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ABSTRACT

This study used the Reading Miscue Inventory (RMI) to examine and compare the reading strategies used by a group of proficient (P) readers and a group of retarded (R) readers, both of which were reading at the fourth-grade level. The purpose of the study was to determine whether qualitative differences in the reading strategies of these two groups of three students could be discerned by the RMI. Two passages for oral reading were chosen. "First Kill" was used for a pretesting session. The story "My Brother is a Genius" was used in the testing session. Prior to reading the story the subjects were informed that this was not a test which would be graded and were asked to read as best they could. Differences between groups were observed although the size of the groups was too small to permit statistical evaluation of these differences. Some of the results indicated; group R made more miscues and showed less efficient use of graphic and phonemic cues; during the reading of the first third of the text, the R group showed strength in the use of syntactic and semantic cues equal to or greater than that of the P group; and in successive segments of the text, the R group's use of cueing systems declined markedly. (WR)

A PSYCHOLINGUISTIC COMPARISON OF ORAL READING BEHAVIOR OF PROFICIENT AND REMEDIAL READERS

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CHAPTER I

BACKGROUND OF PROBLEM

Most educators concerned with reading have limited their studies almost exclusively to methodology of reading instruction (Weber, 1968). Recently, a more dynamic and constructive research approach towards reading has developed; a concern not with methods but with understanding the reading process itself. As linguists have developed models of language acquisition, psycholinguists have developed models of the reading process. Reading is considered by psycholinguists to be the receptive phase of written language (Goodman, 1969).

Studies of remedial readers have often been concerned with finding a specific aspect of the etiology of the problem, such as visual acuity, auditory discrimination, speech and articulation problems, eye movements, vitamin deficiency, endocrine conditions, cerebral dominance, and lateral dominance (Smith & Dechant, 1961). These attempts to assign a cause-and-effect relationship to reading disabilities, with a resultant rigid classification of deficient readers, may discourage analysis of individual weaknesses in the reading process itself.

This, in turn, especially when the classification implies an irreversible deficit, effectively diminishes efforts to reduce the symptoms.

Summing up the vast amount of research on causes of reading retardation, Samuels (1973) notes:

> . . . the bulk of the research fails to add up to much: (a) the research has been piecemeal in its approach rather than systematic; (b) the matched-group designs generally used in these studies were inadequate; (c) the students were used for research after they had been identified as having a reading problem rather than before, thus masking what is cause and what is effect; (d) numerous studies have investigated variables which are not components of a learning model of reading acquisition; (e) diagnostic labels were used, which imply that causes of the reading problem were known; and (f) sources of unreliability in achievement-expectancy formulas, reading-achievement tests, and intelligence tests have resulted in invalid research results and conclusions [p. 208].

A child is considered to have a reading disability if he is reading at least one year below his grade expectancy (Harris, 1961). A reading disability is said to exist when,

> despite adequate instruction, absence of emotional problems which may interfere with learning, adequate attendance, a cooperative child, and absence of sensory impairment, there is a discrepancy between the reading achievement level and some measurement of potential ability [Samuels, 1973, p. 204].

Some of the characteristics attributed to the reading behavior of the child with a reading disability are that he will usually make substitutions in easy vocabulary, occasionally skip words, will try to read

words by their total configuration, and will guess, often inaccurately, from context. He will not have a systematic means of word attack and will make little use of sounds or of structural analysis skills (Kottmeyer, 1959). This implies that the more severely disabled the reader, the more the above characteristics will be exhibited. Evidences of any of the above deviations from the text are often considered as absolute errors even when they do not impair the meaning of what is being read.

What happens to the child having difficulty in reading? He is frequently given phonic rules as well as appropriate isolated words to teach him "word attack skills." Sight word lists are also presented with the expectation that by memorizing these word lists, his reading will improve. Thus, he may be "taught" to lose interest in reading, and language development may be stifled because he is reading highly synthetic materials where discussion of the story is virtually impossible. Another not uncommon situation (especially in the middle grades) is that the deficient reader is presented with material which is too far beyond his reading competence. This, too, leads to loss of interest in reading and promotes an association between reading and failure. The problem reader is not given the same opportunity as more proficient readers to participate actively in reading by using

his own language ability and previous experience.

It is suggested above that widely used teaching techniques are often not only ineffectual but may lead to a solidification of a deficient reader's problem. In view of the fact that a child enters school with well-developed language abilities (Ruddell, 1970; Wardhaugh, 1971), the methods of teaching reading are very artificial. Teachers rarely take advantage, when teaching reading, of the strategies that children have already acquired and which they exhibit in their oral language (Goodman, 1972). School-age children use the syntactic and semantic constraints of the language, demonstrate realistic expectation of sentence patterns, and show an ability to utilize the redundancy of the spoken message (Goodman, 1965; Ruddell, 1970; Wardhaugh, 1971). If new methods are to be developed, a better understanding of the reading process of all readers must first be obtained.

Need for the Study

The most widely used tests of children's reading ability provide, primarily, an indication of the reading grade level of the individual. They do not provide measurements of qualitative differences, between readers at the same grade level, reflecting weaknesses and strengths in the individuals' reading process. Most diagnostic

tools (as the Durrell Analysis of Reading Difficulty, 1955, or the Gates-McKillop Reading Diagnostic Tests, 1962) are word recognition and phonics tests that narrowly determine the relative efficiency of the individual being tested to utilize grapho-phonemic relationships. This would assume that phonics is, if not the only problem, the major stumbling block in the way of learning to read. This assumption, along with the limited tests available, may well result in remediation efforts being confined to phonics training.

Many studies of retarded readers have included a bias concerned with identifying a particular etiology or primary causative factor of the retardation (Samuels, 1973). These studies, too, tend to diminish recognition of individual variation in the reading process of deficient readers and promote narrow, if any, direction towards remediation efforts.

An increasing number of studies concerned with understanding the reading process itself (Biemiller, 1971; Y. Goodman, 1967; Goodman & Burke, 1969; Gutknecht, 1971; Menosky, 1971; Weber, 1970a) strongly suggest that although all readers utilize their linguistic skills when reading, there is considerable variation between the individuals' utilization of linguistic strategies as they learn to read.

