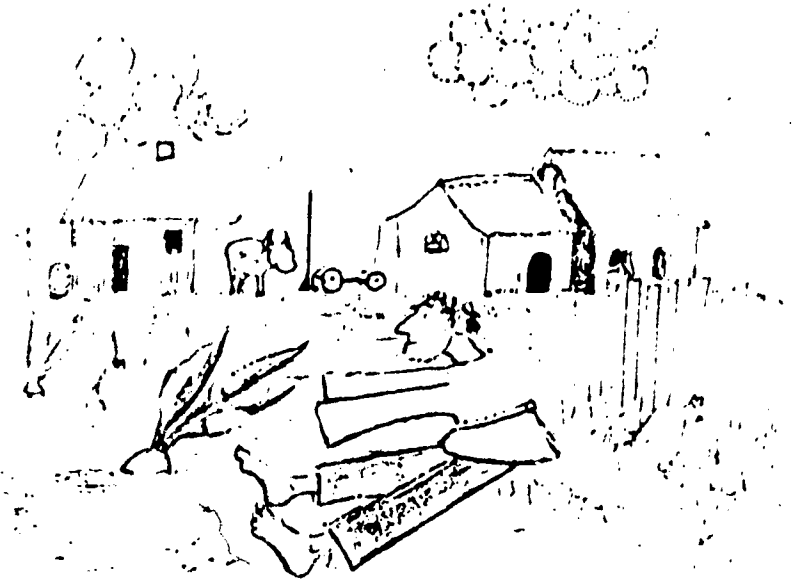
If the miscue occurs in the last word in a sentence and the teacher comes in at this point, it is always coded "at the next sentence break."

Lesson 3 Cluster III

Part 2: Practice

For your initial practice in coding Cluster III, you will code the teacher's verbal feedback to the readers' miscues during the same oral reading session you heard in Lessons 1 and 2. Listen to the tape as many times as necessary and follow the instructions and definitions in Part 1 of Lesson 3. A copy of the text correctly marked for miscues and student reactions follows this page. As you listen to the tape again, mark the text for Cluster III, following the examples. Code Cluster III on the following FORMAS, which is already correctly coded for Clusters I and II. Remember that when the teacher offers more than one kind of sustaining feedback, you will indicate the order in which the different prompts were given with 1, 2, 3.

When you have finished coding, turn to the next pages where you will find the correctly marked text and the correct codes for Cluster III, with marginal comments. Compare the marks and correct codes with your own. Where your codes differ from the ones given, refer back to the definitions and examples in Part 1 of this lesson, and study the marginal comments. Listen to the tape again if necessary until you understand the rationale for each code.



The Big Turnip

It was summer.

A mother asked her boy to bring her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled but he did not get the turnip.

The boy went back to his mother.
He said, 'I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and met the mother.
"Will you help pull?" the mother asked.

The man said, "Yes, I will help.
You and the boy and I will pull up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher C.T. Group 4

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I: Miscue Type: Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Characteristics: Little Change in Meaning	Substantial Change in Meaning	High Grapho-Phonic	Low Grapho-Phonic	Cluster II: Reactions: Continuation	Repeated Attempts	Pause	Call for Help	No Opportunity	Immediate Self Correction	Cluster III: Teacher Verbal Feedback: Type: No Verbal Feedback	Sustaining Fbk	Terminal Feedbk	Form: Attending	Grapho-Phonic	Context	Timing: Less than 3 Sec	More than 3 Sec	Point: Before Next Sentence Break	At the Next Sentence Break	After Next Sentence Break
	1	summer	so (01)			X						X		X		X				X										
	2	mother	mu (01)				X					X		X		X				X										
	3	her	h (01)				X					X		X		X				X										
	4	boy	– (01)						X				X				X													
	5	turnip	turn (02)				X					X	X	X						X										
	6	for	f (02)				X					X		X						X										
	7	her	h (01)				X					X		X						X										
	8	bring	– (02)						X								X													
	9	but	– (01)						X								X													
	10	that	they (03)			X						X	X		X					X										
	11	then	they (03)			X						X	X		X					X										
	12	his	hee (03)			X					X			X						X										
	13	as	ass (03)				X					X	X	X		X				X										
	14	the	s (02)				X				X		X			X														
	15	asked	ask (02)		X						X		X			X														
	16	–	and (02)	X							X					X														
	17																													
	18																													
	19																													
	20																													
	21																													
	22																													
	23																													
	24																													
	25																													

58 Turn	59 Name	60 I.D.
1	Becky	01
2	Nathan	02
3	Becky	01
4	Tim	03
5	Nathan	02
6		
7		
8		

Date

Tape no.

Text Sun and Shadow

The Big Turnip

It was summer.
A mother asked her boy to bring
her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he
did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull
on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and
met the mother.
"Will you help pull?" the mother asked.

The man said, "Yes, I will help.
You and the boy and I will pull
up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher C)'t Group 4

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I: Miscue — Type: Insertion	Omission	Substitution	Mispronunciation	Don't know	Hesitation	Repetition	Characteristics: Little change in meaning	Substantial change in meaning	High graphophonic	Low graphophonic	Cluster II: Reactions: Continuation	Repeated attempt	Pause	Call for help	No opportunity	Immediate self correction	Cluster III: Teacher Verbal Feedback — Type: No verbal feedback	Sustaining	Terminal feedback	Form: Attending	Graphophonic	Context	Timing: Less than 3 sec.	More than 3 sec.	Point: Before next sentence break	At the next sentence break	After next sentence break
	1	summer	so (01)			X						X		X		X				X				2	1			X	X		
	2	mother	mu... (01)				X					X		X					X	X	X								X		
	3	her	hi... (01)				X					X		X		X					X				1			X				
	4	boy	– (01)						X								X				X				1				X	X		
	5	turnip	turn (02)				X					X	X							X	X											
	6	for	f... (02)				X					X		X						X	X											
	7	her	hi... (02)				X					X		X						X	X											
	8	bring	– (02)						X								X					X			1				X	X		
	9	but	– (01)						X								X															
	10	that	they (02)			X						X	X							X	X											
	11	then	they (02)			X						X	X			X					X											
	12	his	hee (03)			X					X			X							X											
	13	as	ass (03)				X					X	X			X					X											
	14	the	s (02)				X					X	X								X											
	15	asked	ask (02)		X						X			X		X					X											
	16	–	and (03)	X							X			X		X					X											
	17																															
	18																															
	19																															
	20																															
	21																															
	22																															
	23																															
	24																															
	25																															

58 Turn	59 Name	60 I.D.
1	Becky	01
2	Nathan	02
3	Becky	01
4	Tim	03
5	Nathan	02
6		
7		
8		

Date _____

Tape no. _____ 171

Text Sun and Shadow

Miscue Number

1. Although teacher's initial comment appears to be attending (No."), she does not allow student time to make an attempt at word before giving graphophonic prompt ("How can it be 'so big'?"). Code as 1. Finally she offers an attending prompt ("What's the word?"); code as 2. Although teacher calls on another student for help, do not code terminal because her first feedback was sustaining. Code as at the next sentence break since word falls at end of sentence.

3. Student has already identified miscue before teacher tells her to reread sentence, so do not code as context feedback.

4. Although teacher calls on another student to read the passage, do not code as terminal because teacher's first feedback was sustaining.

8. Although "something you wear on your finger" appears to be a context prompt, it does not refer to the actual meaning of the word "bring," but is rather intended to access a sound to the reader. Thus, a continuation of graphophonic information.

34

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Lesson 4 Cluster IV Student Verbal Feedback
Part 1: Introduction

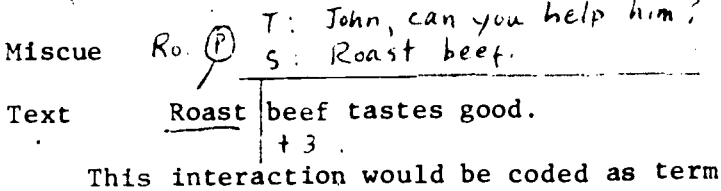
Verbal behavior of student(s) other than the reader relating to the expected or observed response are the focus for this fourth cluster of FORMAS. This cluster is not coded if oral reading is being guided in a dyadic (one teacher-one student) context.

Since the categories in this cluster are largely self-explanatory, few examples will be offered to support the narrative discussion.

Definition of STUDENT VERBAL FEEDBACK (41): Verbal behavior of a student other than the reader relating to the expected or observed response.

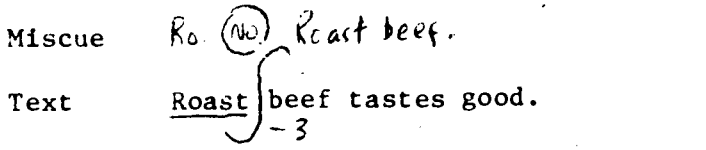
The type (42) of other student verbal feedback is divided into three major areas: none (43), solicited (44), and unsolicited (45).

Example 51



This interaction would be coded as terminal feedback on the teacher's part (Cluster III) and solicited feedback in Cluster IV.

Example 52



This interaction would be coded as no verbal feedback on the teacher's part (Cluster III) and unsolicited feedback in Cluster IV. Note that the text is marked with an S when unsolicited student feedback occurs.

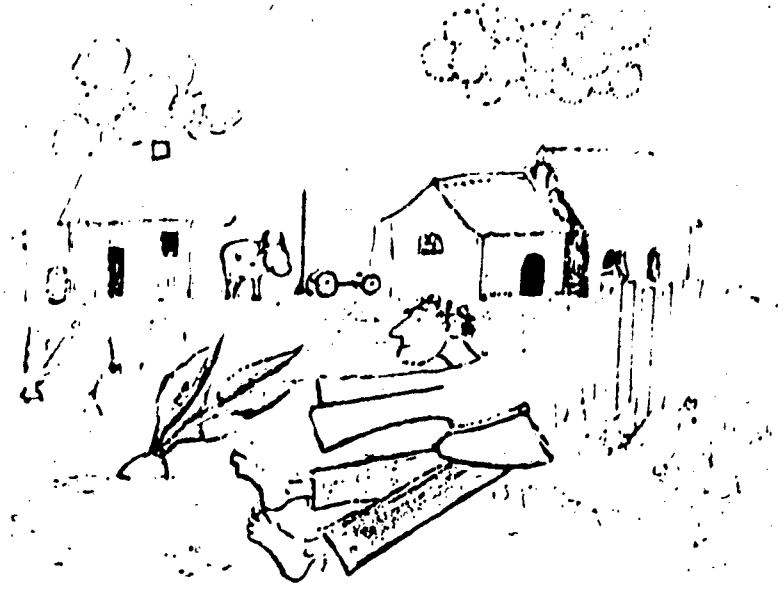
The remaining two categories in Cluster IV parallel in content and form those discussed in Cluster III (i.e., the timing (46) and point (49) of feedback). The same text markings and operational definitions are applied, only rather than specifying teacher behavior, the other students' behavior is addressed.

Lesson 4 Cluster IV

Part 2: Practice

For your initial practice in coding Cluster IV, you will code the other students' verbal feedback to the readers' miscues during the same oral reading session you heard in previous lessons. Listen to the tape as many times as necessary and follow the instructions and definitions in Part 1 of Lesson 4. A copy of the text correctly marked for miscues, student reactions, and teacher feedback follows this page. Mark the text for Cluster IV, following the examples. Code Cluster IV on the following FORMAS, which is already correctly coded for Clusters I, II, and III.

When you have finished coding, turn to the next pages where you will find the correctly marked text and the correct codes for Cluster IV, with marginal comments. Compare the marks and correct codes with your own. Where your codes differ from the ones given, refer back to the definitions and examples in Part 1 of this lesson, and study the marginal comments. Listen to the tape again if necessary until you understand the rationale for each code.



The Big Turnip

It was summer.
A mother asked her boy to bring her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and met the mother.
"Will you help pull?" the mother asked.

The man said, "Yes, I will help.
You and the boy and I will pull up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher O'[illegible] Group 4

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I: Miscue — Type: Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Characteristics: Little Change in Meaning	Substantial Change in Meaning	High Grapho-Phonic	Low Grapho-Phonic	Cluster II: Reactions: Continuation	Repeated Attempts	Pause	Call for Help	No Opportunity	Immediate Self Correction	Cluster III: Teacher Verbal Feedback — Type: No Verbal Feedback	Sustaining F&K	Terminal Feedback	Form: Attending	Grapho-Phonic	Context	Timing: Less than 3 sec.	More than 3 sec.	Point: Before Next Sentence Break	At the Next Sentence Break	After Next Sentence Break	Cluster IV: Student Verbal Feedback — Type: None	Solicited	Unsolicited	Timing: Less than 3 sec.	More than 3 sec.	Point: Before NSB	At NSB	After NSB
	1	Summer	so (01)			X						X		X		X						X			2	1			X		X								
	R	mother	mu... (01)				X					X		X						X		X						X		X								
	3	hen	hr... (01)				X					X		X		X						X						X		X								
	4	boy	- (01)						X			X	X				X					X						X										
	5	turnip	turn (02)				X					X	X								X	X																
	6	for	f... (02)				X					X		X							X	X																
	7	hen	hi... (01)				X					X		X							X	X																
	8	bring	- (01)						X								X					X						X	X									
	9	but	- (01)						X								X					X																
	10	that	they (03)			X						X	X								X	X																
	11	then	they (03)			X						X	X		X						X	X																
	12	his	hee (03)			X					X			X							X	X																
	13	as	ass (03)				X					X	X								X	X																
	14	the	s... (01)				X					X		X							X	X																
	15	asked	ask (02)		X						X			X		X						X																
	16	-	and (02)	X							X					X						X																
	17																																						
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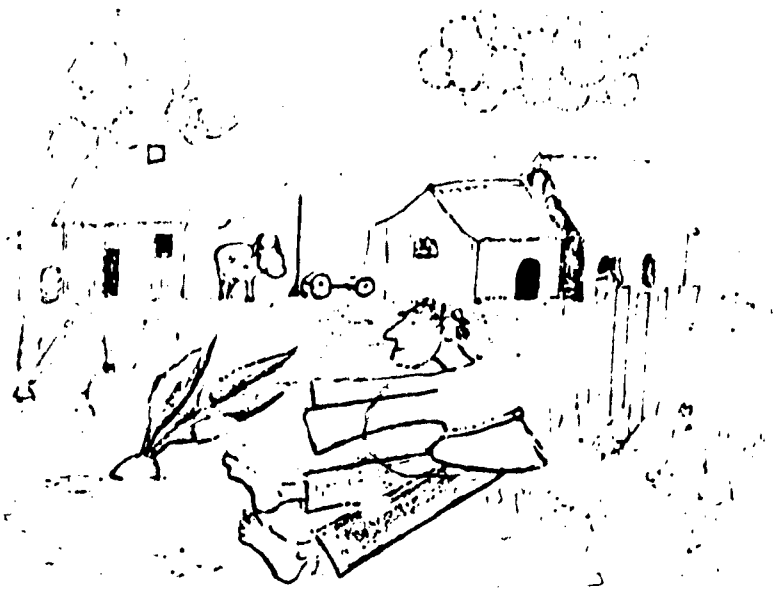
	25																																						

58 Turn	59 Name	60 I.D.
1	Becky	01
2	Nathan	02
3	Becky	01
4	Tim	03
5	Nathan	02
6		
7		
8		

Date _____

Tape no. _____

Text Sun and Shadow



The Big Turnip

It was summer.

A mother asked her boy to bring her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and met the mother.
"Will you help pull?" the mother asked.

The man said, "Yes, I will help.
You and the boy and I will pull up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher 04 Group 4

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I Miscue: Types (6 Insertion, 7 Omission, 8 Substitution, 9 Mispronunciation, 10 Don't Know, 11 Hesitation, 12 Repetition)	Cluster I Miscue: Characteristics (14 Little Change in Meaning, 15 Substantial Change in Meaning, 16 High Graphic-Phonic, 17 Low Graphic-Phonic)	Cluster II Reactions (18 Continuation, 20 Repeated Attempts, 21 Pause, 22 Call for Help, 23 No Opportunity, 24 Immediate Self Correction)	Cluster III Teacher Verbal Feedback: Types (25 No Verbal Feedback, 26 Sustaining FBK, 29 Terminal Feedback)	Cluster III Teacher Verbal Feedback: Form (31 Attending, 32 Graphic-Phonic, 33 Context)	Cluster III Teacher Verbal Feedback: Timing (35 Less than 3 sec., 36 More than 3 sec.)	Cluster III Teacher Verbal Feedback: Point (38 Before next sentence break, 39 At the next sentence break, 40 After next sentence break)	Cluster IV Student Verbal Feedback: Types (43 None, 44 Solicited, 45 Unsolicited)	Cluster IV Student Verbal Feedback: Time (47 Less than 3 sec., 48 More than 3 sec.)	Cluster IV Student Verbal Feedback: Point (50 Before NSB, 51 At NSB, 52 After NSB)
	1	Summer	so (01)					21						
	2	mother	mu... (01)											
	3	her	hr... (01)					1						
	4	boy	– (01)					1						
	5	trump	turn (02)											
	6	for	f... (01)											
	7	her	hi... (01)											
	8	bring	– (01)					1						
	9	but	– (01)											
	10	that	they (03)											
	11	then	they (03)											
	12	his	her (03)											
	13	as	ass (03)											
	14	the	s... (02)											
	15	asked	ask (01)											
	16	–	and (01)											
	17													
	18													
	19													
	20													
	21													
	22													
	23													
	24													
	25													

58 Turn	59 Name	60 I.D.
1	Becky	01
2	Nathan	02
3	Becky	01
4	Tim	03
5	Nathan	02
6		
7	–	
8		

Miscue Number

1. Teacher asks another student for first syllable.

4. Code as none because teacher calls on another student to have a turn, not to give help on this specific miscue.

Site

Tape no.

Text Sun and Shadow

Lesson 5 Cluster V Resolution

Part 1: Introduction

This final cluster of FORMAS addresses the issue of the resolution of the miscue.

Definition of RESOLUTION (53): Whether or not the miscue is corrected and the individual correcting the miscue.

Four categories are represented: teacher identifies word (54), student identifies word (55), other identifies word (56), and uncorrected miscue (57).

Example 53

Miscue fort → (TI) Forest. +3

Text They were in the forest gathering wood.

The text is marked with a TI in this case to indicate the teacher had corrected the miscue. In some instances the teacher may begin with sustaining feedback but ultimately provide the student with the text word.

Example 54

Miscue fort → (TI) 1. Try again. 2. It's forest. +3

Text They were in the forest gathering wood.

In this instance Cluster III would be coded a sustaining (attending) and Cluster V as teacher corrected.

Example 55

Miscue fort → (01) T: Tim, help him. S. Forest. +3

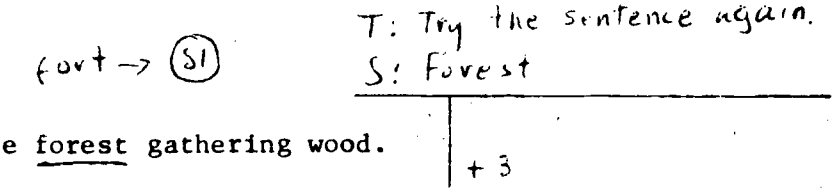
Text They were in the forest gathering wood.

In this instance the teacher called on another student (terminal feedback) and that student identified the word.

Example 56

Miscue

Text They were in the forest gathering wood.

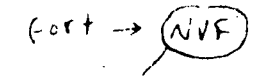


In this instance the teacher provided sustaining feedback (contextual) to the student and the student was successful in identifying his own miscue.

Example 57

Miscue

Text They were in the forest gathering wood.



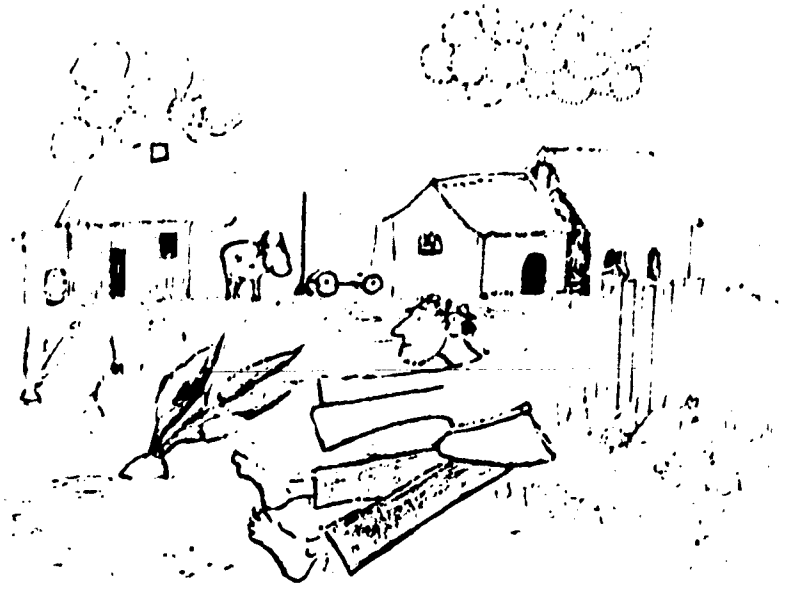
In this final example, the miscue has been left unidentified.

Lesson 5 Cluster V

Part 2: Practice

For your initial practice in coding Cluster V, you will code whether and by whom the miscue is ultimately corrected during the same oral reading session you heard in previous lessons. Listen to the tape as many times as necessary and follow the instructions and definitions in Part 1 of Lesson 5. A copy of the text correctly marked for miscues, student reactions, teacher feedback, and student feedback follows this page. Mark the text for Cluster V, following the examples. Code Cluster V on the following FORMAS, which is already correctly coded for Cluster I-IV.

When you have finished coding, turn to the next pages where you will find the correctly marked text and the correct codes for Cluster V, with marginal comments. Compare the marks and correct codes with your own. Where your codes differ from the ones given, refer back to the definitions and examples in Part 1 of this lesson, and study the marginal comments. Listen to the tape again if necessary until you understand the rationale for each code.



The Big Turnip

It was summer.
A mother asked her boy to bring her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and met the mother.
"Will you help pull?" the mother asked.

The man said, "Yes, I will help.
You and the boy and I will pull up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher CH Group 4

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response
	1	Sum	so (01)
	2	mat	mu... (01)
	3	hen	hi (01)
	4	boy	– (01)
	5	turnip	turn (02)
	6	for	f... (02)
	7	hen	hi... (02)
	8	having	– (01)
	9	but	– (01)
	10	that	they (03)
	11	then	they (03)
	12	his	hen (03)
	13	as	ASS (01)
	14	the	s... (02)
	15	asked	ask (03)
	16	–	and (03)
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		

Cluster I — Miscue

Type: Insertion; Omission; Substitution; Mispronunciation; Don't know; Hesitation; Repetition

Characteristic: Little change in meaning; Substantial chng in meaning; High graphо-phonic; Low graphо-phonic

Cluster II — Reactions

Continuation; Repeated attempts; Pause; Call for help; No opportunity; Immediate self correction

Cluster III — Teacher Verbal Feedback

Type: No verbal feedbk; Sustaining; Terminal feedbk

Form: Attending; Graphо-phonic; Context

Timing: Less than 3 sec.; More than 3 sec.

Point: Before next sentence break; At the next sentence break; After next sentence break

Cluster IV — Student Verbal Feedback

Type: None; Solicited; Unsolicited

Time: Less than 3 sec.; More than 3 sec.

Point: Before NSB; At NSB; After NSB

Cluster V — Reso-lution

Teacher identifies wd.; Student identifies wd.; Other identifies wd.; Uncorrected miscue

Inaudibles

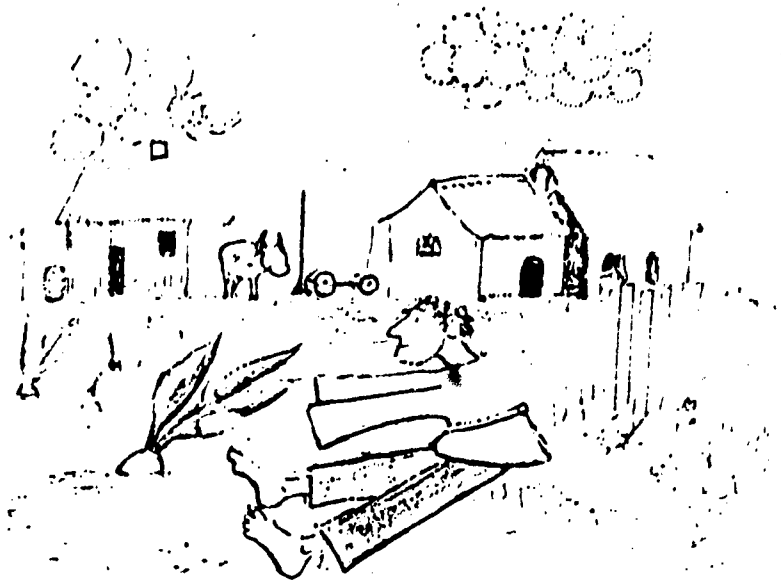
Multiple Miscues

Turn	Name	I.D.
1	Becky	01
2	Nathan	02
3	Becky	01
4	Tim	03
5	Nathan	02
6		
7		
8		

Date

Tape no.

Text Sun and Shadow



The Big Turnip

It was summer.
A mother asked her boy to bring her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."

"Then I will help," said his mother.
"I will pull on you as you pull on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and met the mother.
"Will you help pull?" the mother asked.

The man said, "Yes, I will help.
You and the boy and I will pull up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher O4 Group 1

FORMAS

Cluster I: MISCUE — Type: Insertion, Omission, Substitution, Mispronunciation, Don't Know, Hesitation, Repetition; Characteristics: Little Change in Meaning, Substantial Change in Meaning, High Grapho-Phonic, Low Grapho-Phonic

Cluster II: REACTIONS — Continuation, Repeated Attempts, Pause, Call for Help, No Opportunity, Immediate Self Correction

Cluster III: TEACHER VERBAL FEEDBACK — Type: No Verbal Feedbk, Sustaining Fbk, Terminal Feedbk; Form: Attending, Grapho-Phonic, Context; Timing: Less than 3 sec., More than 3 sec.; Point: Before Next Sentence Break, At the Next Sentence Break, After Next Sentence Break

Cluster IV: STUDENT VERBAL FEEDBACK — Type: None, Solicited, Unsolicited; Time: Less than 3 sec., More than 3 sec.; Point: Before NSB, At NSB, After NSB

Cluster V: RESOLUTION — Teacher Identifies Wd., Student Identifies Wd., Other Identifies Wd., Uncorrected Miscue

Time Code	Miscue Number	Expected Response	Observed Response
	1	summer	so (01)
	2	mother	mu... (01)
	3	her	hr... (01)
	4	boy	— (01)
	5	turnip	turn (02)
	6	for	f... (02)
	7	her	hi... (01)
	8	bring	— (01)
	9	but	— (01)
	10	that	they (03)
	11	then	they (03)
	12	his	her (03)
	13	AS	ASS (03)
	14	the	s... (02)
	15	asked	ask (02)
	16	—	and (02)
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		

Turn	Name	I.D.
1	Becky	01
2	Nathan	02
3	Becky	01
4	Tim	03
5	Nathan	02
6		
7		
8		

Site ________
Tape no. ________
Text Sun and Shadow

Miscue Number

4. Code as uncorrected. This reader never correctly identifies the miscue during this turn, and the resolution ("boy" is read correctly by the next reader) is not directly or explicitly focused on the first reader's miscue.

Note the two boxes at the extreme right of FORMAS, labeled multiple miscues (64) and inaudibles (65). In them you will simply tally with a slash each instance of a multiple miscue and each time you think you have heard a miscue but are unable to code it because of poor audio quality or any other factor.

Lesson 5: Conclusion

You have now completed the miscue analysis coding section of FORMAS. A person familiar with the text markings should be able to examine your marked text and analyze each miscue from its occurrence, through the student's reaction, teacher's feedback, other students' feedback, to the resolution. Likewise, the text markings should be reflected in the boxes coded for each miscue under each cluster on FORMAS. In the next lesson you will be instructed in how to complete the bottom section of FORMAS.

Lesson 6: Coding Turns

Part 1: Introduction

The bottom section of the FORMAS taxonomy is set aside for recording information on student turns. This information is particularly useful if individual student performance is to be analyzed.

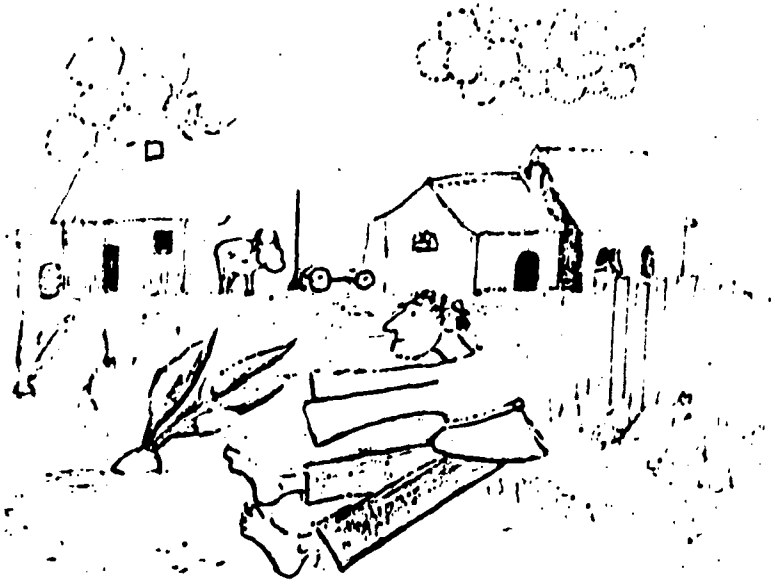
The first column, "Turn" (58) is used simply to indicate the sequence in which students read in this particular group interaction with the teacher. The I.D. (60) number for the student reading is recorded in the next column. This is the same I.D. number noted after each of the observed responses. The Total number of Correct Words Read (TCWR) (61) is recorded in the next column. This total number of words read correctly on the first attempt is specific to that turn and exclusive of all single word and multiple miscues. The next column is used to record the Total number of Words in the Longest Correct String (TWLCS) (62). This number is determined by examining the text to identify the longest set of words which the student read without making any type of miscue. The total number of words is recorded in this column. The final column specifies the Time for Reading the Longest Correct String (TRLCS) (63). This is simply the time it took expressed in seconds for the student to read the words in the longest correct string. If there is disruption to the string which is non-miscue related, then the amount of time devoted to the disruption should be subtracted from the total.

The information in this Turns section can be used to estimate such factors as error level of placement in reading materials and rate of reading in words per minute (wpm).

Lesson 6: Coding Turns

Part 2: Practice

Following the instructions in Part 1 of Lesson 6, fill in the bottom section of FORMAS for the reading session you have coded. Use a stopwatch to calculate Time for Reading the Longest Correct String. Check your figures against the correct ones on the final FORMAS in this manual. Listen to the tape again if necessary to correct your calculations.



The Big Turnip

It was summer
A mother asked her boy to bring
her a turnip for lunch.

The boy went to get a big turnip.
He got down to pull it up.
He pulled and pulled, but he
did not get the turnip.

The boy went back to his mother.
He said, "I can't get the turnip.
It is so big that I can't pull it up."
"Then I will help," said his mother.
"I will pull on you as you pull
on the turnip."

The mother pulled on the boy.
The boy pulled on the turnip.
They pulled and they pulled.
But they did not get the turnip.

A man came down the road and
met the mother.
"Will you help pull?" the mother asked
her.

The man said, "Yes, I will help.
You and the boy and I will pull
up the big turnip."

So the man pulled on the mother.
The mother pulled on the boy.

Teacher 04 Group 1

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I Miscue: Type: Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Character-istics: Little Change in Meaning	Substantial Chng in Meaning	High Grapho-phonic	Low Grapho-phonic	Cluster II Reactions: Continuation	Repeated Attempts	Pause	Call for Help	No Opportunity	Immediate Self Correction	Cluster III Teacher Verbal Feedback: Type: No Verbal Feedback	Sustaining FBK	Terminal Feedback	Form: Attending	Grapho-phonic	Context	Timing: Less than 3 sec.	More than 3 sec.	Point: Before Next Sentence Break	At the Next Sentence Break	After Next Sentence Break	Student Verbal Feedback: Type: None	Solicited	Unsolicited	Time: Less than 3 sec.	More than 3 sec.	Point: Before NSB	At NSB	After NSB	Resolution: Teacher Identifies Wo.	Student Identifies Wo.	Other Identifies Wo.	Uncorrected Miscue
	1	Summer	so (01)			X	X					X		X		X				X	X			2	1		X			X		X										
	2	mother	mu... (01)				X					X		X						X	X											X										
	3	her	hir... (01)				X					X		X		X						X			—			X	X			X										
	4	boy	— (01)						X								X					X			—			X	X			X										
	5	turnip	turn (02)				X					X	X							X	X				—							X										
	6	for	f... (02)				X					X		X						X	X											X										
	7	her	hi... (01)				X					X		X						X	X											X										
	8	bring	— (01)						X								X					X			—			X	X			X										
	9	but	— (01)						X								X					X										X										
	10	that	they (03)			X						X	X								X											X										
	11	then	they (03)			X						X	X			X					X											X										
	12	his	her (03)			X					X			X							X											X										
	13	as	ass (03)				X					X	X			X					X											X										
	14	the	s... (03)				X					X		X							X											X										
	15	asked	ask (03)		X						X			X		X					X											X										
	16	—	and (03)	X							X					X					X											X										
	17																																										
	18																																										
	19																																										
	20																																										
	21																																										
	22																																										
	23																																										
	24																																										
	25																																										

Inaudibles 57

Multiple Miscues 58

Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.	Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.
1	Becky	01				9					
2	Nathan	02				10					
3	Becky	01				11					
4	Tim	03				12					
5	Nathan	02				13					
6						14					
7						15					
8						16					

53

Date _____ Coder's name _____

Tape no. _____

Text Sun and Shadow Story The Big Turnip Page no. 74

FORMAS

Teacher 04 Group 4

Time Code	Miscue Number	Expected Response	Observed Response
	1	Summer	so (01)
	2	mother	mu... (01)
	3	her	hr... (01)
	4	boy	– (01)
	5	turnip	turn (02)
	6	for	f... (01)
	7	her	hi... (01)
	8	bring	– (01)
	9	but	– (01)
	10	that	they (01)
	11	then	they (01)
	12	his	hee (01)
	13	as	ASS (01)
	14	the	s... (01)
	15	asked	ask (01)
	16	–	and (01)
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		

Cluster I: Miscue

Type: 6 Insertion; 7 Omission; 8 Substitution; 9 Mispronunciation; 10 Don't know; 11 Hesitation; 12 Repetition

Characteristics: 14 Little change in meaning; 15 Substantial change in meaning; 16 High graphic-phonic; 17 Low graphic-phonic

Cluster II: Reactions

18 Continuation; 20 Repeated attempts; 21 Pause; 22 Call for help; 23 No opportunity; 24 Immediate self correction

Cluster III: Teacher Verbal Feedback

Type: 26 No verbal feedback; 28 Sustaining FBK; 29 Terminal feedback

Form: 31 Attending; 32 Graphic-phonic; 33 Context

Timing: 35 Less than 3 sec.; 36 More than 3 sec.