The development of a diagnostic tool with a sufficiently unbiased approach would be needed to recognize useful differences between the reading process of individuals or between retarded and normal readers. The Reading Miscue Inventory (RMI) by Y. Goodman and Burke (1972a) may be an adequately broad and sensitive research tool to yield a description and analysis of the reading behavior of individuals toward this end.

Statement of the Problem

The present study is an effort to use the RMI to compare individual retarded and normal readers. Do the retarded readers, i.e., reading at least one year below their grade expectancy, utilize their linguistic competence similarly and to the same extent as proficient readers reading on the same level? This is the question to which the present study is directed.

Limitations of the Study

This study has several limitations. The sample size is small, consisting of only three individuals in each of the two groups studied. The subjects are all female, caucasian, public school students of economically middle-class families. A limitation imposed by the design of the study is that the two groups differ in age and educational experience.

These limitations, while allowing a descriptive analysis for individual and group performances, preclude rigorous statistical analysis and generalizations comparing retarded and normal readers. Further, while the limitations would not permit a definitive statement as to the utility of the RMI as a diagnostic tool, the study should indicate the likelihood of its having such use.

CHAPTER II

REVIEW OF THE LITERATURE

This search is limited to a survey of studies in oral reading errors of retarded, average, and superior readers; a description of the psycholinguistic model of reading proposed by K. S. Goodman (1968); and studies based on the Goodman Taxonomy of Reading Miscues (1969). An effort was made to note those studies most pertinent to an examination of the oral reading errors made by retarded readers.

Oral Reading of Retarded Readers

Reading, like all language processes, involves syntax and semantics. One measure of young readers' use of constraints imposed by their language may be done by the analysis of their oral reading errors. Weber's extensive review article on oral reading errors (1968) revealed that very little research had been done on the study of written words as linguistic units represented graphically. She concluded that inaccurate responses have usually been considered to be indications of perceptual inaccuracies or evidence of poor vocabulary rather than responses generated by a reader's expectations based on his knowledge of the

constraints imposed by grammatical structure. In addition, she states that "early discussions of errors relative to their verbal context only mentioned rather than analyzed the effect of an error on the meaning of a sentence [p. 113]."

The early studies concerned with identifying certain types of errors made by retarded readers were greatly influenced by Orton's theory (1928) that the retarded readers were a specific sub-group of the population whose failure to establish dominance in one hemisphere of the brain caused reversals of letters (p, q) and of words (i.e., saw, was). He felt that the analysis of reading errors, especially reversals, would provide a means of recognizing retarded readers. Studies were done either as attempts to support or refute Orton's suggestions (Davidson, 1934; Hill, 1936; Malmquist, 1958; Monroe, 1932). These studies gave evidence that reversals were only one of several types of errors made by all readers and that reversals tended to disappear with maturity (Weber, 1968).

Although most of the attempts to analyze the oral reading of retarded readers were based on the reading of words presented in isolation, some linguistic insight was apparent. Payne (1930), in analyzing more than 10,000 responses by middle-graders to words tachistoscopically

exposed, emphasized that the graphic display of a word is only one aspect of its properties as a stimulus, even when displayed in isolation. She was one of the first to express doubt concerning the value of describing reading difficulties in terms of reversals. She stated that error analysis had to consider the quality of the attempt made by the child, the influence of other words being learned at the same time as the stimulus word, the frequency of the stimulus word, and the graphic-phonemic similarity between the stimulus word and other words in the language.

Fairbanks (1937) and Swanson (1937), both using the same method for analyzing the errors, recorded the oral reading of a group of good readers and a group of poor readers while they read selections. The errors were categorized as substitutions, omissions, repetitions, and mispronunciations. They found that the poor readers made more oral reading errors than did the good readers and altered the meaning of the text more often than did the good readers.

Bennett (1942) provided one of the few exceptions to the type of studies done at this time. She did an analysis of 34,274 errors of recognition and pronunciation of 237 basic words read in context. Her subjects were 710 retarded readers in the middle grades as they progressed through 30 remedial lessons. Classification of errors was

made into nine types concerned with substitutions of the stimulus word and the graphic similarity of the substituted word. She did note, although informally, that dominant letters or word parts were important as cues for word recognition and pronunciation, and that the structure of the context was important as well. She estimated that 41% of the errors were "relevant responses" in that they were closely associated in thought with the stimuli and that, of the "irrelevant responses," 50% were of the same part of speech as the stimuli. Of the "relevant responses," only a very few differed from the stimuli in part of speech. None of the 34,274 errors were nonsense words and there was a uniformity of errors as indicated by the fact that only 82 of the 237 words elicited two or more different response words. The other 155 all elicited only one form of incorrect response. This indicated that the readers substituted words that were part of their previous reading vocabulary instead of using grapho-phonemic cues in order to recognize new words. She did not examine self-correction behavior formally but her informal notes show a greater awareness than her contemporaries of the process of reading. She concluded:

> . . . It is seen that word recognition and pronunciation are complex mental processes in which the neural centers involved in language usage play a controlling part. Errors did not occur in a haphazard way, but are governed by the context in which the stimuli are incorporated, and by unfortunate learning habits which

> the pupil has developed in the process of reading. A pronounced characteristic of pupils retarded in word recognition seems to be the tendency not to inhibit associated responses until a word is clearly seen in all its parts--beginning, middle and ending [p. 38].

Oral Reading of Normal Readers

Recent studies have tried to show that the syntactic and semantic constraints evident in oral reading indicate that reading is a continuous language process and that most children will correct their own errors when dissonance in grammar and/or meaning occurs. This applies to all readers, be they proficient, average, or slow (Clay, 1968, 1969; K. S. Goodman, 1965; Y. Goodman, 1967; Goodman & Burke, 1969; Gutknecht, 1971; Menosky, 1971; Weber, 1970a). K. S. Goodman (1970) analyzed the errors of fourth-graders reading a brief passage and by analyzing the miscues (errors) showed how these miscues are governed by the grammatical constraints of the language. He also reported (1965) that early readers recognized the words which appeared in context with greater accuracy than when the same words appeared in a list. Of the words missed on the list, first-graders missed only 38% of them in stories, the second-graders 25%, and the third-graders 18%. Goodman concluded that the syntactic and semantic constraints of the language are incorporated in reading and that reading is a continuous linguistic process (Goodman, 1968).