Point: 38 Before next sentence break; 39 At the next sentence break; 40 After next sentence break

Cluster IV: Student Verbal Feedback

Type: 43 None; 44 Solicited; 45 Unsolicited

Time: 46 Less than 3 sec.; 47 More than 3 sec.

Point: 50 Before NSB; 51 At NSB; 52 After NSB

Cluster V: Resolution

55 Teacher identifies miscue; 56 Student identifies miscue; 57 Other identifies miscue; 58 Uncorrected miscue

Inaudibles 63

Multiple Miscues 64

58 Turn	59 Name	60 I.D.	61 T.C.W.R.	62 T.W.L.C.S.	63 T.R.L.C.S.
1	Becky	01	4	2	3
2	Nathan	02	39	27	20
3	Becky	01	38	24	23
4	Tim	03	62	29	42
5	Nathan	02	47	26	15
6					
7					
8					

58 Turn	59 Name	60 I.D.	61 T.C.W.R.	62 T.W.L.C.S.	63 T.R.L.C.S.
9					
10					
11					
12					
13					
14					
15					
16					

54

Date _____ Coder's name _____

Tape no. _____

Text Sun and Shadow Story The Big Turnip Page no. 74

Extended Practice and Reliability

The audiocassette tape accompanying this manual is intended for use in conjunction with the Feedback to Oral Reading Miscue Analysis System Training Manual. It consists of four sessions of guided oral reading. You have used the first approximately seven minute session throughout the first six lessons in the manual. The remaining three sessions of approximately five, eight, and three minutes respectively are to be used for further practice at the completion of the six lessons.

One of the goals of the extended practice is to lead you to certain criterion levels of accuracy in coding. Accuracy is judged in terms of your ability to code independently an audiotaped interaction in the same or similar ways as others who are trained in the system. A high level of agreement is necessary before we can begin to have confidence that what is coded is a representation of what transpired between the teacher and student.

After you have listened to and coded one of the extended practice sessions you will be given the expert codes for that tape, a formula to use in determining your level of agreement with the expert on miscue identification, and one for use in measuring agreement within FORMAS among agreed on miscues.

To determine the level of agreement on miscue identification, the following formula for Kappa (Cohen, 1960) will be used:

$$K = \frac{N(M+C) - E}{N^2 - E}$$

Where: K = Kappa: The reliability coefficient

N = Total words read or attempted in the text

A = Coder's estimate of miscues made

B = N - A: Coder's estimate of correct words read

X = Expert's estimate of miscues made

Y = N - X: Expert's estimate of correct words read

M = Miscue agreements between coder and expert

C = B - (X - M): Correct words read agreement between coder and expert

E = (X * A) + (Y * B): N times the expected agreements

The Kappa coefficient as used in this application is a measure of coder agreement, adjusted for the amount of agreement which would be expected by chance. The chance value is based on each coder's frequency of coding miscues. Both miscue matches and correct word matches are taken into account in this formulation. A discussion of the calculational formula presented above may help in understanding this coefficient. If we rearrange the numerator (N(M+C) - E) of the equation it becomes (M+C) - E/N. By definition, M+C is the number of actual agreements, and E/N is the number of agreements expected by chance. Their difference then is the number of actual agreements that occurred, corrected for those that are expected by chance. A negative number would indicate that fewer agreements occurred than would be expected by chance. By dividing the denominator of the equation by N it can be seen that this value is the number of words read less the expected (chance) agreements. This number then represents the maximum number of non-chance agreements that can occur. By dividing the numerator by the denominator we obtain the proportion of non-chance agreements observed out of the number of possible non-chance agreements.

This formula can be applied later when two coders are working independently on new tapings. Expert coder values are simply replaced with coder #2 values.

The levels of agreement on codings within FORMAS are determined in a more straightforward manner.

1. Identify the set of miscues which were identified by both the coder and expert.
2. For each category in the system determine where the codings are the same (+1) or different (0).
3. Sum the number of 1's (agreements) for each category and divide by the total number of possible agreements for that category. In some cases the number of possible agreements will be equal to the total number of agreed on miscues (e.g., miscue type), but in other cases the number of possible agreements will vary considerably (e.g., form of sustaining feedback).

Guidance will be given by computing reliability after each of the extended practice sessions.

Extended Practice 1

Fisherman to Farmer

Rosita Gomez lived near a big lake. Her father was a fisherman.

Each day Mr. Gomez would throw out a big net to catch fish. Rosita would help her father pull in the net and pile the fish in baskets. Then off to market they would go to sell the fish!

One day Mr. Gomez sold the fish quickly. Then he gave Rosita all the money she had earned. How merrily the coins jingled in her pocket!

"Why don't you get something with your money, Rosita?" her father asked.

"I'm saving my money for a pet," said Rosita as she jingled the coins.

Later that summer the lake became dry. Mr. Gomez and Rosita couldn't go fishing any more. Now there were no trips to town. No coins jingled in Rosita's pocket.

"Now I will never have enough money for a pet," sighed Rosita.

Each night she would lie down on her mat and wish for the fish to come back to the lake. But they didn't return. The family had less and less to eat.

One day a man from the city came to show each fisherman a new way to earn money. "I have two baskets of chickens for you," said the man. "But don't eat the chickens. Let them lay eggs."

"Lay eggs!" said Mrs. Gomez. "I want the chickens for our supper!"

"But you can sell their eggs and use the money for other food," said the man.

Teacher _____ Group _____

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I Miscue: Types: Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Characteristics: Little Change in Meaning	Substantial Change in Meaning	High Graphic-Phonic	Low Graphic-Phonic
	1													
	2													
	3													
	4													
	5													
	6													
	7													
	8													
	9													
	10													
	11													
	12													
	13													
	14													
	15													
	16													
	17													
	18													
	19													
	20													
	21													
	22													
	23													
	24													
	25													

Time Code	Miscue Number	Cluster II Reactions: Continuation	Repeated Attempts	Pause	Call for Help	No Opportunity	Immediate Self Correction	Cluster III Teacher Verbal Feedback: Type: No Verbal Feedback	Sustaining FBK	Terminal Feedback	Form: Attending	Graphic-Phonic	Context	Timing: Less than 3 sec.	More than 3 sec.	Point: Before Next Sentence Break	At the Next Sentence Break	After Next Sentence Break
	1																	
	2																	
	3																	
	4																	
	5																	
	6																	
	7																	
	8																	
	9																	
	10																	
	11																	
	12																	
	13																	
	14																	
	15																	
	16																	
	17																	
	18																	
	19																	
	20																	
	21																	
	22																	
	23																	
	24																	
	25																	

Time Code	Miscue Number	Cluster IV Student Verbal Feedback: Type: None	Solicited	Unsolicited	Time: Less than 3 sec.	More than 3 sec.	Point: Before NSS	At NSS	After NSS	Cluster V Resolution: Teacher Identifies Wd.	Student Identifies Wd.	Other Identifies Wd.	Uncorrected Miscue
	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
	10												
	11												
	12												
	13												
	14												
	15												
	16												
	17												
	18												
	19												
	20												
	21												
	22												
	23												
	24												
	25												

Inaudibles [65]

Multiple Miscues [64]

Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.	Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.
1						9					
2						10					
3						11					
4						12					
5						13					
6						14					
7						15					
8						16					

09

Site _____

Tape no. _____

Text _____

Coder's name _____

Story _____

Page no. _____

211

Fisherman to Farmer

Brad

Rosita Gomez lived near a big lake. Her father was a fisherman.

Each day Mr. Gomez would throw out a big net to catch fish. Rosita would help her father pull in the net and pile the fish in baskets. Then off to market they would go to sell the fish!

Shallsa

One day Mr. Gomez sold the fish quickly. Then he gave Rosita all the money she had earned. How merrily the coins jingled in her pocket!

"Why don't you get something with your money, Rosita?" her father asked.

"I'm saving my money for a pet," said Rosita as she jingled the coins.

Chris

Later that summer the lake became dry. Mr. Gomez and Rosita couldn't go fishing any more. Now there were no trips to town. No coins jingled in Rosita's pocket.

Shawn

"Now I will never have enough money for a pet," sighed Rosita.

Shawn

Each night she would lie down on her mat and wish for the fish to come back to the lake. But they didn't return. The family had less and less to eat.

One day a man from the city came to show each fisherman a new way to earn money. "I have two baskets of chickens for you," said the man. "But don't eat the chickens. Let them lay eggs."

"Lay eggs!" said Mrs. Gomez. "I want the chickens for our supper!"

"But you can sell their eggs and use the money for other food," said the man.

Teacher 05 Group 3

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I: Miscue — Type: Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Characteristics: Little Change in Meaning	Substantial Change in Meaning	High Grapho-Phonic	Low Grapho-Phonic	Cluster II: Reactions: Continuation	Repeated Attempts	Pause	Call for Help	No Opportunity	Immediate Self Correction	Cluster III: Teacher Verbal Feedback — Type: No Verbal Feedback	Sustaining FBK	Terminal Feedbk	Form: Attending	Grapho-Phonic	Context	Timing: Less than 3 sec.	More than 3 sec.	Point: Before Next Sentence Break	At the Next Sentence Break	After Next Sentence Break	Student Verbal Feedback — Type: None	Solicited	Unsolicited	Time: Less than 3 sec.	More than 3 sec.	Point: Before NSB	At NSB	After NSB	Reso-lution: Teacher Identifies Wd.	Student Identifies Wd.	Other Identifies Wd.	Uncorrected Miscue
	1	out	– (a)		X						X									X	X											X											
	2	hea	– (a)						X		X									X	X											X		X									
	3	–	the (a)	X							X				X					X	X											X											X
	4	Basita	Basa (a)			X					X		X						X	X	X						X		X			X										
	5	messily	mes... (a)			X	X				X		X						X	X	X						X		X			X										
	6	jingled	juggled (a)			X					X		X		X					X	X						X		X			X		X		X						
	7	Basita	– (a)						X										X	X	X											X	X		X							
	8	bea	bea,it (a)				X				X		X		X					X	X											X										
	9	–	she (a)	X							X		X		X					X	X											X										X
	10	jingled	ju... (a)				X				X		X				X			X	X				I			X				X									
	11	became	be... (a)				X				X		X							X	X											X									
	12	Basita	Basa (a)			X					X		X						X	X	X				I			X		X		X									
	13	any	en... (a)			X	X				X		X		X					X	X											X									
	14	no	not (a)			X					X		X				X			X	X											X									
	15	jingled	jug,jingling (a)			X					X		X		X					X	X				I			X				X									
	16	sighed	said (a)		I	X					X		X		X					X	X											X									
	17	lie	lay (a)			X					X		X		X					X	X											X									
	18	and	I (a)			X					X		X		X					X	X											X									
	19	the	a (a)			X					X		X				X			X	X				I			X		X		X									
	20	to	– (a)						X		X		X		X					X	X											X									
	21	the	a (a)			X					X		X		X					X	X											X									
	22	chickens	chicken (a)			X					X		X		X					X	X											X									
	23	said	and (a)			X					X		X		X					X	X											X									
	24	but	mmmmm (a)							X										X	X											X									
	25	–	You (a)	X							X				X					X	X				I			X				X									X

Inaudibles

Multiple Miscues

Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.	Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.
1	Brad	01	49	18	12	9					
2	Shelisa	02	38	11	35	10					
3	Chris	03	24	5	5	11					
4	Shawn	04	99	19	9	12					
5						13					
6						14					
7						15					
8						16					

Date

Tape no.

Coder's name

Text Mustard Seed Magic Story Fishermen to Farmers Page no. 92-97

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I: Miscue — Type: Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Characteristics: Little Change in Meaning	Substantial Change in Meaning	High Graphic-Phonic	Low Graphic-Phonic	Cluster II: Reactions: Continuation	Repeated Attempts	Pause	Call for Help	No Opportunity	Immediate Self Correction	Cluster III: Teacher Verbal Feedback — Type: No Verbal Feedback	Sustaining FBK	Terminal Feedback	Form: Attending	Graphic-Phonic	Context	Timing: Less than 3 sec.	More than 3 sec.	Point: Before Next Sentence Break	At the Next Sentence Break	After Next Sentence Break	Cluster IV: Student Verbal Feedback — Type: None	Solicited	Unsolicited	Time: Less than 3 sec.	More than 3 sec.	Point: Before NSB	At NSB	After NSB	Resolution: Teacher Identifies Miscue	Student Identifies Miscue	Other Identifies Miscue	Uncorrected Miscue
	1	the	– (a)		X						X				X						X						X					X									X		
	2	their	the (a)			X					X		X		X						X						X					X									X		
	3																																											
	4																																											
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	6																																											
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Miscue Number

26. Note that miscues 25 and 26 are addressed by the same teacher feedback ("No, that's not what he said"), a contextual prompt that invites the student to reread the sentence. When the teacher allows an accumulation of miscues and then has the student read the passage again without focus on a particular miscue, code each miscue from the first reading as usual according to its characteristics, student's own reaction, teacher feedback (always sustaining context), other students' feedback, and resolution. If new miscues are made during the rereading, do not code them.

Inaudibles

Multiple Miscues

Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.	Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.
1						9					
2						10					
3						11					
4						12					
5						13					
6						14					
7						15					
8						16					

Date _____ Coder's name _____

Tape no. _____

Text Mustard Seed Boogie Story Fishermen to Farmers Page no. 82-87

Calculating Reliability

Miscue Identification Agreement

Refer to the formula on page 56. Let us say you counted 24 miscues, of which 23 agree with the expert's. The expert counted 27 miscues. There are 242 words of text. The calculation would look like this:

N = 242
A = 24 (say)
B = 218
X = 27
Y = 215
M = 23 (say)
C = 214
E = 47518

$$K = \frac{N(M+C) - E}{N^2 - E}$$

$$K = \frac{242(23 + 214) - 47518}{58564 - 47518}$$

$$K = .89$$

The acceptable level of Kappa for reliability is .80 and above. Insert the values from your coding and calculate your reliability.

Coding Agreement

Refer to the instructions on page 57.

Miscue Type: The denominator is the total number of miscues you and the expert agreed upon. The numerator is the number you agree on with the expert as to type.

$$\text{Miscue Type} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Meaning Change: The denominator is the number of miscues you agree with the expert should be coded for meaning change (eliminate hesitations, e.g.). The numerator is the number you agree on as to amount of meaning change.

$$\text{Meaning Change} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Grapho-phonic Similarity: Parallels Meaning Change.

$$\text{G-P Similarity} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Reactions: The denominator is the total number of miscues you agree on with the expert. The numerator is the number you agree on as to reaction.

$$\text{Reactions} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Teacher Verbal Feedback Type: Parallels Reaction.

$$\text{TVF Type} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Teacher Verbal Feedback Form: The denominator is the number of miscues you agree with the expert should be coded as receiving Sustaining Feedback. The numerator is the agreements between you and the expert as to form and order of form.

$$\text{TVF Form} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Teacher Verbal Feedback Timing: The denominator is the number of miscues you and the expert agree can be coded for timing (eliminate No Verbal Feedback). The numerator is the number you agree on as to timing.

$$\text{TVF Timing} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Teacher Verbal Feedback Point: Parallels Timing.

$$\text{TVF Point} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Student Verbal Feedback: Parallels Teacher Verbal Feedback.

$$\text{SVF Type} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

$$\text{SVF Timing} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

$$\text{SVF Point} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Resolution: Parallels Miscue Type.

$$\text{Resolution} = \frac{\text{Agreements}}{\text{Possible Agreements}} = \quad = \quad \%$$

Extended Practice 2

A Baby in the House

It was a cold, winter afternoon.
The snow that fell was mixed with rain, and so Pat stayed in the house.
When a car came up the street, Pat jumped up and looked out.
But it was not his father's car.

"He will come home before long," said the woman who sat with Pat.
"When he comes, he will tell you."

It was dark when Father came home.
He went to Pat and picked him up.
"Pat, old boy, I have a surprise for you!" said Father.

"Is it a boy?" asked Pat.

"No, a girl!" said Father.
"We have a little baby girl.
Her name is Pam."

A girl! That was something for Pat to think about.

He had wished and wished for a boy.
Just thinking about a baby girl made him mad.

In four days, Pat's mother came home with the baby.
On that day, Pat and his friend played together in the snow.

"You look mad," said Pat's friend.

"I am mad," said Pat.
"Mom came home with the baby this morning.
Who needs a baby girl around?"

"Oh, a baby girl is not so bad!" said the friend.
"All I have is a dog."

"I wish I had a dog," said Pat.
"I'll trade the baby for your dog."

"You can't do that," said Pat's friend.
"But I'll tell you what.
You can live at my house so you won't have to stay around her."

"Good," Pat said as he began to run. "I'll go home and get my things."

When Pat got home, his mother was in the kitchen.

She was mixing milk for the baby.

In the next room, the baby cried.

Pat walked over to his mother.

He was all set to tell her that he was moving out of the house.

But then he stopped.

"Mom will get mad," he said to himself.

Just then a man rapped on the door.

As Pat's mother went to the back door, the baby cried and cried.

Pat went to the door of the baby's room.

He looked at the little baby.

"She is so little," he said to himself.

Pat put his hand on the baby.
She looked up at Pat.
Before long she stopped crying.

Soon Pat's mother came in.
"Pat, you are magic!" she said.
"You made her stop crying.
What did you do?"

"She likes me," said Pat in surprise.

"Do you like her?" asked Mother.

"She is not so bad," said Pat.
And away he ran to tell his friend.

FORMAS

Time Code	MISCUE NUMBER	EXPECTED RESPONSE	OBSERVED RESPONSE	CLUSTER I MISCUE: TYPES: INSERTION	OMISSION	SUBSTITUTION	MISPRONUNCIATION	DON'T KNOW	HESITATION	REPETITION	CHARACTERISTICS: LITTLE CHANGE IN MEANING	SUBSTANTIAL CHNG IN MEANING	HIGH GRAPHO-PHONIC	LOW GRAPHO-PHONIC	CLUSTER II REACTIONS: CONTINUATION	REPEATED ATTEMPT	PAUSE	CALL FOR HELP	NO OPPORTUNITY	IMMEDIATE SELF CORRECTION	CLUSTER III TEACHER VERBAL FEEDBACK: TYPE: NO VERBAL FEEDBK	SUSTAINING FBK	TERMINAL FEEDBK	FORM: ATTENDING	GRAPHO-PHONIC	CONTEXT	TIMING: LESS THAN 3 SEC.	MORE THAN 3 SEC.	POINT: BEFORE NEXT SENTENCE BREAK	AT THE NEXT SENTENCE BREAK	AFTER NEXT SENTENCE BREAK	STUDENT VERBAL FEEDBACK: TYPE: NONE	SOLICITED	UNSOLICITED	TIME: LESS THAN 3 SEC.	MORE THAN 3 SEC.	POINT: BEFORE NSB	AT NSB	AFTER NSB	RESOLUTION: TEACHER IDENTIFIES WD.	STUDENT IDENTIFIES WD.	OTHER IDENTIFIES WD.	UNCORRECTED MISCUE
	1																																										
	2																																										
	3																																										
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Inaudibles [65]

Multiple Miscues [64]

Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.	Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.
1						9					
2						10					
3						11					
4						12					
5						13					
6						14					
7						15					
8						16					

Date _____ Coder's name _____

Tape no. _____

Text _____ Story _____ Page no. 227

A Baby in the House

Timothy

It was a cold, winter afternoon.
The snow that fell was mixed with rain, and so Pat stayed in the house.
When a car came up the street, Pat jumped up and looked out.
But it was not his father's car.

"He will come home before long," said the woman who sat with Pat.
"When he comes, he will tell you."

Carrie

It was dark when Father came home.
He went to Pat and picked him up.
"Pat, old boy, I have a surprise for you!" said Father.

"Is it a boy?" asked Pat.

"No, it's a girl!" said Father.
"We have a little baby girl.
Her name is Pam."

A girl! That was something for Pat to think about.

He had wished and wished for a boy.
Just thinking about a baby girl made him mad.

Alex

In four days, Pat's mother came home with the baby.
On that day, Pat and his friend played together in the snow.

"You look mad," said Pat's friend.

"I am mad," said Pat.
"Mom came home with the baby this morning.
Who needs a baby girl around?"

"Oh, a baby girl is not so bad!" said the friend.
"All I have is a dog."

"I wish I had a dog," said Pat.
"I'll trade the baby for your dog."

Tanya

"You can't do that," said Pat's friend.
"But I'll tell you what.
You can live at my house so you won't have to stay around her."

"Good," Pat said as he began to run.
"I'll go home and get my things."

When Pat got home, his mother was in the kitchen.

She was mixing milk for the baby.

In the next room, the baby cried.

Pat walked over to his mother.

He was all set to tell her that he was moving out of the house.

But then he stopped.

"Mom will get mad," he said to himself.

Just then a man rapped on the door.

As Pat's mother went to the back door, the baby cried and cried.

Pat went to the door of the baby's room.

He looked at the little baby.

"She is so little," he said to himself.

Pat put his hand on the baby.

She looked up at Pat.

Before long she stopped crying.

Soon Pat's mother came in.

"Pat, you are magic!" she said.

"You made her stop crying.

What did you do?"

"She likes me," said Pat in surprise.

"Do you like her?" asked Mother.

"She is not so bad," said Pat.

And away he ran to tell his friend.

Teacher 04 Group 2

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response
	1	—	that (a)
	2	in the house	mmmm (a)
	3	will	wou... (a)
	4	Pat	Pete (a)
	5	comes	cā... (a)
	6	a	it's (a)
	7	the	a (a)
	8	her	hese (a)
	9	himself	myself (a)
	10	baby	babe (a)
	11	she	sh... (a)
	12	likes	— (a)
	13	surprise	— (a)
	14	away	after (a)
	15	ran	runs (a)
	16		
	17		
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		

Cluster I — Miscue

Type: 7 Insertion; 8 Omission; 9 Substitution; 10 Mispronunciation; 11 Don't know; 12 Hesitation; 13 Repetition

Characteristics: 14 Little change in meaning; 15 Substantial change in meaning; 16 High graphophonic; 17 Low graphophonic

Cluster II — Reactions

18 Continuation; 20 Repeated attempt; 21 Pause; 22 Call for help; 23 No opportunity; 24 Immediate self correction

Cluster III — Teacher Verbal Feedback

Type: 27 No verbal feedback; 28 Sustaining FBK; 29 Terminal feedbk

30 Form: 31 Attending; 32 Grapho-phonic; 33 Context

Timing: 35 Less than 3 sec.; 36 More than 3 sec.

37 Point: 38 Before next sentence break; 39 At the next sentence break; 40 After next sentence break

Cluster IV — Student Verbal Feedback

42 Type: 43 None; 44 Solicited; 45 Unsolicited

Time: 47 Less than 3 sec.; 48 More than 3 sec.

49 Point: 50 Before NSB; 51 At NSB; 53 After NSB

Cluster V — Resolution

52 Teacher identifies wd.; 54 Student identifies wd.; 56 Other identifies wd.; 57 Uncorrected miscue

Inaudibles 63

Multiple Miscues 64

58 Turn	59 Name	60 I.D.	61 T.C.W.R.	62 T.W.L.C.S.	63 T.R.L.C.S.	58 Turn	59 Name	60 I.D.	61 T.C.W.R.	62 T.W.L.C.S.	63 T.R.L.C.S.
1	Timothy	02	53	21	16	9					
2	Carrie	02	74	41	41	10					
3	Alex	03	78	41	40	11					
4	Tanya	04	64	39	22	12					
5	Jason	05	76	44	28	13					
6	Christy	06	59	23	45	14					
7						15					
8						16					

74

Date _____ Coder's name _____

Tape no. _____

Text Together We Go (old edition) Story A Baby in the House Page no. 135

233

Calculating Reliability

Miscue Identification Agreement

Insert your values:

N = 421 C =

A = E =

B =

X = 15 $K = \frac{N(M + C) - E}{N^2 - E}$

Y = 406

K =

M =

Coding Agreement

Miscue Type = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

Meaning Change = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

G-P Similarity = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

Reaction = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

TVF Type = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

TVF Form = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

TVF Timing = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

TVF Point = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

SVF Type = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

SVF Form = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

SVF Point = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

Resolution = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

Extended Practice 3

Their trip to the zoo got off to a bad start. Carol and Maria walked along slowly, without talking. Their mothers talked, but the girls said nothing.

"I don't know why I thought coming here would help," Carol said to herself. "We can't even talk to each other!"

Carol looked at Maria. She was looking around, but she didn't smile.

"If only I could help," Carol thought. "How would I feel if I were in a strange country?"

Suddenly Carol stopped. Her face lit up. She tapped on the sign by a cage. Then she
100 pointed to the animal inside.

"Wolf!" said Carol. She smiled at Maria and said, "Wolf!"

Maria smiled. Then Maria tapped on the sign and said, "Wolf." She pointed to the animal in the cage and said, "Wolf."

Then Maria shouted out, "*Lobo!*" And she pointed to the wolf.

"*Lobo!*" Carol shouted right back.

Carol and Maria looked at each other and began to laugh. Carol grabbed Maria's hand, and the two girls ran ahead to the big bear cage.

When they saw the brown bear standing on his back legs, Carol jumped to the side as if she were scared.

203 At the next cage, Maria jumped back to show Carol she was scared of the red fox crouched in the corner. They didn't need words to understand each other.

It was Maria who pointed out the possum babies. Then Maria held up her hand. But Carol shook her head to show she didn't understand.

Again Maria pointed to the babies. She put Carol's hand in hers. Then she tapped until she counted to twelve.

"Oh!" Carol jumped up and down. "I know. You're saying I could put the twelve
289 little babies in my hand!"

Teacher _____ Group _____

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I: Miscue — Types: Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Characteristics: Little Change in Meaning	Substantial Change in Meaning	High Grapho-Phonic	Low Grapho-Phonic
	1													
	2													
	3													
	4													
	5													
	6													
	7													
	8													
	9													
	10													
	11													
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	16													
	17													
	18													
	19													
	20													
	21													
	22													
	23													
	24													
	25													

Cluster II: Reactions	Continuation	Repeated Attempts	Pause	Call for Help	No Opportunity	Immediate Self Correction

Cluster III: Teacher Verbal Feedback — Types	No Verbal Feedback	Sustaining Fbk	Terminal Feedback	Form: Attending	Grapho-Phonic	Context	Timing: Less than 3 Sec.	More than 3 Sec.	Point: Before Next Sentence Break	At the Next Sentence Break	After Next Sentence Break

Cluster IV: Student Verbal Feedback — Types	None	Solicited	Unsolicited	Time: Less than 3 Sec.	More than 3 Sec.	Point: Before NSB	At NSB	After NSB

Cluster V: Resolution	Teacher Identifies Wd.	Student Identifies Wd.	Other Identifies Wd.	Uncorrected Miscue

Inaudibles [ ]

Multiple Miscues [ ]

Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.	Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.
1						9					
2						10					
3						11					
4						12					
5						13					
6						14					
7						15					
8						16					

78

Date _____

Tape no. _____

Text 233

Coder's name _____

Story _____

Page no. _____ 239

Paul

Their trip to the zoo got off to a bad start. Carol and Maria walked along slowly, without talking. Their mothers talked, but the girls said nothing.

"I don't know why I thought coming here would help," Carol said to herself. "We can't even talk to each other!"

Kim

Carol looked at Maria. She was looking around, but she didn't smile.

"If only I could help," Carol thought. "How would I feel if I were in a strange country?"

Suddenly Carol stopped. Her face lit up. She tapped on the sign by a cage. Then she pointed to the animal inside.

Jennifer

"Wolf!" said Carol. She smiled at Maria and said, "Wolf!"

Maria smiled. Then Maria tapped on the sign and said, "Wolf." She pointed to the animal in the cage and said, "Wolf."

Then Maria shouted out, "*Lobo!*" And she pointed to the wolf.

Barbara

"*Lobo!*" Carol shouted right back.

Carol and Maria looked at each other and began to laugh. Carol grabbed Maria's hand, and the two girls ran ahead to the big bear cage.

When they saw the brown bear standing on his back legs, Carol jumped to the side as if she were scared.

Cindy

At the next cage, Maria jumped back to show Carol she was scared of the red fox crouched in the corner. They didn't need words to understand each other.

It was Maria who pointed out the possum babies. Then Maria held up her hand. But Carol shook her head to show she didn't understand.

Ronnie

Again Maria pointed to the babies. She put Carol's hand in hers. Then she tapped until she counted to twelve.

"Oh!" Carol jumped up and down. "I know. You're saying I could put the twelve little babies in my hand!"

Teacher 03 Group 3

FORMAS

Time Code	Miscue Number	Expected Response	Observed Response	Cluster I Miscue: Type: Insertion	Omission	Substitution	Mispronunciation	Don't Know	Hesitation	Repetition	Character-istics: Little Change in Meaning	Substantial Chng in Meaning	High Grapho-Phonic	Low Grapho-Phonic	Cluster II Reactions: Continuation	Repeated Attempts	Pause	Call for Help	No Opportunity	Immediate Self Correction	Cluster III Teacher Verbal Feedback: Type: No Verbal Feedback	Sustaining FBK	Terminal Feedbk	Form: Attending	Grapho-Phonic	Context	Timing: Less than 3 sec.	More than 3 sec.	Point: Before Next Sentence Break	At the Next Sentence Break	After Next Sentence Break	IV Student Verbal Feedback: Type: None	Solicited	Unsolicited	Time: Less than 3 sec.	More than 3 sec.	Point: Before NSB	At NSB	After NSB	V Reso-lution: Teacher Identifies Wd.	Student Identifies Wd.	Other Identifies Wd.	Uncorrected Miscue
	1	to	it (01)			X					X			X	X						X										X										X
	2	slowly	s (01)				X					X		X		X					X										X								X			
	3	thought	th (01)				X					X		X		X					X										X								X			
	4	and	that (01)			X						X		X	X						X										X								X			
	5	Lobo	Luby (01)				X				X			X	X						X				1		X			X			X	X								
	6	and the	nnnn (01)							X										X	X											X										
	7	cage	— (01)		X						X				X						X										X									X		
	8	—	big (01)	X							X					X					X										X											
	9	show Coool	nnnn (01)							X										X	X										X								X			
	10	they	nnnn (01)							X										X	X										X								X			
	11	they didn't need words	nnnn (01)							X										X	X										X								X			
	12	but	— (01)		X						X				X						X										X									X		
	13	hers	hee (01)		X							X		X						X	X										X											
	14	—	be (01)			X						X		X						X	X										X											
	15	little	luu (01)				X					X		X						X	X										X											
	16																																										
	17																																										
	18																																										
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	20																																										
	21																																										
	22																																										
	23																																										
	24																																										
	25																																										

Inaudibles

Multiple Miscues

Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.	Turn	Name	I.D.	T.C.W.R.	T.W.L.C.S.	T.R.L.C.S.
1	Paul	01	45	15	6	9					
2	Kim	02	52	52	23	10					
3	Jennifer	03	42	30	17	11					
4	Barbara	04	49	20	11	12					
5	Cindy	05	47	19	11	13					
6	Bonnie	06	39	20	9	14					
7						15					
8						16					

Date

Type no. 212

Coder's name

Text Mustard Seed Magic Story More Than Words Page no. 35

213

08

Calculating Reliability

Miscue Identification Agreement

Insert your values:

N = 289 C =

A = E =

B =

X = 15 $K = \frac{N(M + C) - E}{N^2 - E}$

Y = 274

K =

M =

Coding Agreement

Miscue Type = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

Meaning Change = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

G-P Similarity = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

Reaction = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

TVF Type = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

TVF Form = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

TVF Timing = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

TVF Point = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

SVF Type = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

SVF Form = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

SVF Point = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

Resolution = $\frac{\text{Agreements}}{\text{Possible Agreements}}$ = = %

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Teacher _____ Group _____

FORMAS

Time Code	1 MISCUE NUMBER	2 EXPECTED RESPONSE	3 OBSERVED RESPONSE	CLUSTER I MISCUE — 4 TYPE: 6 INSERTION; 7 OMISSION; 8 SUBSTITUTION; 9 MISPRONUNCIATION; 10 DON'T KNOW; 11 HESITATION; 12 REPETITION — 13 CHARACTERISTICS: 14 LITTLE CHANGE IN MEANING; 15 SUBSTANTIAL CHNG IN MEANING; 16 HIGH GRAPHO-PHONIC; 17 LOW GRAPHO-PHONIC	CLUSTER II REACTIONS — 18 CONTINUATION; 19 REPEATED ATTEMPTS; 21 PAUSE; 22 CALL FOR HELP; 23 NO OPPORTUNITY; 24 IMMEDIATE SELF CORRECTION	CLUSTER III TEACHER VERBAL FEEDBACK — 25 TYPE: 26 NO VERBAL FEEDBACK; 27 SUSTAINING FBK; 28 TERMINAL FEEDBK; 30 FORM: 31 ATTENDING; 32 GRAPHO-PHONIC; 33 CONTEXT; 34 TIMING: 35 LESS THAN 3 SEC.; 36 MORE THAN 3 SEC.; 37 POINT: 38 BEFORE NEXT SENTENCE BREAK; 39 AT THE NEXT SENTENCE BREAK; 40 AFTER NEXT SENTENCE BREAK	CLUSTER IV STUDENT VERBAL FEEDBACK — 42 TYPE: 43 NONE; 44 SOLICITED; 45 UNSOLICITED; 47 TIME: 47 LESS THAN 3 SEC.; 48 MORE THAN 3 SEC.; 49 POINT: 50 BEFORE NSE; 51 AT NSE; 52 AFTER NSE	CLUSTER V RESOLUTION — 53 TEACHER IDENTIFIES MC; 54 STUDENT IDENTIFIES MC; 55 OTHER IDENTIFIES MC; 56 UNCORRECTED MISCUE
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
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	18							
	19							
	20							
	21							
	22							
	23							
	24							
	25							

57 Inaudibles

58 Multiple Miscues

Appendix A

59 Turn	59 Name	60 I.D.	61 T.C.W.R.	62 T.W.L.C.S.	63 T.R.L.C.S.	59 Turn	59 Name	60 I.D.	61 T.C.W.R.	62 T.W.L.C.S.	63 T.R.L.C.S.
1						9					
2						10					
3						11					
4						12					
5						13					
6						14					
7						15					
8						16					

83

Date _____ Coder's name _____

Tape no. _____

Text _____ Story _____ Page no. _____

Appendix B

FORMAS Definitions

1. Miscue number - the ordinal sequence of each miscue in the interaction being coded.

2. Expected response - the text word that is inovlved in the miscue.

3. Observed response - what the student did (or did not do) in making the miscue.

4. Miscue - an observed response that differs from an expected response.

5. Miscue type - classification scheme for observed miscues.

6. Insertion - the reader inserts a word or an affix which is not present in the text.

7. Omission - the reader omits a word or an affix which is present in the text.

8. Substitution - the reader substitutes a word or an affix for one which is present in the text.

9. Mispronunciation - the reader substitutes a partial or complete nonsense utterance for a word or affix which is present in the text.