Y. Goodman (1967), in a longitudinal study of six

6-year-old beginning readers, found that as a reader's skill increases, his ability to use grammatical constraints also increases. She concluded that the beginning reader's understanding of syntax is of greater influence on development of reading proficiency than his semantic understanding which is undoubtedly due to the fact that in the early grades the child's grasp of grammatical complexity exceeds that required by the written text.

A major study of oral reading errors was carried out by K. S. Goodman and Burke (1969). They analyzed the errors made by second-, fourth-, and sixth-graders who were proficient readers, applying the Goodman Taxonomy of Reading Miscues (1969). Errors were divided into two groups: those which did not alter syntactic structure (non-transformation miscues) and those which did (retransformation miscues). The non-transformation miscues reflect the subject's strong control of the structures of the language. At each of the three grade levels they found that there was a tendency to retain the grammatical function of the text in the miscue. Even within the retransformation miscues where the subjects changed the text to a more familiar language pattern, there was a tendency to retain grammatical function with the structural changes involving such shifts as in tense or number, or for the intent of the original structure to be retained while alternate

forms were deleted or added. The tendency to retain grammatical function in retransformation miscues was found to increase from grades 2-6, indicating the reader's increasing control of the English language.

Clay (1968), in examining the oral reading errors of beginning readers, indicated that her above-average readers could be distinguished by their low number of errors and their use of repetition and self-correction. The 100 children she tested were taught by a method which emphasized words in context with no prior teaching of sounds or words, singly or in lists. Responses were categorized as true report, error, repetition, or self-correction. Relationships between self-correction behavior and the grammatical acceptability of the error were analyzed. The group was divided at the end of the year of testing into quartile groups: High, High Middle, Low Middle, and Low by a test of reading progress. The "median child" of her high group made one error in every 37.39 words read, compared with the "median child" of the low group who made one error in every 2.58 words read. The High and High Middle groups corrected one in every three or four errors while in the Low Middle and Low groups, self-correction rates were one in 8 and one in 20, respectively. In a linguistic analysis of substitution errors (7,683) self-correction rates were: Low, 11%; Low Middle, 14%; High

Middle, 28%; and High, 35%.

She felt that the low error-high self-correction rates of the High group resulted from efficient processing of cues and the high error-high self-correction of the High Middle group indicated that efforts were being made to relate cues and resolve inconsistencies but the process was not operating efficiently. In analyzing self-correction behavior, she concluded that grammatical competency is the significant source of cues for error-correction strategy for all readers.

In addition, she found that the Low group used less graphic cues than did the High group. They were more influenced by the semantic constraints than the graphic constraints of the text.

Weber (1970a) analyzed the oral reading errors made by a first-grade class as they learned to read from a basal reading series over a period of a school year. Very little phonic instruction was given. The purpose of her analysis of oral reading errors was to determine the strategies that beginning readers used to identify words. The errors of weaker readers were compared to those of stronger readers. The two groups were designated as High Achievers and Low Achievers by their reading progress during the year. This was confirmed by testing the children in May with a standardized silent reading test. Most

children in the High group scored above grade level while the Low group scored at grade level or below. The errors that she analyzed were substitutions, omissions, insertions, and reversals. They were analyzed for grapho-phonemic correspondence, grammatical function, and grammatic and semantic acceptability.

Substitutions comprised 80% of the total errors with the remaining errors divided almost equally between omissions and insertions. Reversals were rare and not unique to either reading group. There was little difference in the distribution frequency of types of errors made by the two groups.

Weber found, as did Bennett (1942) and Clay (1968), that in making substitutions the better readers used responses more similar graphically to the corresponding stimulus words than did the slower readers. She also found 91% of the errors to be grammatically appropriate to the preceding context. The difference between the groups in this respect was negligible: 92.3% for the High group and 88.9% for the Low group. Since, as beginning readers, they had been only minimally instructed in the use of word attack skills, the preceding structure of a sentence may have been their principal source of information for identifying a word. The Low group showed a decrease of grammatical appropriateness of substitutions as the year

progressed, going from 93.1% to 83.6%, while the High group only went from 93.8% to 91.0%. This suggests that the Low group was showing a change in strategies as they became more aware of graphic cues and that an increased concern with these cues interfered with their use of grammatical constraints.

There was no difference observed between groups as to the percentage of the errors that were grammatically acceptable for the entire sentence. However, in a further analysis of the data (Weber, 1970b), it was found that the High group corrected errors that did not conform to the structure of the written sentence more frequently than they did acceptable errors. The Low group showed no corresponding difference, i.e., they overcorrected as often as they attempted legitimate corrections.

Weber concluded that syntactic and semantic constraints were brought to the reading task even by the beginning readers and that changes in reading strategies and the use of cues were evidenced in both groups but that the High group was more efficient in forming a reading strategy based on their use of letter-sound relationship patterns. She also stated that there is some evidence for an inverse relationship between the beginner's use of graphic cues and syntactic cues.

Biemiller (1971), apparently following up the

conclusions suggested by Weber's (1970a) study, observed the oral reading errors of 42 children during their year in the first grade. This was done in order to examine changes in the use of contextual and graphic information for word identification. From his analysis of the errors in terms of semantic and graphic constraints as well as non-response errors, he developed a three phase model of reading acquisition. In the first stage, the children showed a predominance of contextually constrained errors. They used a minimum of graphic information and made use of information learned aurally (learning sight words). With an increase of non-response errors, the child moved into the second stage. A non-response was interpreted by Biemiller to mean that the child does not recognize the word and is trying to use graphic information. This stage, characterized by word-for-word reading, was reached sooner by the better readers while the slower learners were still making fewer non-response errors and, as did those in Bennett's (1942) study, were responding by substituting words which they had previously been taught. The better readers showed a significant decrease in contextually acceptable errors at this time, whereas the slower readers (as found by Clay [1968] and Weber [1970a]) were still depending upon the semantic and syntactic constraints of the language.

A drop in non-response errors marks the beginning of the third stage. The children made significantly more substitution errors that were both contextually and graphically acceptable (82%) than were made in the first two stages. In agreement with Weber (1970a), Biemiller sees poor readers as showing a lag in moving from one developmental stage to another in the reading process with this showing up in their ability to handle graphic information. In the one year of his study, only the better group achieved the three stages. The slower readers were not able to develop reading strategies and in a sense "started off on the wrong track [p. 95]."

Goodman's Psycholinguistic Model of Reading

Recently there has been a movement in which linguistic models of Chomsky's transformational-generative grammar (1965) have been interpreted and applied to reading. The psycholinguistic approach is concerned with the relationship between language and thought. Psycholinguists are aware of the constraints of the language capability which a child brings to the "learning to read" situation and that this is a basis of his learning. The child utilizes his total prior experience and learning, including his language competence in the reading task. Studies of the level of language acquisition of 5- and

6-year-olds have indicated both the great extent to which children have control over the grammatical aspects of oral English when they enter school as well as their further development as they progress in school. Ruddell (1970) and Wardhaugh (1971) have compiled extensive reviews of the literature concerned with early language acquisition.

K. S. Goodman (1968) has provided one psycholinguistic definition of reading:

> Reading is the receptive phase of written communication. In written language a message has been encoded by the writer in graphic symbols spatially distributed on the page. The reader does not merely pass his eyes over a written language and receive and record a stream of visual perceptual images. He must actively bring to bear his knowledge of language, his past experience, his conceptual attainments on the processing of language information encoded in the form of graphic symbols in order to decode the written language. Reading must, therefore, be regarded as an interaction between the reader and the written language, through which the reader attempts to reconstruct a message from the writer [p. 15].

He has developed a complex model of the reading process based on Chomsky's transformational-generative grammar. In his model, he has divided reading proficiency into three levels. At the first level, the child perceives the graphic symbol, recodes it for aural input, recodes again into a familiar language symbol, and then decodes it into meaning. It is at this level that the child is taught strategies for recoding whether it be phonic, phonemics, or whole word. Goodman feels that too much emphasis is given to word attack skills and that if

presented in quantity beyond what is needed to recode, may actually distract the child from the real end, decoding written language for meaning.

At the second stage of proficiency, the child is able to recode from the graphic symbols and then decode to meaning. The deletion or reduction of the aural component may reflect an increasing awareness and acceptance by the student that the written language is very similar to his spoken language.

At the final stage, the graphic symbol is decoded directly upon visual input. The proficient reader at this final level, when reading aloud, must encode from meaning to oral output; that is, he must extract meaning from the deep structure and encode this information into speech.

Goodman calls this model "a psycholinguistic guessing game." One approaches the written text with prior knowledge and uses this knowledge to test hypotheses which one forms in the process of reading. The reader confirms or disconfirms his hypotheses as he reads. It is not necessary for him to read every word perfectly but only enough to allow him to confirm or disconfirm previous hypotheses and to form new ones. This model differs from earlier linguistic models (Bloomfield, 1942; Fries, 1964; Lefevre, 1964) in that the reader is now considered to be actively taking part in the reading process rather than

passively being stimulated by the graphic representation to which he applies previously taught rules.

Studies Based on the Goodman Taxonomy

The following studies analyzed oral reading miscues using either the Goodman Taxonomy or the RMI (derived from the Goodman Taxonomy). Like the immediately preceding studies of oral reading errors, the concern is psycholinguistic in nature. These studies stemmed from the Reading Miscue Center at Wayne State University. The subjects included proficient and average elementary school readers, first- and fourth-graders designated as low readers, and a group of perceptually impaired children.

In using the Goodman Taxonomy, the miscues are analyzed in more than 20 described categories. These categories include syntactic and semantic relationships and changes, grammatical functions, the use of transformation processes, phonemic and graphemic relationships and changes, and the phenomenon of correction strategies. The term miscue is used instead of error in that the response is evaluated as to how much it differs in several respects from the text and as to the factors influencing it.

Y. Goodman (1967) analyzed the miscues of three average and three "slow readers" as they progressed through the first grade. She found that the "slower readers" made more Miscues Per Hundred Words (MPHW) than

did the average readers. However, the number of miscues decreased with increased text length for the slow readers and increased for the average readers. She also found that comprehension scores were not related to the number of miscues made.

In a developmental study covering four years of these same children, Y. Goodman (1970) concluded that as children progress, the more proficient readers produced qualitatively better miscues making use of semantic and syntactic cues, whereas the less proficient readers produced miscues that were primarily responses to the graphic field. This is in agreement with Biemiller (1971), Clay (1968), and Weber (1970a).

Gutknecht (1971) analyzed the miscues generated by five children (from 11.0 to 12.4 years in age) diagnosed as perceptually impaired. These readers were reading at least two years below their reading expectancy. The range of their reading levels were Primer to 4-1. Gutknecht limited his analysis of miscues to general miscues, corrections, syntactic information, and semantic information. His subjects had a range of 6.7 to 25.0 MPHW. These MPHW are considerably higher than those previously encountered in similar studies using the Goodman Taxonomy. Like Y. Goodman's (1967) findings, there was no correlation between MPHW and comprehension scores.

Gutknecht found that 63.8% of the miscues resulted in a word of the same grammatical function. While 89.2% of the miscues had graphic similarity, most of the miscues which had no graphic similarity were grammatically acceptable. Seventy-four percent of the miscues had some phonemic similarity but only 20% had high phonemic similarity. These data strongly suggest that graphic information was more important than phonemic information.

Gutknecht, in analyzing correction behavior, found that his readers, like proficient and average readers, tended not to correct miscues which were syntactically and semantically acceptable. When a miscue was unacceptable relative to the preceding part of the sentence, it was more likely to be corrected than were miscues that were unacceptable to an entire sentence. All of these subjects used syntactic and semantic cues to some extent, using syntactic cues more successfully than semantic cues.

Children were weak in grapho-phonemic strategies--either through overuse or to improper application due to a lack of knowledge. They seemed to correct because of graphic mismatches rather than because of disparities in meaning or grammar. Although the perceptually impaired children made some use of syntactic and semantic cues, this strategy was not developed enough for them to use it efficiently. Gutknecht believed that the rate of

acquisition of the reading process is the main difference between normal learners and his group. He, therefore, makes a plea that the reading materials prepared for the perceptually impaired child not be phonic-laden or lower level basal readers but new and interesting materials, taking advantage of the child's linguistic abilities and to eliminate the idea that every child must go through the same type of learning process in learning to read.

Menosky (1971) attempted to show that the miscues generated by a reader may vary qualitatively more than quantitatively. Using groups of three average readers from each of grades 2, 4, 6, and 8 and three low and three high readers from grade 4, she analyzed their oral reading miscues. All texts were divided into three sections with the miscues in the first portion of the material compared with the miscues in the second section.