10. Don't know - the reader stops before attempting a word and verbally requests teacher assistance.

11. Hesitation - the reader pauses before attempting a word for at least 3 seconds or the teacher or another student intervenes before the 3 second period elapses.

12. Repetition - saying a text word or set of adjacent text words two or more times.

13. Miscue characteristics - qualitative features of each particular type of miscue.

14. Little meaning change - the miscue alters the author's intended meaning only slightly.

15. Substantial meaning change - the miscue alters the author's intended meaning significantly.

16. High grapho-phonic similarity - at least 2 of the 3 parts of the observed response conform to the expected response.

17. Low grapho-phonic similarity - less than 2 of the 3 parts of the observed response conform to the expected response.

18. Reactions - how the reader initially deals with his miscue.

19. Continuation - student continues reading with no apparent attention to the miscue.

20. Repeated attempts - the reader makes repeated attempts at identifying the text word.

21. Pause - student stops reading for at least 2 seconds after the miscue occurs.

22. Call for help - reader explicitly requests teacher assistance after the miscue has been made.

23. No opportunity for reaction - teacher or another student intervenes within 2 seconds of the miscue occurring and no other reaction by the student is in evidence.

24. Immediate self-correction - student self-corrects the miscue immediately before showing evidence of any other reaction.

25. Teacher verbal feedback - initial verbal teacher behavior that follows a miscue and reader's reaction to the miscue and relates to the expected or observed response.

26. Feedback type - the general nature of teacher feedback.

27. No verbal feedback - teacher displays no verbal feedback strategy which is directly related to the identification of the target word.

28. Sustaining feedback - teacher verbal feedback that provides the reader with the opportunity to identify part or all of an expected response.

29. Terminal feedback - first response of teacher is to identify target word or call on another student.

30. Feedback form - specific characteristics of sustaining teacher feedback.

31. Attending - sustaining feedback which offers the reader another response opportunity but provides reader with no new information and is noncue focusing.

32. Grapho-phonic - sustaining feedback which relates to visual and/or sound related characteristics of the miscue and/or the expected response.

33. Context - a sustaining prompt which initially relates to the surrounding semantic (meaning) or syntactic (structural) features.

34. Timing of teacher feedback - the time in seconds that has elapsed between the miscue and the initiation of feedback.

35. Less than 3 seconds - time period which intervenes between the occurrence of a miscue and teacher feedback.

36. More than 3 seconds - time period which intervenes between the occurrence of a miscue and teacher feedback.

37. Point of feedback - sentence position relative to the miscue at which the teacher provides feedback.

38. Before the next sentence break - teacher feedback offered before the student completes reading the sentence containing the target miscue.

39. At the next sentence break - teacher feedback offered when the student completes reading the sentence containing the target miscue.

40. After the next sentence break - teacher feedback offered when the student has read beyond the sentence containing the target miscue.

41. Student verbal feedback - verbal behavior of a student other than the reader relating to the expected or observed response.

42. Student feedback type - the general nature of student verbal feedback.

43. None - no other student offers verbal feedback directly related to the miscue.

44. Solicited - a student's verbal feedback that is requested by a teacher.

45. Unsolicited - verbal feedback that is volunteered by a student and not requested by a teacher.

46. Time of student feedback - the time in seconds that has elapsed between the miscue and the initiation of a student's feedback.

47. Less than 3 seconds - time period which intervenes between the occurrence of a miscue and student feedback.

48. More than 3 seconds - time period which intervenes between the occurrence of a miscue and student feedback.

49. Point of feedback - sentence position relative to the miscue at which a student provides feedback.

50. Before the next sentence break - other student feedback offered before the reader completes the sentence containing the target miscue.

51. At the next sentence break - other student feedback offered when the reader completes the sentence containing the target miscue.

52. After the next sentence break - other student feedback offered after the reader has progressed beyond the sentence containing the target miscue.

53. Miscue resolution - whether or not the miscue is corrected and the individual correcting the miscue.

54. Teacher identifies word - teacher identifies word (or corrects a student's miscue).

55. Student identifies word - reader self-corrects his own miscue.

56. Other identifies word - person other than the teacher or student reading identifies target word.

57. Uncorrected miscue - student continues reading with miscue left uncorrected.

58. Turn - sequence in which student reads.

59. Name - student's name.

60. I.D. - student's unique I.D. number.

61. T.C.W.R. - Total number of Correct Words Read.

62. T.W.L.C.S. - Total number of Words in Longest Correct String.

63. T.R.L.C.S. - Time for Reading Longest Correct String in seconds.

64. Multiple miscues - a tallying of student generated miscues that involve two or more contiguous text words which are not attended to individually either through self-correction or teacher feedback.

65. Inaudibles - possible miscues which cannot be coded because of poor audio quality or other factors.

NRC yearbook

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A COMPARISON OF INSERVICE AND PRESERVICE TEACHER VERBAL FEEDBACK TO STUDENT MISCUES ACROSS TWO DIFFICULTY LEVELS OF TEXT

Teacher guided oral reading persists as a common practice in most elementary classrooms. Howlett and Wientraub (1978) report that over four-fifths of primary grade teachers responding to their survey engage students daily in oral reading exercises. Other than the research evidence pointing to the existence and wide use of oral reading in classrooms, we have no substantial history of research into the characteristics or effects of oral reading instruction on pupil performance. While emotional indictments of teacher guided oral reading appear from time to time in the professional literature (e.g., Artley, 1972), the practice continues. Making the situation even more unsettling is some recent classroom research pointing to positive outcomes for students in classrooms where teachers engage students frequently in oral reading (Anderson & Evertson, 1978; Stallings, Needels, & Stayrook, 1979). The void in our understanding for the place of teacher guided oral reading in a developmental program is sorely in need of attention.

In an instructional context oral reading takes on the form of a dialogue in which information is exchanged between teacher and student. These verbal interactions typically arise from the teacher's efforts to give students feedback about their miscues. Clements and Hoffman (1981) have found that over 35% of teacher talk during guided oral reading is miscue focused. What kinds of feedback do teachers typically rely on in such contexts? How do situational or setting variables influence changes in the kinds of feedback offered? What effects (both short and long term) do these different strategies have on the development of pupil competencies? Only recently has the research literature come to offer any information useful in answering any of these questions (Niles, 1980). It was in an effort to contribute to our knowledge in this area that the present study was conceived.

This research represents an attempt to systematically study the characteristics of teacher feedback to student miscues during oral reading. The research builds directly on the work of such researchers as Brophy and Good (1969), Goodman (1973), Brady and Lynch (1976), and Allington (1978). It is based on the conceptual framework for studying teacher feedback proposed by Hoffman (1979) who identified three critical dimensions to be considered in examining verbal feedback during oral reading: (1) selectivity—which miscues (or what proportion) are responded to by the teacher; (2) timing—when, or at what point, is the feedback offered; and (3) form—what are the qualitative characteristics of the feedback itself.

METHOD

Subjects

The subjects for this study were teacher pupil dyads. Thirty-four elementary pupils were selected at random from students enrolled in a summer reading program at The University of Texas at Austin. The actual grade placement levels of the students were distributed evenly among grades one through five. The teachers were eighteen experienced classroom teachers enrolled in a graduate reading methods class and sixteen undergraduate education majors (inexperienced teachers) enrolled in their first reading methods course. Pupils were randomly assigned to teachers to form instructional dyads. Teachers and pupils had no instructional contact or familiarity prior to participation in this study. This was done so as to control for the possibility that prior knowledge of student needs might influence response patterns by teachers.

Procedures

Each student's approximate instructional reading level (92-98% Word Accuracy) was determined during a screening phase using an informal reading inventory developed from passages found in each of the basal readers of *The New Basic Readers* (Scott, Foresman, and Company, 1964). Reading achievement levels, as reflected on the informal reading inventory (IRI), were generally distributed evenly above and below grade placement.

Selected portions of basal readers in the *New Basic Reading Series* that had not been included in the informal reading inventory, were used as reading materials in this study. Each pupil read aloud to a teacher for approximately ten minutes from one section of text at an instructional level and for an additional ten minutes from a second piece of text at the next higher level within the series. The difficulty sequence was counter-balanced between subjects (i.e., easy first/hard second and hard first/easy second). All sessions were videotaped from concealed audiovisual equipment. Prior to commencing the oral reading sessions, identical sets of directions were given. Experienced and preservice teachers were informed that the purpose of the study was to record and examine interactions between teachers and students during oral reading instruction and that they should feel free to assist the student in as natural a manner as possible. The pupils were told they would read two texts aloud with a teacher present to guide them.

Coding

Videotapes were coded using the FORMAS-dyadic taxonomy (Hoffman & Baker, 1980). Coders were trained to use FORMAS to classify audiovisual recordings of the student-teacher interactions during oral reading instruction. Four major clusters of teacher/pupil interactive behaviors were monitored and analyzed for this study. See Table 1. Interrater reliability during coding was monitored with random checks for coder agreement. The coefficient of interrater agreement for nominal scores K, was the measure used to estimate the proportion of joint judgements of reading miscues after chance agreement was excluded (Hoffman, Gardner & Clements, 1980). For each dyad the reliability coefficients for agreed miscues ranged between .83 and 1.00. Interrater reliability coefficients for each category of behavior across the agreed upon miscues ranged between .79 and .96. Only single word miscues were coded and analyzed

TABLE 1

Four major clusters of teacher/pupil interactive behaviors

I Miscue
- A Type: insertions; omissions; hesitations; substitutions; mispronunciations; calls for help; and repetitions.
- B Meaning change: high and low.
- C Syntactic acceptability: high; some; and low.
- D Grapho-phonic similarity: high and low.

II Reaction (student's immediate behavior following miscue)
- A. Type: repeated attempt; continuation; immediate self-correction; pause; call for help; and no opportunity.

III. Teacher Verbal Feedback
- A. Type: no verbal; terminal (giving the text word); and sustaining (helping student to identify text word).
- B Form of sustaining: attending (noncue focusing); simple graphophonic; simple context; complex graphophonic (i.e., graphophonic followed by context); and, complex context (i.e, context followed by graphophonic).
- C. Timing of teacher feedback: immediate (0 to 3 seconds); delayed (more than 3 seconds).
- D. Point of teacher feedback: before the next sentence break; at the next sentence break; or after the next sentence break.

IV. Resolution: teacher identified text word; student identified text word; or miscue left unidentified.

in this study. Multiple miscues (similar to Weber's (1970) "scrambles") involving two or more contiguous text words were simply tallied.

RESULTS AND DISCUSSION

A total of 1,837 miscue interactions were coded. The average accuracy of oral reading for students in the easy material was about 85% and in the difficult material about 81%. Although these error rates (15% and 19% respectively) are high in comparison to the criteria used with the screening IRI, two important differences must be kept in mind. First, in the experimental setting hesitation and repetitions were always counted as miscues. This was not always the case in the screening IRI. Second, miscues which were self corrected in the experimental setting were counted. They were not counted in the screening IRI. Multiple miscues accounted for about 9% of the total. These miscues were not included in the analyses to be reported.

Selection: Which miscues did teachers respond to?

Teachers made some form of overt verbal response to only 37% of the single word miscues made by students. This figure roughly replicates the findings of Allington (1978) in his study of classroom oral reading instruction. Further analyses of our data revealed that teachers were more likely ($p < .05$) to respond to miscues made in difficult rather than easy material (40% versus 34%). Inservice teachers were also more inclined ($p < .05$) to respond than preservice teachers (40% versus 34%).[1]

[1] All tests of statistical significance were made following the model proposed by Castellan (1965) for the use of chi-squares in the partitioning of contingency tables.

Teachers were more likely ($p < .05$) to respond to miscues which affected meaning substantially (44% were responded to) than those which resulted in minimal meaning change (only 19% were responded to). Teachers seemed also to be sensitive to the ways in which students were reacting to their own miscues in determining whether or not to respond. Teachers were most likely to respond to repeated attempts (55% were responded to) and pauses after miscues (62% were responded to). Teachers were least likely to respond when the students continued reading in the text after making a miscue (only 15% were responded to). It seems reasonable to conclude from these data that there are at least three factors directly related to criteria for selection of which miscues to respond to: (1) the degree of meaning change involved; (2) the density of miscues; and (3) the strategy the student exhibits immediately following the miscue.

Timing: When did teachers respond?

The timing of teacher response was monitored in two ways: First, in terms of elapsed time between the occurrence of the miscue and the initiation of feedback; and second, in terms of the point in the text relative to the miscue at which the feedback was first offered. In general it can be said that teachers interrupt early and fast. Verbal responses were offered immediately (i.e., within 0-3 seconds), almost 75% of the time and before the student had progressed very far beyond the miscue in the text (e.g., 83% before the next sentence break).

In comparing the timing of responses between easy and hard materials it was found that point of response tended to be earlier in the more difficult material, although elasped time was greater. This phenomenon can be explained in part by the associated decrease in continuations by the students when moving from easy to difficult material (35% to 33%), and the increase in repeated attempts (16% to 18%) and pauses (7% to 8%). When the feedback is offered, then, it is directly related to the degree of text difficulty in relation to pupil ability. Where the feedback is offered is influenced by the student's strategy following the miscue.

Form: What kind of feedback was offered?

When teachers did respond overtly to student miscues, their responses were divided fairly evenly (19% versus 18%) between terminal feedback (initially giving the student the text word) and sustaining feedback (attempting to have the student identify the text word). The data also revealed that inservice teachers resorted more often to terminal feedback than preservice teachers and that both groups used significantly more terminal feedback when students were reading in the more difficult material. See Table 2.

In terms of breakdown of teacher sustaining feedback behaviors, it was found that inservice teachers relied on significant attending feedback more often than did preservice teachers (38% as opposed to 22%). Significant attending feedback provides the student with an opportunity to respond and is noncue focused. Examples would include such statements as: "try again" or "keep working at it." Both groups tended to rely less on significant attending feedback when students were reading in the more difficult material.

Both groups of teachers were fairly evenly split between their reliance on grapho-phonic and contextual prompts. As a group, teachers became more contextually oriented in their prompts as students read in the more difficult material. While, as noted earlier, teachers were more likely to respond to miscues which substantially affected text meaning, there was no apparent relationship

TABLE 2

Percentage of Teacher Prompts as a Function of Sustaining Feedback by Category

MATERIAL TYPE	Teachers	Total Number of Miscues	Attending Without Prompt	Simple Graphic Phonic	Complex Graphic Phonic	Simple Context	Complex Context
EASY	Inservice	67	34%	31%	5%	25%	5%
	Preservice	68	28%	40%	1%	27%	1%
	Total	135	31%	36%	3%	26%	4%
HARD	Inservice	83	43%	24%	0%	22%	11%
	Preservice	77	14%	39%	0%	43%	4%
	Total	160	29%	31%	0%	32%	8%
ALL	Total	295	30%	33%	2%	29%	6%

between the level of meaning change and the form of sustaining feedback, nor was there a discernible relationship between the form of sustaining feedback and the degree of grapho-phonic similarity between the miscue and the text word. In other words, a student who generated a miscue which substantially affected text meaning was no more likely to get a context prompt than a grapho-phonic prompt. Conversely, a student who generated a miscue which had low grapho-phonic similarity to the text word was no more likely to get a grapho-phonic prompt than a context prompt. It was surprising—particularly with respect to miscues which substantially affected meaning—that teachers would apparently use this information to determine whether or not they should prompt and then not use the information in determining the kind of prompt they would offer.

Also, teachers rarely initiated a prompt at one level and completed the prompt at another. For example, in only 6% of the cases in which a prompt was offered did teachers combine both grapho-phonic and contextual cues. Teachers were more likely to make repeated prompts at the same level even when faced with unsuccessful responses by the student.

An analysis of the amount of time spent on a prompt from initiation by the teacher to resumed reading by the pupil revealed no significant differences between the groups of teachers. There was, however, a slight tendency toward shorter interruptions in the more difficult material. A significant difference ($p < .05$) was found for the amount of time away from the task of reading relative to the form of the sustaining feedback with grapho-phonic prompts taking much longer than the others.

Of all the single word miscues made by students not given overt feedback, 45% were ultimately identified by the students themselves. Of those single word miscues responded to and receiving sustaining feedback, 41% were ultimately identified by the teacher and 54% by the students. Some forms of prompts were more associated with student identification of the text word than were others. Simple context prompts, for example, led to student identification 67% of the time, while simple grapho-phonic prompts led to student identification only 51% of the time.