The low fourth-graders who read the same passage as the second-graders had the highest MPHW of any group. They did not change their strategies as they progressed through the text making only substitution errors, whereas the high fourth-, sixth-, and eighth-graders made all types of miscues: substitutions, omissions, and additions. The low fourth-graders tended to produce more totally acceptable miscues as they progressed through the text but they overcorrected more of these semantically and

syntactically acceptable miscues. Y. Goodman (1967) also found this in her low first-grade readers. The more proficient readers made corrections for more of their unacceptable miscues and less for their acceptable ones as they read. They did not change their performance but changed their strategies. Menosky also found a slight correlation between comprehension and MPHW across groups. However, this did not apply to individuals within groups. All of her readers showed a lack of ability to make inferences or draw conclusions in their retelling. The low fourth-grade readers had the lowest comprehension score of all the groups.

In comparing the first pages with those within the first quarter of the text, she found that more miscues were generated in the first pages. Thus, it is unfair for a child to be judged on an oral reading inventory just allowing him to read the first few paragraphs or pages of the text. Only with sufficient length is the reader able to gain "contextual support" as indicated by the changes in the quality of the miscues as they read the varying portions of the text.

Y. Goodman (1972) attempted to show the differences between quantitative and qualitative aspects of reading diagnosis using the RMI. A seventh-grade subject read three different passages of varying difficulty. MPHW

were analyzed in the total story as well as those generated in the first and middle 200 words of each story. Because of the large variability of MPHW made in the various portions, she concluded as did Menosky (1971) that only in viewing the whole story can a correct picture of the reading behavior be made. The story in which the subject made the greatest percentage of miscues that caused loss of meaning also had the greatest number of substitution miscues with high graphic similarity. This indicated that he was reading on a superficial level.

Burke (1973), using the RMI, analyzed the self-correction behavior of six first-grade readers. Three of the readers were taught by a synthetic method (basal reader approach) and three by an analytic approach (phoneme-grapheme correspondence). Her results indicated that the group taught by the synthetic approach had more varied profiles, showing that they were using all cueing systems: phoneme-grapheme, syntactic, and semantic. The group taught by the phonetic approach made more miscues, had lower comprehension ratings, and like the subjects of Y. Goodman (1967) showed an inverse relationship between phoneme-grapheme correspondence and grammatic and semantic acceptability. Thus, it could be concluded that reading methodology can affect reading behavior. The synthetic method produced readers whose profiles were acceptable to

the Goodman model of proficient readers, whereas the phonetic method did not. Burke concluded that the RMI is a good diagnostic tool for the teacher but as a research tool it has certain limitations in that the quality and uniqueness of the original taxonomy from which it was derived is diminished.

Summary

Much of the research cited above suggests that analysis of miscues generated during oral reading by children may be a useful tool to increase our understanding of some aspects of the development of the reading process. The first-grade reading studies (Biemiller, 1971; Burke, 1973; Clay, 1968; Y. Goodman, 1967; Weber, 1970a) show that, at this early age, differences in reading strategies and abilities occur due to the interaction of the child, teacher, and teaching methodology. Not all children learn to read in the same manner or at the same rate. The rate at which individuals learn to read depends on their ability to use syntactic and semantic constraints of the language as well as the learning and application of grapho-phonemic correspondences. Competence to develop strategies based on all three factors is requisite to the development of reading proficiency. The "slow" reader often has trouble acquiring grapho-phonemic skills and concomitantly may rely very heavily on syntactic and semantic

cues. Conversely, as this reader becomes more competent in the discrimination of graphic cues, a pattern of word-by-word reading behavior emerges with a decrement in the utilization of syntactic and semantic strategies. In comparison, students who have little trouble learning to read tend to reach a state which is not characterized by inordinate reliance persistently placed on one set of cues at the expense of another.

It is assumed, in the present study, that retarded readers, like proficient readers, vary in their individual patterns of usage of linguistic cues and that this can be observed by an analysis of oral reading miscues.

This study is an attempt to determine to what extent reading strategies of proficient and retarded readers are comparable and to what extent the RMI can be used to pinpoint the strengths and weaknesses of individuals in both groups.

CHAPTER III

PROCEDURE

This chapter will describe the subjects and materials involved in the study. The section concerned with the analysis of the data will contain a discussion of the research tool used, the RMI (Y. Goodman & Burke, 1972a).

Subjects

The subjects were six female children attending an elementary school in North Plainfield, New Jersey, a white middle-class suburban community. Three third-grade children were selected from six children who were recommended by their teachers as highly proficient readers. They were selected after the Gates-MacGinitie Reading Test (1965) and the Tests of General Ability (1960), a group intelligence test, were administered to match as closely as possible three proficient and three retarded readers. The three remedial subjects included two fifth-grade students and one sixth-grader all reading on a fourth-grade level in the remedial reading class. Descriptive and educational information for each of the subjects is contained in Table 1.

An examination of Table 1 indicates that the mean

TABLE 1

DESCRIPTIVE AND EDUCATIONAL INFORMATION

	Grade	Chronological age	Sex	Tests of general intelligence (I.Q.)	Gates-MacGinitie Reading Test (grade level)	
					Vocabulary	Comprehension
			Group P			
Nancy	3	8 yrs. 3 mos.	Female	117	4.8	4.4
Cathy	3	9 yrs. 0 mos.	Female	114	4.2	4.2
Linda	3	8 yrs. 3 mos.	Female	103	4.8	3.9
Mean		8 yrs. 6 mos.		111	4.6	4.2
			Group R			
Lisa	6	11 yrs. 7 mos.	Female	108	4.8	3.8
Margaret	5	10 yrs. 4 mos.	Female	108	4.8	4.2
Linn	5	10 yrs. 6 mos.	Female	112	4.2	3.8
Mean		10 yrs. 10 mos.		109	4.6	3.9

chronological age for the proficient group (Group P) is 8 years 6 months and for the remedial group (Group R), 10 years 10 months. Although there is some variation in the individual I.Q.'s, the mean I.Q. for Group P is 111 as compared with 109 for Group R.

The reading scores for both groups on the Gates-MacGinitie Reading Test (Level D, Form 3) are quite similar. Group P and Group R had an identical mean grade expectancy score of 4.6 in the vocabulary subtest. On the comprehension subtest, the mean grade expectancy score for Group P was 4.2 and 3.9 for Group R. The reading scores satisfy the requirements of this study that the two groups be at the same reading level.

Materials

Two passages for oral reading were chosen. "First Kill" (Y. Goodman & Burke, 1972b) was used for a pre-testing session. The story "My Brother Is a Genius" (Hayes, 1963) from the sixth-grade reader, Adventures Now and Then, was used in the actual testing session (Appendix A). Extreme care was taken in selecting the testing material so that an appropriate number of miscues would be generated for both groups. Y. Goodman (1967) stated that for beginning readers, the optimum number of miscues per hundred words which could be generated with adequate comprehension is between 5 and 14. It was assumed by this

researcher that this would apply to the older readers as well since a sixth-grade text is longer and thus the redundancy of the information would reinforce the story line. Other important considerations were that the details and plot of the passages would be equally familiar and interesting to third-, fifth-, and sixth-graders and the passages were ones which none of the subjects had previously seen or heard in their classrooms. The Reading Miscue Inventory Manual: Procedure for Diagnosis and Evaluation (RMI Manual) by Yetta Goodman and Carolyn Burke (1972a) was the source of the testing and scoring procedures.

Method

Each subject was given a pretest and the actual test within a school week. The identical procedure was followed in both testing sessions.

Prior to the reading of the story, the subject, alone in the room with the investigator, was told that this was not a test which would be graded but an experiment interested in seeing how children read orally. The subject was then told that she was to read an entire story into the tape recorder; the story was a little difficult but that was necessary for the study; and, if she had any difficulty, the researcher would not help her but she should try to figure out the word by herself. She was further told that after reading the story, she would be

asked to retell it.

While the subject read the story, the researcher observed the miscues and such reading behaviors as finger pointing and silent corrections, recording them on a prepared copy of the text (Appendix C contains a sample page). The only response made by the researcher during this time was an occasional encouraging smile or nod. Although some difficulty was encountered by the subjects, they did not fidget or show any other overt signs that they were so frustrated that the material should be abandoned for something easier (Y. Goodman & Burke, 1972a).

After completing the oral reading of the story, the subject was asked to retell as much of the story as she remembered. When this was done, the researcher asked questions in order to encourage the subject to recall as much as she could in the identification and analysis of the characters, plot, and events. Care was taken to ask questions using information already provided by the reader.

Data Analysis

By listening to the audio tape of the story, additional miscues were identified and added to the prepared copy of the text. Miscues were identified as substitutions, omissions, insertions, and reversals. Partial words, non-words, intonational shifts, and long pauses

were also recorded. Regressions (repetition of words, phrases, or sentences) were noted. These often occur in the course of correction behavior and may be regarded as indicators of anticipated difficulty with words or ideas. Particular attention was given to the length of regressions as this reflects the size of the language unit being processed by the readers as well as the cues being used. The miscues were then entered onto the Reading Miscue Coding Sheet (Appendix D) according to the directions given in the RMI Manual (pp. 39-48).

The following is a brief description of the questions in the linguistic analysis of each miscue.

1. Dialect. Is a dialect variation involved in the miscue?
2. Intonation. Is a shift in intonation involved in the miscue?
3. Graphic Similarity. How much does the miscue look like what was expected?
4. Sound Similarity. How much does the miscue sound like what was expected?
5. Grammatical Function. Is the grammatical function of the miscue the same as the grammatical function of the word in the text?
6. Correction. Is the miscue corrected?
7. Grammatical Acceptability. Does the miscue occur in a structure which is grammatically acceptable?
8. Semantic Acceptability. Does the miscue occur in a structure which is semantically acceptable?
9. Meaning Change. Does the miscue result in a change of meaning [RMI Manual, pp. 49-50]?

All miscues were coded and analyzed for intonation, grammatical acceptability, semantic acceptability, and meaning change. Substitutions for single whole words, in addition, were analyzed for graphic similarity, sound

similarity, and grammatical function.

Intonation shifts and dialect miscues were marked in the appropriate column with a check. There were no dialect miscues indicating a similarity of dialect between the researcher and the subjects.

The category Graphic Similarity was marked for high similarity (Y), some similarity (P), and no similarity (N). Sound Similarity was marked in the appropriate column in the same way. Grammatical Function was marked identical (Y), not similar (N), and not possible to determine the grammatical function (P). The category Correction was marked (Y) if the miscue was corrected, not corrected (N), and attempt to correct or unsuccessful correction attempt (P). Grammatical Acceptability was marked for acceptable grammatically to the entire sentence (Y), acceptable only to the preceding portion of the sentence up to the miscue (P), and not grammatically acceptable (N). Semantic Acceptability was coded in the same way as Grammatical Acceptability. Meaning Change was coded for extensive meaning change (Y), some meaning change (P), and no meaning change (N).

When the inventory questions had been answered for all of the miscues noted, Grammatical Relationship Patterns and Patterns of Comprehension were checked for each reader (RMI Manual, p. 81). These patterns determined the

strengths and weaknesses of the strategies used by the reader.

Grammatical Relationship Patterns were determined for each miscue by checking one of the 18 possible combinations consisting of Correction, Grammatical Acceptability, and Semantic Acceptability. The interrelationships of these categories indicate strength, partial strength, weakness, and overcorrection.

Patterns of Comprehension were determined by checking one of the possible 27 combinations consisting of Correction, Semantic Acceptability, and Meaning Change. The interrelationships of these categories indicate strength, partial strength, or weakness.

Percentages were calculated for each subcategory in Graphic Similarity, Sound Similarity, Grammatical Acceptability, Grammatical Function, Grammatical Relationship Patterns, and Patterns of Comprehension. These percentages were then entered onto each individual's Student Profile Sheet.

The retelling score was arrived at by listening to the audio tape and scoring the retelling sheet for character identification, character analysis, events, plot, and theme (Appendix B). This score was also entered on the Student Profile Sheet. Repetitions were entered on the Student Profile Sheet as well.

A further analysis of each reader's miscues was done by dividing the text into thirds by lines. Each of the three sections was compared to one another in all of the categories mentioned above. This was done in an attempt to provide further information as to possible differences in the reading strategies used by the proficient and remedial readers as they progress through varying portions of the text. Miscues per hundred words and mean percentages of all measures were calculated for the total text as well as for each section.