SUMMARY

This study was designed in order to observe and describe the characteristics of

verbal feedback behaviors used by teachers during guided oral reading. Basic relationships between pupil behavior and teacher behavior were explored.

In summary, the major findings of this study can be categorized by characterizing teachers' verbal feedback in terms of selection, timing and form. On the whole, both experienced and inexperienced teachers were remarkably similar in their choices of response patterns. With regard to selection, teachers were more likely to respond to miscues made in difficult material. As well, all teachers appeared sensitive to meaning change in determining which miscues they would respond to (although they did not appear to use this information in determining the form of their verbal feedback). With regard to the timing dimension of teacher feedback, teachers more often responded to miscues quickly rather than delaying their point of intervention. Finally, in the area of form, terminal feedback appeared to be a strategy teachers turned to more often in difficult text. Attending prompts (i.e., sustaining feedback with no cue offered), simple grapho-phonic prompts and simple contextual prompts were equally divided. The patterns of sustaining feedback seemed to indicate that contextually oriented prompts took less time and were more likely to lead to student identification of miscues than grapho-phonically oriented prompts.

The generalizability of the findings from this study are limited by the dyadic context and the unfamiliar teacher/pupil pairings in which the interactions occurred. But as Wilmot (1975) has pointed out, the basic components of a communicative system may be more easily studied initially in a dyadic setting. The results of this study form a useful and necessary basis for expanded studies of teacher-pupil interactions during oral reading in the classroom.

ACKNOWLEDGEMENT

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Guided Oral Reading and Miscue Focused Verbal Feedback in Second Grade Classrooms

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The important link between success in learning to read in classrooms and such variables as academic alloted time, academic engaged time and task success rates has been documented again and again over the past ten years (Berliner, 1981; Guthrie, Martusa, & Seifert, 1979). More recently, research on teaching has come to focus on a qualitative analysis of learning tasks themselves and the strategies teachers use to maintain and manage groups of students through these tasks (Duffy, 1981). Indeed, Doyle (1979) argues that the most pressing challenge we face in instructional research is to explore the nature of learning tasks and the relative effects or merits of teachers' efforts to sustain students' cooperation to a point of task completion. He suggests that research on teaching should focus on behaviors surrounding specific learning tasks that are clearly defined. One area of teacher-pupil interaction over a specific learning task which has shown particular promise in recent years is the analysis of teacher verbal feedback to students' oral reading miscues. The advantages of studying interactions in this context are fairly straightforward. First, guided oral reading occupies a significant amount of time and attention in most primary reading programs (Howlett & Weintraub, 1978). Second, the goals held, attitudes expressed, and procedures used in this task seem to be fairly consistent across teachers (Daly & Hoffman, 1982). And, third, guided oral reading is highly amenable to observation given the fixed nature of the stimulus (the text) and the overt responses required of both students (the pronunciation of words) and teacher (the verbal feedback).

The overall goal of the research to be reported, then, was to broaden our understanding of teacher-pupil interaction patterns as they are manifested

during oral reading instruction and in particular those interactions which surround oral reading miscues. The conceptual framework for this research is based on two literatures: first on the work of Goodman (1967), Goodman and Burke (1973) and others in developing and refining miscue analysis techniques; and second on the work of Hoffman (1979) who has proposed a working model of teacher decision making as it relates to miscue focused verbal feedback.

Background

Miscue Analysis

The qualitative analysis of oral reading errors did not begin with the work of Goodman (see reviews by Weber, 1968; Leu, 1982). However, the degree of attention and thoughtful interpretation he brought to this area are undeniable. He has proposed that, at the word level, during oral reading the active reader is constantly sampling information from surrounding cue sources (grapho-phonic, syntactic, and semantic) and using this information to make predictions about upcoming text (Goodman, 1967; Goodman & Burke, 1973). When a miscue or deviation from the expected response in the text occurs, we are witnessing a breakdown in the reading process. Through a careful examination of patterns across many miscues we are able to make inferences about reader's strategies relative to the utilization of information from available cue systems. Based on the findings from miscue studies with many children, Goodman and others have been able to formulate an elaborate portrait of the developing reader's reliance on grapho-phonic information and sensitivity to contextual constraints. The strategies of good and poor readers have also been compared and shown to be different in the ways in which their miscue patterns reflect utilization of grapho-phonic information and sensitivity to the surrounding grammatical context. Goodman's goal in the original development and use of miscue analysis techniques was primarily theoretical.

That is, he set out to explain a complex phenomenon (oral reading) and therein test and elaborate on a psycholinguistic model of the reading process itself.

Tangential to these efforts at theory building have been attempts to use miscue analysis techniques in other settings. In clincial work, miscue analysis may be used as a diagnostic tool to determine appropriate remedial strategies (Goodman & Burke, 1972). Others have used miscue analysis and similar techniques to evaluate the impact of various types of programs on pupil strategy development (e.g., Barr, 1974; Cohen, 1975). These kinds of studies support the position that the qualitative characteristics of instruction influence reader strategies. For example, students who are exposed to instruction which has a strong code empahsis demonstrate greater reliance on grapho-phonic cues on their miscue patterns. Students who are exposed to reading instruction which emphasizes meaning demonstrate greater reliance on contextual (i.e., syntactic and semantic) information in their miscue patterns. Few studies, however, have used miscue analysis techniques to investigate ongoing reading instruction. On the one hand, a reluctance to do so may reflect the fact that as a research movement, field-based studies are just beginning to gain momentum. On the other hand, this reluctance may reflect a general negative attitude toward teacher guided oral reading as an instructional practice. Whatever the reason, when one sets out to do classroom research which involves observation of guided oral reading, one recognizes that the Goodman and Burke (1972) Reading Miscue Inventory (RMI) has certain limitations in this setting. For example, no provisions are made in the RMI for recording hesitations or refusals on the part of the reader and yet this is one of the most common types of errors made by students during early reading (Biemiller, 1970). Moreover, the RMI offers little direction on how to record or analyze the strategies students employ immediately following

their initial miscues, and yet there is evidence that this subsequent strategy level may be a very important one (Goodman & Gollasch, 1980). These kinds of shortcomings have led to the development of a number of observational instruments designed specifically for the analysis of oral reading in field settings which are open to input from the teacher in terms of feedback behaviors: OROS (Brady & Lynch, 1976), FORMAS (Hoffman & Baker, 1981) and ASSISTIR (Mitchell, 1980).

Feedback to Miscues

Teacher feedback to students during instruction is a critical though not particularly well understood ingredient to successful learning (Kulhavy, 1977). Teacher feedback informs the learner about the accuracy with which she or he is performing the task and can affect errors by telling the student when errors occur and allowing them (i.e., either the teacher or the student) to engage in corrective activity. Hoffman (1979) has proposed that teacher verbal feedback to miscues can be understood as a complex decision making process in which three dimensions are in operation: (1) the teacher selects which miscues should be responded to; (2) the teacher decides when these miscues should be responded to; and, (3) the teacher determines how these miscues should be responded to. The research into teacher verbal feedback to miscues has attempted to depict how teachers are behaving during actual guided oral reading instruction, what effects various combinations of these dimensions have on strategy developments, and how teacher adjustments relate to pupil adjustments. Niles (1980) has reviewed research in this area. The early clinical work suggests significant but complex relationships between teacher feedback and pupil miscue patterns and comprehension (Jenkins & Larson, 1979; Niles, Graham, & Winstead, 1977, 1978; Niles, 1979). Recently, several field based studies have been reported which shed light on the nature,

distribution, and effects of teacher verbal feedback to student miscues in classroom settings.

Allington (1978, 1980) studied teacher verbal behaviors following oral reading errors of primary grade children in high and low reading groups. He found that teachers interrupt proportionally more often following errors in the poorer reading groups than in the higher groups. He was also able to show that teachers tend to "tell" words more often to lower readers than to the higher, and that the lower readers were given less time than the higher ones to work out words for themselves. Feedback for the higher readers was also delayed more often to a later point in the text than it was with the lower ones. Allington suggested that the lower readers may be lower because we treat them differently.

Pflaum, Pascarella, Boswich and Auer (1980) reported findings from a study of teacher feedback which extend Allington's conclusions by examining the question of whether difference in teacher response patterns to low group errors may be due to different patterns in student behavior. That is, teachers adjust feedback to the particular miscue patterns of the two ability groups. They compared the relative predictive contribution of pupil status variables (such as sex and reading achievement) and specific pupil oral reading behaviors (such as phonic use and meaning change) to teacher feedback behavior. Pupil behaviors accounted for twice as much of the variance as status variables in predicting teacher behaviors. They suggest that in conducting future studies of interaction both directions of potential influence be considered.

Hoffman and Clements (1981) found that the less skilled second grade readers were given less time in reading groups, had less engaged time in actual reading, and experienced less task success (i.e., a higher error rate)

than the more skilled readers. In contrast to Pflaum, et al. (1980) teacher verbal feedback differed for the less skilled readers as compared to that received by the more skilled readers even when the same miscue patterns held. Hoffman and Clements suggest that teachers seem to operate under different feedback routines to students in high and low reading groups even when given precisely the same set of miscue characteristics. They go on to point out how the dominant miscue patterns for high and low skilled readers were being reinforced by teacher feedback behaviors. They describe the more skilled readers in their study as making mainly substitute type miscues which affected meaning only slightly and did not resemble the grapho-phonic characteristics of the text word being used. The good reader was likely to continue reading in the text after a miscue of this type without interruption from the teacher and without bothering to self-correct later on. With more difficult words, the good reader was more likely to mispronounce--showing strong use of grapho-phonic relationships--and then immediately self-correct or make repeated attempts at the word, again without interruption from the teacher until the word was successfully identified. They describe the less skilled readers in the study also as making primarily substitution miscues; however, these miscues did resemble the grapho-phonic features of the text word and also substantially affected text meaning. In such instances the teacher was likely to interrupt almost immediately or after the student had paused briefly to give the correct word. With more difficult words the less skilled reader hesitated and all but waited for assistance which the teacher quickly obliged by giving the text word. Their interpretations of the findings go a step beyond Doyle's (1980) "reciprocity" principle (which allows for pupil behaviors to influence teachers and vice versa) to suggest a mutual adaptation cycle for smooth activity flow. Hoffman

and Clements proposed that teachers and student groups have tacitly worked out an efficient system to make it through the oral reading of basal materials such that there is a minimum of disruption to activity flow. Unfortunately for the less skilled readers, the adaptive cycle leads to an equilibrium state of teacher pupil interactive behaviors which despite their efficiency are very likely to lead to continued patterns of failure.

These recent field studies bring forth more questions than answers about teacher feedback and its influence on pupil strategies and learning. We do not know how and to what degree teachers are sensitive to pupil miscues. We do not know how feedback characteristics predict or relate in significant ways to patterns of pupil behavior. It may also be that error rate in practice materials and achievement level of pupils interact with one another in complicated ways to predict teacher and pupil behaviors. Most importantly, we do not know what kinds of verbal feedback variables relate to growth in reading skills particularly for low readers.

The current observational study was designed to move us closer to plausible hypotheses in these areas of concern. Specifically, the current study had three major objectives:

1. to describe the characteristics of teacher verbal feedback to student oral reading miscues and their relationship to the qualitative features of those miscues;
2. to analyze differences in teacher verbal feedback and pupil miscue patterns relative to student ability groups; and,
3. to examine the effects of error rate and teacher verbal feedback patterns on pupil behaviors and growth in reading skill.

The scope of this study was much broader in terms of number of subjects, extent and number of interactions recorded, and breadth of variables

considered than any of the previous work cited. In this regard, it also offered the opportunity to replicate many earlier findings as well as explore new ones.

Method

This study was field-based in nature. The data were collected during regular ongoing reading instruction in actual classrooms so that naturally occurring behaviors in the research setting could be examined. There were certain elements of the research design, therefore, which were outside the investigators' control. Limitations to the study caused by the naturalistic setting and the various steps that were taken to adjust to the setting will be noted.

The research site was a school district in a city of approximately 100,000 people located in the south central region of the United States. The developmental reading program is a traditional basal orientation, with an emphasis on ability grouped instruction. The Houghton Mifflin basal series was used in all but two classrooms. The classrooms were self-contained although teachers in most schools exchanged students for reading instruction in order to reduce the number of ability levels within a class.

Subjects

All second grade teachers (N=22) from the ten elementary schools in the district participated in the study. The teachers were all women--four were Black, one was Mexican American, and the remaining seventeen were Anglo. There were four teachers in two schools; three teachers in one school; two teachers in four schools; and one teacher in each of the remaining three schools. The students whose reading was studied were those assigned by their teachers to either their highest (N=179) or, lowest (N=178) reading groups.

The mean number of students in both the high and low reading groups was around eight students at the time of initiation of the study.

Procedures

The participating teachers were given an overview of the research project during a fall orientation. They were told that the study would focus on the characteristics of guided oral reading as it is typically conducted in second grade classrooms. The teachers were trained to self tape record their reading lessons. They were asked to record at least one lesson of their own choosing every two weeks with both their highest and lowest reading groups. They were encouraged to record those sessions in which they planned to do some guided oral reading. The importance of following normal classroom procedures during the recorded guided oral reading sessions was stressed. This self-recording data collection procedure had been tested and compared favorably to videotaping and direct observation in an earlier study (Hoffman & Kugle, 1982). Each teacher was visited by a research team at least once every two weeks to pick up the recorded tapes and deliver blank ones. This procedure was followed over a ten week period. Thus five tapes were collected on each group through the course of the study.

Pre and post reading achievement measures were gathered as part of the district-wide testing program using the California Achievement Test. The pre-test was administered during the third and fourth weeks of school, prior to the initiation of the study, and the post-test was administered during the third and fourth weeks of the next academic year.

All participating teachers were interviewed individually once the data collection had been completed. During these interviews teacher practices, beliefs, and attitudes toward oral reading were explored.

Coding

Audio tapes were coded using the FORMAS taxonomy (Hoffman & Baker, 1981). This system of analysis identifies five major clusters of teacher pupil behaviors which are miscue focused (see Figure 1). Cluster I specifies the type of miscue and qualitative characteristics (i.e., meaning change and grapho-phonic similarity) of certain miscues. In Cluster II the first behavior of the student following the miscue is recorded. The characteristics of teacher feedback are addressed in Cluster III in terms of teacher feedback type, form, timing, and point. Input from their students in the groups are specified in Cluster IV. The final cluster (V) is used to record who ultimately (if anyone) identifies the text word. Research team members served as coders of tapes from the teachers they were working with. The coders were trained to criterion levels using the procedures outlined in the FORMAS training manual (Hoffman, Gardner, & Clements, 1980). All coded sheets were reviewed for consistency and a random sample tested for inter-coder reliability by at least one other trained coder. Agreement levels exceeded .85 levels in all clusters of the taxonomy.

Student miscues and subsequent interactions were coded in sequence from a tape up to but not to exceed a total of twenty-five miscues or sixteen turn changes within a group--whichever came first. In addition to the miscue information, the students were monitored for number of words read correctly.

Data Analysis

The reading group formed the basic unit of analysis for this study. The analyses were carried out in two phases.

Phase I

In Phase I the frequency data from each of the FORMAS clusters were converted to rates. These were calculated for each student in a given group

by dividing the FORMAS variable under consideration by the total number of words read by that group and then multiplying by 100. In this way, for example, the rate of high meaning change substitutions for a given group could be calculated. These rates formed the basic dependent variables used in Phase I.

The major categories in each FORMAS cluster were first analyzed separately (Cluster IV was not included since very few instances of other student feedback were observed). In Cluster I a two-way between-within analysis of variance was run with ability groups as a factor and the miscue categories as the within group factor. In Cluster II a similar analysis was run for the reaction categories. Repetition miscues were omitted from the analysis because they tend to artifically inflate the category of immediate self-corrections. In Cluster III feedback categories were analyzed. Immediate self-corrections were omitted from the latter two analyses since they offered no opportunity for teacher feedback.

There are two major areas of concern inherent in this analysis. As noted earlier there were instances where teachers exchanged students within schools for reading instruction in order to reduce the number of levels of ability within a room. This meant that in some schools one teacher's low ability group might be more skilled than another teacher's high ability group. The problem was further complicated by extreme between school differences. In some cases the best reading group in one school were less skilled readers than the students in the lowest group in another school. For the ability group comparisons in Phase I; therefore, an operational decision was made to reclassify groups. High skilled and less skilled groups were formed based on a median split of average reading achievement for all groups using the initial student reading achievement test scores. Pre-test scores were available on

91% of all the subjects in the reading groups. The mean pre-achievement grade levels score for the high skilled groups was 2.6 and for the low skilled groups the mean was 1.5. Unfortunately, the result of this reclassification procedure was that some teachers were represented twice within an ability level. Specifically, four teachers had both of their groups classified high skilled; another four teachers had both their groups classified low skilled. The remaining 14 teachers had one high and one low group each. In these 14 cases the teacher assigned ability level was consistent with the achievement test ranking. As a check on this problem, the Phase I analyses were run first with all teachers included and then with just the 14 who had high and low group splits. Since no differences in patterns of significance were uncovered in any of these comparisons, a decision was made to include data from all teachers in reporting the findings.