CHAPTER IV

RESULTS

This chapter presents the results of the data obtained in terms of each group and the individuals within the groups. It is divided into three areas. The first section will consist of the descriptions and analysis of each individual's performance. The second section is comprised of the results expressed as the mean scores of the two groups. The last section presents the data of the mean scores of the two groups for each third of the test passage.

Proficient Group--Individual Analyses

Nancy's profile is based on 116 miscues (5.3 MPHW), the least number of miscues made by any reader in her group. Sixty-five and five-tenths percent of these were substitution miscues. She utilized graphic and sound cues equally effectively. Sixty-nine and seven-tenths percent of her substitution miscues had high graphic similarity, 18.4% had partial similarity, and 11.8% had no similarity. Sixty-five and eight-tenths percent had high sound similarity, 22.4% had partial similarity, and 11.8% had no similarity.

Nancy demonstrated the strongest sense of

grammatical function in her group. Of her substitution miscues, 73.7% had identical grammatical function with the stimulus word, 23.7% were not the same, and 2.6% were indeterminate.

She also showed the greatest strength in her group as regards use of grammatical relationships although not as effectively as one would expect considering her strength in grammatical function. Fifty-six percent of her miscues showed strength, 15.5% partial strength, 22.4% weakness, and 6.0% overcorrection. In comprehension, 55.2% of her miscues showed no loss, 22.4% partial loss, and 22.4% loss. Her retelling score was 57.

Nancy's greater strengths in the use of graphic and phonemic cues and her ability to substitute words of the same grammatical function compared with her moderately effective use of the interrelated semantic and syntactic cues indicate that she needs to become aware of her miscues that are distorting meaning. Although she was able to recall the first two-thirds of the story quite well, she was not able to recall the concluding portion of the text. By learning to predict and anticipate meaning as well as grammatical function, Nancy will be reading more proficiently.

Nancy showed a shifting in reading strategies in the first third of the text and the remaining portions of

the text. She made her fewest miscues in the first portion with only 4.5 MPHW and seemed to use all cues most effectively here. Eighty-one and eight-tenths percent of her substitution miscues had high graphic and sound similarity and 86.4% of her substitution miscues resulted in words of the same grammatical function as the stimulus word. Of her total miscues, 57.1% resulted in no loss of comprehension and 62.9% exhibited strength in her use of grammatical relationships. As Nancy progressed to the middle portion of the text, she made 5.3 MPHW and her use of graphic and sound similarity cues and substitution of words of the same grammatical function decreased. Her Comprehension Pattern did not exhibit much change although she did show a greater weakness in her Grammatical Relationships Pattern. Nancy's use of cues in the last portion of the text was similar to her use of cues in the middle portion.

The miscue behavior of Nancy is summarized in Table 2.

Cathy's profile was based on a total of 136 miscues (6.2 MPHW). Eighty-three and one-tenth percent of her miscues were substitutions. Of all the readers in Group R, she was the most effective in using graphic cues. Seventy-one and seven-tenths percent of her substitution miscues had high graphic similarity, 20.4% had some

TABLE 2

MISCUE BEHAVIOR OF NANCY

	Portion of text			Total
	1/3	2/3	3/3	
Miscues	35	36	45	116
MPHW	4.5	5.3	6.0	5.3
Substitutions	---	---	---	65.5%
Graphic similarity				
High	81.8%	65.2%	64.5%	69.7%
Low	13.6	13.0	25.8	18.4
None	4.5	21.7	9.7	11.8
Phonemic similarity				
High	81.8	56.5	61.3	65.8
Low	9.2	26.1	29.0	22.4
None	9.2	17.4	9.7	11.8
Grammatical function				
Same	86.4	65.2	71.0	73.7
Different	13.6	34.8	22.6	23.2
Indeterminate	0.0	0.0	6.5	2.3
Grammatical relationships				
Strength	62.9	2.8	53.3	56.0
Partial strength	20.0	5.6	20.0	15.5
Weakness	17.0	30.6	20.0	22.4
Overcorrection	0.0	11.1	6.7	6.0
Comprehension				
No loss	57.1	50.0	57.8	55.2
Partial loss	29.9	27.8	17.8	22.4
Loss	20.0	22.2	24.4	22.4

similarity, and only 8.0% had no graphic similarity. Her use of sound cues was considerably lower although still in the effective range. Only 51.3% had high sound similarity, 33.6% had partial similarity, and 15.9% had no sound similarity.

Cathy's use of words having the same grammatical function as the textual word exhibited strength. Sixty-three and seven-tenths percent of her substitution miscues were of identical function, 28.3% were different, and 8.0% were indeterminate. Although she made only moderately effective use of phonemic cues, she was substituting words of the same part of speech indicating that the deficit in use of phonemic cues did not substantially interfere with her use of cues for grammatical function.

Cathy's Grammatical Relationships Pattern and Comprehension Pattern were similar to Nancy's. She showed moderately effective strength in both patterns. In grammatical relationships, 53.7% of her total miscues showed strength, 21.3% partial strength, 17.6% weakness, and 7.4% overcorrection. Cathy overcorrected totally acceptable miscues more than any other person in Group P. In comprehension there was 56.6% no loss, 22.1% partial loss, and 21.5% loss. Her retelling score of 72 was the highest in Group P and shows highly effective use of all reading strategies.

The difference between Cathy's retelling score and Comprehension Pattern may be that during some of the long pauses which she made while reading, she was probably making silent corrections. Other indications that she was silently correcting were that although she mispronounced words as cribe for crib and advise for advertise and did not correct these miscues in the oral reading, she did use the properly pronounced words in the retelling. Cathy was the only reader who related the humor of the story and was able to draw inferences from the information read.

Cathy's understanding of the story is reflected in her Comprehension Pattern and Grammatical Relationships Pattern. She was the only reader who showed increasingly greater strength in these categories as she progressed through the varying portions of the text. That she was using different strategies as she read is indicated by the varying profile in her use of phoneme-grapheme cues, substitutions of words of the same grammatical function, and changes in MPHW.

Table 3 presents Cathy's miscue behavior.