A second problem in Phase I analyses concerned the dependent variables. The dependent variables were expressed as rates and are therefore like proportions. They are not interval variables and therefore do not meet one of the required assumptions for analysis of variance. While there are transformations appropriate for proportion data (e.g., log), the consequence of not transforming is a loss of power in most instances. It will be seen shortly that any loss of power is not crucial to the hypothesis tested. Further, these types of transformations are difficult to use in this case because of the occurrence of zero frequencies in the data set. In all of the transformations a zero must be made into an arbitrarily small number. If this is done, the analyses which contain these proportions are very difficult to interpret. A decision was made therefore to perform analyses in Phase I (and in Phase II) directly on the untransformed data set.

Phase II

In Phase II the data were analyzed using multiple regression following procedures recommended by Ward and Jennings (1973). Multiple regression permitted an examination of the effects of reading achievement level and error rate on the dependent variables. The predictor variables studied were achievement (pre-test); error rate; and teacher feedback behaviors (type, form, timing, and point of feedback). Criterion variables examined were pupil behaviors (miscue characteristics, reactions, and resolution) and post-test achievement scores. To prepare the data for the multiple regression analyses, frequencies were computed for all groups on the independent and dependent miscue and teacher feedback variables. Within clusters these frequencies were transformed to proportions. So, for example, we calculated the proportion of miscues within a group which were substitutions; or the proportion of miscues which were high versus low meaning change. A correlation matrix for each of the criterion variables was then constructed using all of the predictor variables. All predictor variables which correlated significantly with the criterion variables ($p < .1$) were included in the multiple regression equation. The order of entry into the equation was always achievement (pre-test) followed by error rate followed by teacher feedback behaviors. A step down regression procedure was followed to determine which variables contributed in a statistically significant way to the prediciton of the criterion. The full versus restricted models were constructed by removing the predictor variables in the reverse order from which they had been entered. Thus, the last variable tested was always achievement on the pre-test.

Results

All teachers in the study relied on "round-robin" or turn-taking around the reading group as the basic procedure for conducting guided oral reading. The interviews with the teachers revealed that overall they had positive

feelings regarding the benefits and importance of oral reading and used oral reading regularly. The teachers also confirmed at this time that the interactions recorded on the tapes were representative of what went on during a typical guided oral reading session.

Ten tapes out of the total number of tapes to be collected (i.e., 220, with five sessions for each of the 44 groups) were missing. In some cases this was due to mechanical problems with the recorders, and in other instances these teachers had simply missed a session. No single teacher group had more than one tape missing.

Over forty-five hundred separate miscues were recorded and analyzed for teacher feedback characteristics. The data presented in Table 1 reflect the general distribution of miscues across the five sessions by teacher assigned ability groups within classes. The data for each session are broken down by number of miscues (NM); number of turns (NT); total number of correct words read (TNCWR); and reading rate in words per minute (RR). The reader should note that the breakdown by ability in this table is based on teacher assigned groups not the regrouping based on achievement levels that will be used in all subsequent analyses.

Pupil Miscue and Reaction Patterns

The error rate for the high groups was .05 miscues per 100 words (95% accuracy). The error rate for the low groups was .09 miscues per 100 words (91% accuracy). This difference was statistically significant at the $p < .001$ level. The distribution of miscue types was found to be statistically different ($F(5,34) = 27.18$, $p < .001$) across all students. The miscue categories (i.e., insertions, omissions, substitutions, mispronunciations, hesitations, and repetitions) have different rates of occurrence. (There were so few instances of "call for help" miscues that this category identified in

the FORMAS taxonomy was eliminated from consideration.) There was also an ability-by-miscue type interaction ($F(5,170) = 5.01$, $p < .001$) indicating that the low skilled and the high skilled groups differed with respect to the rate of certain kinds of miscues (Table 2). The proportion of hesitations was greater for the less skilled than the high skilled readers. On all other miscue types the proportion was greater for the high skilled readers.

A two-way interaction ($F(2,68) = 18.80$, $p < .001$) was found between ability and the degree of meaning change in insertion, omission, and substitution miscues. The less skilled readers had more meaning change miscues (62%) t the high skilled readers (54% of their miscues). A two-way interaction (' ,34) = 11.84, $p < .01$) was also found between ability groups on the deg e of grapho-phonic similarity in substitutions and mispronunciation type miscues. The miscues of the high skilled readers resembled the target words grapho-phonically 37% of the time, those of the less skilled readers resembled the target words grapho-phonically 29% of the time. An analysis of substitution miscues alone failed to reveal any statistically significant differences between ability level on grapho-phonic similarity.

The distribution of reactions to miscues was found to be statistically significant ($F(4,136) = 14.52$, $p < .001$) across all students. There was also a statistically significant two-way interaction ($F(4,136) = 3.14$, $p < .05$) between reaction type and ability groups (Table 3). The more skilled readers exhibited a higher proportion of continuations and self-corrections following their miscues while the less skilled paused more and were more likely to have no opportunity to respond to their own miscues (i.e., the teacher coming in before the student manifests any of the other reaction behaviors).

Teacher Verbal Feedback Patterns

The distribution of feedback types was found to be statistically different ($F(2,68) = 50.00$, $p < .001$). There was also a statistically significant two-way interaction ($F(8,272) = 17.59$, $p < .001$) between miscue type and feedback type (Table 4). There was no statistically significant difference between the type of feedback and the two ability groups (Table 5). There was, however, a statistically significant interaction ($F(2,68) = 6.48$, $p < .005$) between feedback type and meaning change on insertion, omission, and substitution type miscues (Table 6). The proportion of no verbal feedback tended to decrease as the degree of meaning change increased. No statistically significant differences were found related to the form of sustaining feedback and ability groups. Nor were there any statistically significant differences related to timing or feedback and ability groups.

Predicting Pupil Behaviors from
Achievement, Error Rate, and Teacher Behaviors

Multiple regression analyses were used to identify teacher variables which seem to contribute to the prediction of pupil behaviors while controlling for both reading ability (pre-reading achievement score) and text difficulty (miscue rate). For each of the possible pupil behaviors a full model was constructed from all of the teacher variables which were significantly correlated from all of the teacher variables which were significantly correlated with that pupil variable. Pre-achievement and error rate were always entered into each model as co-variates. Each model was then systematically reduced in terms of predictor variables in the following steps: (1) timing and point of feedback variable; (2) feedback form variable; (3) feedback type variable; (4) the error rate variable; and, (5) the achievemnt variable. At each point the significance of the R^2 drop was noted. Since

steps 1, 2, and 3 contain more than our predictor vector these steps were further investigated if the whole reduction resulted in a significant R^2 drop. The final model was then constructed of those variables which proved to significantly add to the prediction of pupil behaviors. These final models are described below.

The models for each of the miscue characteristic variables are presented in Table 7. In this single table the most critical data from a number of analyses run for each of the miscue characteristics is summarized. For example, the only variable found to be significant in prediciting the level of insertions was error rate. The R^2 drop (.1494) using the step dowm procedure in this case is the same as the R^2 value for the whole model since the e is only one predictor variable. The sign of the Beta weight value for error rate tells us that the relationship is a negative one. In the case of predicting the level of Hesitations two variables were found to be significant: error rate and terminal feedback. The R^2 value for the full model in this case is .7468. The R^2 drop values for terminal feedback (.0475) and error rate (.6993) indicate the change in R^2 value for the full model when these variables are removed from the model. The F test values relate to the statistical significance of these changes. And again, the signs for the Beta weights indicate that the relationship between both the predictor variables (Error rate and Terminal feedback) and the criterion (Hesitations) is positive. Pre-achievement was found to be a significant factor in predicting three of the miscue characteristic variables: omissions, substitutions, and little meaning change. Error rate was found to be a significant factor in predicting all of the miscue characteristic variables with the only exceptions being omissions and little meaning change miscues. The range in R^2 values in predicting miscue characteristics for the various models was from .09 with

high grapho-phonic similarity to .75 with repetitions. Teacher verbal feedback variables were found to be significant in the best models for predicting hesitations (a positive relationship with terminal feedback) and little meaning change miscues (a negative relationship with the point of feedback before the next sentence break).

The models for each of the pupil reaction variables are presented in Table 8. Here, pre-achievement was found to be a significant factor in predicting all variables except repeated attempts and immediate self-corrections. Error rate was significant in all models except for repeated attempts. The range in R^2 values in predicting reactions was from .18 with repeated attempts to .76 for no opportunity. Teacher verbal feedback variables were found to be significant in the following instances: (1) in predicting continuations (a negative relationship with terminal feedback and a positive one with feedback delayed until after the next sentence break); (2) in predicting repeated attempts (a positive relationship with immediate feedback); (3) in predicting pauses (a positive relationship with no verbal feedback and with immediate feedback); (4) in predicting no opportunities to respond (a positive relationship with terminal feedback); and, (5) in predicting immediate self-corrections (a positive relationship with feedback given at the next sentence break).

In determining the relationships among teacher variables and achievement data an effects analysis was run using post-achievement as the criterion variable with pre-test scores included as a predictor. Valid pre- and post-test data were found available on 76% of the total population of students. The model for predicting post-achievement is presented in Table 9. Both error rate and terminal feedback showed a small but significantly negative relationship with post-achievement.

Discussion

The findings of this study will be discussed in terms of the three major objectives set forth earlier.

1. To describe the characteristics of teacher verbal feedback to student oral reading miscues and their relationship to the qualitative features of those miscues. The findings of this study are consistent with our earlier work in this area (Hoffman & Clements, 1981). The type of teacher verbal feedback offered in the context of oral reading is clearly related to pupil miscue characteristics. Certain types of miscues such as hesitations and mispronunciations are more likely to receive an overt response from the teacher than other types of miscues. Those miscues which cause or result in a high degree of meaning change are more likely to be responded to than those which are associated with little meaning change. Teachers appear to be adjusting their manner of responding or not responding to miscues based on their qualitative characteristic rather than using a simple pattern of: if error then respond.

2. To analyze differences in teacher verbal feedback and pupil miscue patterns relative to student ability groups. Here again, the pattern of miscues for the ability groups studied are consistent with the body of miscue research and our own earlier work. The less skilled readers tended to make proportionately more hesitations and fewer insertions, omissions and repetition type miscues than the more skilled readers. The miscues of the less skilled readers also violated text meaning proportionately more often than the more skilled. The miscue reaction patterns were different for the two groups of readers. The less skilled readers were more likely to pause or be interrupted immediately by the teacher while readers in the high skilled groups were more likely to continue and immediately self-correct. The

different patterns of verbal feedback in terms of terminal, sustaining and no response did not reach levels of statistical significance between the less skilled and the more skilled readers although the distribution is in the same direction as that of Hoffman and Clements (1981) and that of Allington (1978, 1981). We attribute this at least in part to the fact that the achievement levels and error rates were not as disparate in this study as they were in our own earlier work. For example, the error rate for the less skilled readers in the Hoffman and Clements (1981) study was 11 miscues per 100 words read. In this study the error rate for the less skilled readers was nine miscues per 100 words read.

3. To examine the effects of error rate and teacher verbal feedback patterns on pupil behaviors and growth in reading ability. Achievement levels, error rate, and teacher verbal feedback variables showed clear and strong predictive relationships to pupil reading miscue and reaction patterns. That reading achievement is related to miscue and reaction patterns is not new. That error rate is independently and significantly related to these patterns has been suggested in the past (e.g., Biemiller, 1979; Blaxall & Willows, 1981) and given clear support in this study. Indeed, with some miscue characteristics (hesitations, repetitions, substitutions, and grapho-phonic similarity) and reaction patterns (i.e., immediate self-corrections) error rate predicts pupil behavior independent of achievement level. Certain teacher verbal feedback behaviors were shown to be related significantly to a number of pupil miscue and reaction patterns. The most noteworthy behaviors were a positive relationship between hesitation miscues and terminal feedback, and a positive relationship for delaying the point of feedback with continuation and immediate self-correction pupil behaviors following miscues.

The findings related to predicting achievement gain are particularly interesting. It was no surprise tht pre-achievement predicts post-achievement. It is significant, though, that both error rate and at least one teacher feedback variable (terminal feedback) are also significantly and negatively related to gain.

The negative relationship found between error rate and achievement is one consistent with a large body of classroom research. High pupil success rates in specific learning tasks are closely related to overall gain. The notion of appropriate placement in practice materials has been a part of reading lore for a long time. The research literature is beginning to offer strong empirical support for this belief and even suggest that the error rates we have established or agreed on (e.g., 95% for instructional level) may need to be revised upwards to a higher success rate (Beck, 1981; Fisher et al., 1978; Good & Beckerman, 1978). The arguments for this in theory and practice are many. At lower error rates the students are getting much more actual reading over the same amount of engaged time. At high error rates students encounter frequent failure and frustration. High error rates lead to constant disruption of activity flow, and this gives rise to management problems in group settings. At high error rates the students are not able to use the same strategies (e.g., relying on surrounding words and meanings as clues) as they could in materials at low error rates. All of these factors contribute to vicious cycle situations where the student hesitates and the teacher gives the word either to build up rate or because they realize the student won't be able to successfully identify the word on his/her own. The next time the student encounters a little frustration with a word, he or she may be just a little more likely to wait for the teacher to give the word and the teacher a little more likely to oblige.

The negative relationship between terminal feedback and growth in reading achievement would suggest that this strategy may be harmful. However, the relative advantages of doing nothing or giving sustaining feedback are not clear from the results of this study. It would seem, though, that a high degree of tolerance (i.e., no verbal feedback) for miscues--particularly those with low meaning change--is warranted given the patterns experienced by the high skilled readers. The only guidance related to the beneficial characteristics of sustaining feedback is to be gained by looking at the prediction models for miscue reactions. The timing (both in terms of point of interruption and elapsed time) of the response seems potentially more important than the actual form of response. Delayed responses or feedback is associated with continuations and self-corrections, both of which are characteristic of the more skilled readers. By contrast immediate feedback by the teacher are associated with pauses and repeated attempts, and pause reactions are characteristic of less skilled readers. Thus delaying overt feedback, whatever the particular form, may be more beneficial than the offer of immediate assistance. This hypothesis has found some support in a clinical study of teacher verbal feedback reported by Hoffman, Clements and O'Neal (1982).

What is emerging from this study and other recent studies is a fairly clear picture of what is going on with respect to miscue focused interactions during oral reading instruction. Pupils and teachers are each influencing the behavior of the other. The mutually adaptive efforts of teacher and student to ensure smooth activity flow helps to explain in large part the difference in the interaction patterns between the high and low ability groups. The effects analysis both on short term (pupil miscue and reaction patterns) and long term (pupil achievement) measures suggest specific ways in which the

context for guided oral reading (in terms of error rate and specific teacher feedback behaviors such as wait time and the use of terminal feedback) is related to pupil behavior. We are now in a better position to begin field-based studies which incorporate direct manipulations of these task conditions to explore short and long term effects on student reading behaviors. Such studies will permit us to speak more clearly in terms of causal relationships and speak more directly in terms of improved classroom practice.

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Figure Caption

Figure 1. A breakdown of the FORMAS variables

CLUSTER

I. Miscue (the observed response in relation to the expected response)
   A. Type: insertions, omissions, hesitations, substitutions, mispronunciations, calls for help, repetitions
   B. Meaning Change: little and substantial
   C. Grapho-Phonic Similarity: high and low

II. Reaction (student's first behavior following the miscue)
   A. Type: repeated attempt, continuation, immediate self-correction, pause, call for help, no opportunity

III. Teacher Verbal Feedback (first teacher behavior in response to a miscue)
   A. Type: no verbal, terminal (giving a text word or calling on another student) and sustaining (providing opportunity or helping the student to identify the text word)
   B. Form of Sustaining: attending (non-cue focusing), grapho-phonic and contextual
   C. Timing of Teacher Feedback: immediate (less than 3 secs) and delayed (more than 3 secs)
   D. Point of Feedback: before the next sentence break, at the next sentence break, or following the next sentence break

IV. Other Student Verbal Feedback
   A. Type: none, solicited and unsolicited
   B. Timing: immediate (less than 3 secs) and delayed (more than 3 secs)
   C. Form: attending (non-cue focusing), grapho-phonic and contextual

V. Resolution
   A. Type: teacher identified text word, student identified text word, another student identified text word, or miscue left unidentified

Table 1

Average number of miscues, turn changes, words read correctly, and reading rate for high and low groups*

	Ability Groups	SESSION I	II	III	IV	V
N of Miscues (NM)	High	20.8	21.1	20.4	20.1	23.7
	Low	21.6	21.3	22.5	21.6	23.3
Turns (NT)	High	8.5	9.2	8.6	7.6	8.2
	Low	6.8	8.0	7.4	6.2	7.3
Total Correct Words Red (TCWR)	High	408.0	460.5	408.6	413.8	434.3
	Low	238.4	275.6	290.6	282.2	309.6
Rate (RR)	High	106.6	109.4	108.2	110.6	110.3
	Low	75.0	81.1	87.0	85.7	91.8

*by teacher assignment

Table 2

Distribution of miscue types within ability groups

Miscue Type	High Skilled		Low Skilled	
	Percent of total	Rate per 100 words read	Percent of total	Rate per 100 words read
insertions	5.07%	.23	2.89%	.22
omission	13.30%	.59	7.82%	.60
substitutions	35.65%	1.59	34.53%	2.65
mispronunciations	20.76%	.92	19.41%	1.49
hesitations	8.77%	.39	22.27%	1.71
repetitions	16.45%	.73	13.08%	1.00

Table 3

Distribution of miscue reaction patterns
within ability groups

Pupil Reactions	High Skilled		Low Skilled	
	Percent of total	Rate per 100 words read	Percent of total	Rate per 100 words read
continuations	41%	.28	27%	.32
repeated attempts	12%	.08	12%	.14
pause	6%	.04	10%	.12
no opportunity	9%	.06	26%	.31
self correction	32%	.21	25%	.29

Table 4

Distribution of teacher feedback
to various types of miscues

Miscue Type	Teacher Verbal Feedback					
	No Verbal		Sustaining		Terminal	
	Percent of total	Rate per 100 words	Percent of total	Rate per 100 words	Percent of total	Rate per 100 words
insertions	90%	.19	8%	.02	2%	.01
omissions	80%	.35	10%	.05	10%	.05
substitutions	60%	1.04	21%	.37	19%	.31
mispronunciations	55%	.30	18%	.10	27%	.15
hesitations	30%	.29	16%	.15	54%	.52

Table 5

Distribution of teacher feedback type related to ability groups

Feedback Type	High Skilled		Low Skilled	
	Percent of total	Rate per 100 words read	Percent of total	Rate per 100 words read
No verbal feedback	68%	.36	49%	.50
Sustaining feedback	16%	.08	19%	.19
Terminal feedback	16%	.08	32%	.33

Table 6

Distribution of feedback type related
to the degree of meaning change involved in the miscue

Degree of Meaning Change	Teacher Verbal Feedback					
	No Verbal		Sustaining		Terminal	
	Percent of total	Rate per 100 words	Percent of total	Rate per 100 words	Percent of total	Rate per 100 words
Low Meaning Change	75%	.28	13%	.05	12%	.04
High Meaning Change	58%	.24	22%	.09	20%	.08

Table 7

Multiple regression models for predicting pupil miscue characteristics

Criterion	R^2	Predictor Variable(s)	Beta Wt.	R^2 Drop	F Test
Insertions	.1494	Error Rate	-.3866	.1494	7.38(1,42) p<.01
Omissions	.2198	Achv. (Pre)	.4689	.2198	11.27(1,40) p<.01
Substitutions	.2147	Achv. (Pre)	-.3913	.1997	9.92(1,39) p<.01
		Error Rate	-.5219	.1126	5.59(1,39) p<.05
Hesitations	.7468	Error Rate	.6720	.6993	97.67(1,42) p<.01
		Terminal Feedback	.2730	.0475	7.70(1,41) p<.01
Repetitions	.1909	Error Rate	-.4369	.1909	9.91(1,42) p<.01
Little Meaning Change	.2890	Achv. (Pre)	.4007	.2035	10.22(1,40) p<.01
		Point of Feedback (before next sentence break)	-.2966	.0854	4.69(1,39) p<.05
High Grapho-Phonic Similarity	.0935	Error Rate	-.3058	.0935	4.33(1,42) p<.05

Table 8

Multiple regression models for predicting pupil miscue reaction patterns

Criterion	R^2	Predictor Variable(s)	Beta Wt.	R^2 Drop	F Test
Continuations	.7071	Achievement (Pre)	.2675	.0863	7.32(1,39) p<.01
		Error Rate	-.3213	.1809	15.35(1,39) p<.01
		Terminal Feedback	-.3051	.0879	8.99(1,38) p<.01
		Point of Feedback (after next sentence break)	.2909	.0788	9.55(1,37) p<.01
Repeated Attempts	.1822	No Verbal Feedback	.3816	.1034	4.85(1,42) p<.05
		Timing (immediate)	.2870	.0788	3.95(1,41) p<.05
Pauses	.6182	Achievement (Pre)	-1.3761	NS	NS
		Error Rate	-2.0840	NS	NS
		Timing (immediate)	- .4187	.3247	21.57(1,38) p<.01
		(Achv (pre) * Error Rate)	2.0539	.1904	18.45(1,37) p<.01
No Opportunity	.7593	Achievement (Pre)	.3814	NS	NS
		Error Rate	1.2163	.2905	23.50(1,39) p<.01
		Terminal Feedback	.5282	.2123	29.91(1,38) p<.01
		(Achv (pre) Error Rate)	-.7797	.0290	4.47(1,37) p<.05
Immediate Self-Corrections	.4231	Error Rate	-.4301	.3067	18.58(1,42) p<.01
		Point of Feedback (at next sentence break)	.3629	.1164	8.27(1,41) p<.01

Table 9

Multiple regression model
for predicting achievement on the post test

Criterion	R^2	Predictor Variables	Beta Wt.	R^2 Drop	F Test
Achievement (Post)	.8904	Achievement (Pre)	.8454	.8621	250.1(1,40) p<.01
		Error Rate	-.0541	.0142	4.46(1,39) p<.05
		Terminal Feedback	-.1498	.0141	4.89(1,38) p<.05

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THE EFFECTS OF DIFFERENTIATED PATTERNS OF VERBAL FEEDBACK TO MISCUES ON WORD IDENTIFICATION STRATEGIES AND SUCCESS

Research on teacher feedback to oral reading miscues has received considerable attention over the past few years (Niles, 1980). This increased activity can be attributed in part to the development of miscue analysis techniques and theory (Goodman, 1967; Goodman and Burke, 1972) and in part to the findings from classroom research which have documented the wide use of oral reading in primary classrooms (e.g., Hoffman & Clements, 1981). Research into teacher verbal feedback to miscues can be classified into two basic kinds of studies. The first set of studies are field-based in nature and have attempted to describe the characteristics and distribution of types of teacher feedback during oral reading instruction. A number of studies in this group have explored differences in feedback in relation to ability level of students (e.g., Allington, 1978; Hoffman and Clements, 1981; Pflaum, Pascarella, Boswick, & Aver, 1980). Others have examined the relationship between teachr beliefs about reading and their feedback patterns (Hoffman and Kugel, 1981; Mitchell, 1980). The other broad area of work in teacher feedback has been more clinical in nature and focused on comparisons of selected patterns of feedback as they relate to student performance characteristics (Jenkins and Larson, 1979; Niles, Graham, and Winstead, 1977 and 1978; Niles, 1979). While studies of this latter group point to the existence of relationships, the treatments have at times been unclearly differentiated and left many crucial features of feedback such as timing and point of interruption unaccounted for in the final analysis.

The study to be reported falls clearly into the second line of research in that it is clinical in nature. The purpose of the study was to explore the ways in which variation in the form and timing dimensions of feedback (Hoffman, 1979) relate to differences in pupil performance.

METHOD

The study was conducted in the public school system of a moderate size city in the south central area of the United States. All ten of the elementary schools in the district participated in the study.

Subjects

There were 84 students in the study who had been selected proportionally from the high reading groups of twenty second grade classrooms in the school district. Students were given the Slossen Oral Reading Test as a measure of general reading achievement. Those scoring below the 1.0 grade level on this test were excluded from consideration. These subject selection critieria were used to avoid having students participate in the experiment for whom the text materials would be too difficult.

Design

Six different treatment conditions were devised for use in this study. These six conditions varied across the two dimensions of form and timing of feedback. The basic feedback forms were (1) terminal-or supplying the word to the student; (2) sustaining grapho-phonic-or attempting to help the student identify the text word by focusing attention or orthographic features of the word (i.e., "Look carefully at the letters in the word" and "Try to sound it out."; and (3) sustaining context-or attempting to help the student identify the text word by focusing attention on surrounding structures and meanings (i.e., "Let's try reading that sentence again" and "Does that word make sense? What word would fit better?). The prompts used for the sustaining conditions were developed based on high frequency strategies used by teachers in earlier field studies. The timing of feedback was varied in terms of the point of interruption: immediate (before or immediately after the word following the miscue); and delayed (at the first sentence back following the miscue.

Procedures

The students were randomly assigned to treatment conditions. They were asked to read aloud both specially designed passages under their assigned feedback condition. Feedback was offered to the students only for those miscues made on the eight difficult words. This made a total of 16 opportunities for feedback given that each of the difficult words occured twice. Student miscues on all other words were ignored. These sessions were tape recorded. The sessions were later reviewed by the researchers for accurate implementation of the treatment condition. If upon review it was found that the experimenter failed to give the correct feedback on over 10% of the student miscues in difficult words then that subject's data was discarded. This review process resulted in the deletion of data from only two subjects.

Data Analysis

Oral reading performance on the sixteen experimental words in this study was coded using a modified version of the FORMAS taxonomy (Hoffman and Baker, 1981). The words were coded initially for miscue type)omission, substitution, mispronunciation, call for help, hesitation, and repetition). Omissions, substitutions and mispronunciations were further classified for high and low meaning change and substitutions and mispronunciations were classified for graph-phonic similarity. Each miscue was also categorized for the subject's immediate reaction to his/her miscue (continuations, repeated attempts, pauses, calls for help, self-corrections) and for the ultimate resolution of the miscue (teacher identifies miscue, student identifies miscue). The other words in the text were coded only for ther occurrence of a miscue. Expert coders listened to tape recordings of the experimental sessions to code reading performance. For each of the categories of miscues described above the subject's errors were expressed as a percentage of the opportunities for error in that category. This was the dependent variable used in analysis described below except where otherwise noted. The basic design of this experiment included three factorialized between subject variables. These were the timing of the feedback, the form of the feedback and the reading ability of the subject. Students whose reading scores exceeded the sample mean (4.7 grade level) on the SORT were classified as higher ability readers ($\bar{x} = 5.7$). Students who scored below the sample mean were classified as lower ability readers ($\bar{x} = 3.3$). It should be noted that the classification by ability is a relative one.

A series of five analysis of variance were run using this design with the addition of one of the FORMAS within subject variables (miscue type, meaning change, grapho-phonic similarity, reaction, and resolution). Minor changes from analysis to analysis are discussed in the results section. In every case an unweighted means solution was used to solve the problem of unequal cell sizes.

A final analysis was run in which the percent of second miscues which were also missed the first time were analyzed as a function of the form of feedback, the timing of feedback, and reading ability.

RESULTS

Preliminary analysis revealed no statistically significant differences between the six treatment groups on either the percentage of miscues on target words or on the total number of miscues made including those outside the target words. The overall error rate was 41% on the target words and 6% when all miscues were considered. There was a statistically significant difference ($p<.001$) between the high and low ability readers in their error rates on target words (23% versus 59%) and on all text words (4% versus 8%).

The first basic set of analysis examined the percent of miscues on target words as a function of miscue type, form of feedback, timing of feedback, and ability group. For these analysis and those that follow omission, insertions, and calls for help were not considered due to their low frequency (i.e., less than 1% of the total). The distribution of miscues across the remaining three categories differed significantly across al treatment and ability groups [$F(2,144) = 29.04$, $p<.01$]. The most frequent types of miscues across all groups were mispronounciations (56%). There were no statistically significant main effect differences in the distribution of miscue types among the six treatment conditions or between ability groups. There was, however, a statistically significant four-way interaction between miscue type, feedback type, feedback timing and ability groups [$F(4,144) = 531$, $p<.01$]. The data for higher and lower ability readers relative to this interaction are presented in Table 1. The major source of the interaction seems to be related to differential performance of the poorer readers under the various feedback conditions.

Subjects in the lower ability group under the delayed grapho-phonic feedback condition had a much higher incidence of mispronunciation type miscues as compared to those in the immediate grapho-phonic condition. Under the immediate condition the lower ability readers in the grapho-phonic treatment condition tended to hesitate rather than mispronounce. The lower ability readers in the delayed context feedback condition demonstrated a much higher incidence of hesitation type miscues as compared to those in the immediate context prompt condition. Lower ability readers in the immediate context condition tended to mispronounce rather than hesitate.

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The patterns for the higher readers under the sustaining conditions tended to be in direct contrast to those of the lower readers in particular with respect to mispronounciations. Immediate grapho-phonic feedback inflated the level of mispronunciations. Immediate context diminished mispronunications. Uder the delay conditions those patterns were reversed for the higher ability readers. Terminal feedback under both immediate and delayed conditions had similar effects for both higher and lower ability readers.

Reader performance was analyzed next under sustaining feedback conditions for the two most frequent miscue types (mispronunciatons and hesitations) to determine whether it was the teacher or the student who was ultimately responsible for identifying a text word once a miscue had been made. There was a statistically significant ($p<.001$) five-way interaction between miscue type, feedback type, feedback timing, ability group and resolution (Table 2). For the higher reading group, the sustaining context conditions—both immediate and delayed—were superior to any of the other conditions in eliciting student over teacher identification or mispronunciations. The same was true for the lower readers in the delayed condition. In the immediate condition, however, the context group was the highest in teacher identification of mispronunciation miscues.

The final area of analysis focused on the percent of miscues made on a target word the second time it was encountered given a miscue on the first encounter. The percent of errors were analyzed as a function of feedback type, feedback timing and ability group. These error rates are presented in Table 3. A statistically significant main effect was found for timing on error rate [$F(1,72 = 5.49$, $p<.05$]. Although not reaching levels of statistical significance, the delayed context feedback condition was superior to al other conditions in reducing the incidence of repeated errors.

DISCUSSION

The results of this study clearly indicate that difference in verbal feedback can affect the quality of student performance during oral reading. The precise nature of the relationship between teacher feedback and student performance is complicated but the findings of this study point toward some valuable hypotheses useful in guiding future investigations.

The tendency for the lower ability readers in the immediate grapho-phonic condition to hesitate can be explained in part as "learned helplessness." That is, the readers come to recognize that they will receive help soon if they just wait. There may also be a certain amount of error avoidance operating within this condition for the lower readers. By hesitating rather then mispronouncing they avoid having their own decoding efforts corrected immediately. In the delayed grapho-phonic condition these factors are not in force. The lower readers have time to apply the strategy communicated implicitly in the feedback and they mispronounce.

Lower ability readers in the immediate context condition respond with inflated mispronunciations over hesitations. One explanation for the willingness of this group to mispronounce may be that they recognize that with immediate feedback pending there is no time or way to utilize the context strategies implicit in the feedback. They have limited time to process and only the context up to the point of the miscue to work with in making an attempt. The option of mispronouncing is open to them because even if unsuccessful their effort will not be challenged by the context oriented prompt. The tendency for lower ability readers in the delayed context condition was to hesitate. As with the delayed grapho-phonic group it seems that these readers had sufficient time to apply the strategy implicit in the feedback offered. We hypothesize that these readers are using hesitations as thinking time or even for covert rereading. Timing seems to be the critical factor influecing the ability or the willingness of the lower readers to apply certain strategies. For the higher readers timing did not seem to be so crucial.

Delayed context shows up in two areas as a potentially valuable feedback strategy. Students reading in this condition were more successful than in any other in identifying their own miscues. Students in this group were also highly successful in identifying target words in their second encounter. Interestingly, the students in the immediate context condition were among the poorest in both these areas of performance.

The importance of timing of feedback showed its overall impact in the area identifying the target words on their second encounter. The effect of delaying feedback was salient across all forms of prompts for higher and lower readers alike.

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NRC, Judging the Emergent Reading Abilities of Kindergarten Children
Disk 33, File 3, Galley 3d, mss. 327

TABLE 1

Percent of Miscues as a Function of Miscue Type, Form of Feedback, Timing, and Ability Group

	Form	Timing	Substitutions	Mispronunciations	Hesitations
	Terminal	Imm.	4.33	27.83	25.50
		Delay	14.38	22.06	15.06
Lower	Sus. G.P.	Imm.	7.78	25.94	29.39
Ability		Delay	14.40	33.20	10.60
	Sus. Con.	Imm.	8.67	46.92	4.25
		Delay	6.31	17.38	25.06
	Terminal	Imm.	.81	22.19	3.19
		Delay	.92	9.93	2.71
Higher	Sus. G.P.	Imm.	8.33	12.67	7.42
Ability		Delay	1.95	11.50	7.00
	Sus. Con.	Imm.	1.86	11.71	4.50
		Delay	.00	20.63	3.25

NRC, Specification of Promising Teacher Effectiveness Variables for Reading Instruction
Disk 2, File 38, Galley 38d, mss. 328

TABLE 2

Percent of Miscues as a Function of Miscue Type, Form of Feedback, Timing, Ability Group, and Resolution

	Form	Timing	Mispronunciations		Hesitations	
			Teacher ID	Student ID	Teacher ID	Student ID
	Terminal	Imm.	15.67	12.00	21.83	3.33
		Delay	17.38	4.75	7.88	5.38
Lower	Sus. G.P.	Imm.	13.78	8.44	23.00	5.56
Ability		Delay	20.80	12.80	7.60	2.60
	Sus. Con.	Imm.	37.33	9.67	4.17	.00
		Delay	7.13	10.00	13.38	9.63
	Terminal	Imm.	16.63	5.38	2.38	.75
		Delay	5.43	4.57	2.71	.00
Higher	Sus. G.P.	Imm.	7.33	5.17	3.00	4.33
Ability		Delay	5.60	5.70	3.20	3.20
	Sus. Con.	Imm.	2.71	7.00	2.71	.00
		Delay	3.00	15.75	1.50	1.50

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TABLE 3

Percent of Repeated Errors on Second Encounter of Target Words as a Function of Feedback Form and Timing

	Form	Immediate	Delayed
Lower Ability	Terminal	53.33	53.54
	Sus. G.P.	59.67	55.33
	Sus. Con.	72.02	37.80
Higher Ability	Terminal	27.08	14.29
	Sus. G.P.	34.52	10.33
	Sus. Con.	14.76	8.33