The profile of Linda is based on 143 miscues (6.5 MPHW) of which 74.1% were substitutions. Her use of graphic cues was the lowest of her group yet she, too, exhibited a good use of graphic and sound cues. Fifty-six and six-tenths percent of her substitution miscues had

TABLE 3

MISCUE BEHAVIOR OF CATHY

	Portion of text			Total
	1/3	2/3	3/3	
Miscues	41	42	53	136
MPHW	5.3	6.2	7.0	6.2
Substitutions	---	---	---	83.1%
Graphic similarity				
High	78.1%	65.8%	72.1%	71.7%
Low	15.6	28.9	16.3	20.4
None	6.3	5.3	11.6	8.0
Phonemic similarity				
High	43.8	50.0	60.5	52.2
Low	40.6	39.5	25.6	34.5
None	15.6	10.5	14.0	13.3
Grammatical function				
Same	81.3	60.5	53.5	63.7
Different	18.8	39.5	25.6	28.3
Indeterminate	0.0	0.0	20.8	8.0
Grammatical relationships				
Strength	46.3	54.8	58.5	53.7
Partial strength	26.8	14.3	22.6	21.3
Weakness	17.1	19.0	17.0	17.6
Overcorrection	9.8	11.9	1.9	7.4
Comprehension				
No loss	58.5	54.8	56.6	56.6
Partial loss	14.6	23.8	26.4	22.1
Loss	26.8	21.4	17.0	21.3

high graphic similarity, 18.9% partial similarity, and 24.5% no similarity. Her use of sound cues was similar to her use of graphic cues with 55.7% high sound similarity, 17.0% partial similarity, and 27.4% no similarity.

Sixty-eight and nine-tenths percent of her substitution miscues were of the same grammatical function as the stimulus word, 30.2% were different, and only 0.9% were indeterminate.

Although her use of semantic and syntactic cues was moderately effective, she was the weakest reader in her group as indicated by her Grammatical Relationships Pattern and Comprehension Pattern. In grammatical relationships, only 46.8% of her total miscues showed strength, 25.2% partial strength, 22.4% weakness, and 5.6% of her miscues were overcorrected. Forty-seven and six-tenths percent of her total miscues indicated no loss in comprehension, 20.3% partial loss, and 32.2% loss. In spite of her low comprehension profile relative to the others of Group P, Linda had a retelling score of 65.

The discrepancy between Linda's weaker Comprehension Pattern and retelling score may be due to her familiarity with the background of the story. Linda also made long pauses between correction attempts indicating that some silent correction may be taking place. Linda may be overrelying on semantic cues. Meaning was lost in the

improper substitutions of pronouns and conflicting number between subject and predicate. Linda needs to become aware that the language of the author has the same syntactical constraints as hers and that meaning is lost when she does not correct miscues which cause dissonance in syntax.

Linda used the interrelated cues most effectively in the first portion of the text. She made the least MPHW in this portion and scored highest in all categories. She had only 5.6 MPHW in this portion. Sixty-seven and six-tenths percent of her miscues had high graphic similarity and 64.7% had high sound similarity. Seventy-six and five-tenths percent of her substitution miscues were of the same grammatical function as the stimulus word. Her Grammatical Relationships Pattern showed 57.8% strength and 53.3% of her miscues resulted in no loss of comprehension.

As Linda progressed to the second portion of the text, her strategies changed. She made 7.2 MPHW which is the greatest number she made in any portion. Her use of the graphic and sound cues diminished as did her ability to substitute words of the same grammatical function (59.0%). Accordingly she exhibited less strength in utilizing grammatical relationships but her loss of comprehension did not decrease significantly (49.0%). As

Linda progressed to the last portion, there were indications that she was more concerned with the word than with meaning. She made fewer miscues than in the second section (6.5 MPHW). She began to use graphic and phonemic cues and substituted words of the same function as effectively as in the first section, but only 40.8% of her miscues showed no loss of comprehension and only 42.9% showed strength in grammatical relationships.

Table 4 reports Linda's miscue behavior.

Remedial Group--Individual Analyses

Linn's profile is based on 185 miscues (8.4 MPHW) with 70.3% of them being substitution miscues. This was the greatest number of miscues made in her group. She used graphic and sound cues less effectively than anyone else in her group with only 44.6% of her miscues having high graphic and sound similarity to the stimulus word. Some graphic similarity to the stimulus word was observed in 23.8% of the miscues and some sound similarity in 26.7% of them. Thirty-one and five-tenths percent had no graphic similarity and 29.2% had no sound similarity.

Linn did exhibit strength in substituting words of the same grammatical function as the textual word. Seventy-one and five-tenths percent of her miscues had the same grammatical function, 27.7% were different, and 0.8% were indeterminate.

TABLE 4

MISCUE BEHAVIOR OF LINDA

	Portion of text			Total
	1/3	2/3	3/3	
Miscue	45	49	49	143
MPHW	5.7	7.2	6.5	6.5
Substitutions	---	---	---	74.1%
Graphic similarity				
High	67.6%	41.0%	63.6%	56.6%
Low	11.8	25.6	18.2	18.9
None	20.6	33.3	18.2	24.5
Phonemic similarity				
High	64.7	38.5	66.7	55.7
Low	14.7	18.0	18.2	17.0
None	20.6	43.6	15.2	27.4
Grammatical function				
Same	76.5	59.0	72.7	68.9
Different	23.5	38.5	27.3	30.2
Indeterminate	0.0	2.6	0.0	0.9
Grammatical relationships				
Strength	57.8	40.8	42.9	46.8
Partial strength	22.2	24.5	28.6	25.2
Weakness	16.6	24.5	26.5	22.4
Overcorrection	4.4	10.2	2.0	5.6
Comprehension				
No loss	53.3	49.0	40.8	47.5
Partial loss	20.0	18.4	22.4	20.3
Loss	26.7	32.6	36.7	32.2

The Grammatical Relationship Pattern of Linn was moderately effective with 56.8% strength, 9.2% partial strength, 20.5% weakness, and 13.5% indicated overcorrection. Linn overcorrected miscues more than anyone in her group. Her Comprehension Pattern was moderately effective with 65.9% no loss, 15.2% partial loss, and 18.9% loss. Her retelling score was 58.

Linn's relatively low use of graphic and phonemic cues should only be considered in relation to her grammatical strengths. She substituted words of the same grammatical function 71.5% of the time but her Grammatical Relationship Pattern showed that she had difficulty in interrelating the semantic and syntactic cueing systems. Only 55% of her miscues exhibited strength. In examining her repetition miscues, it was apparent that Linn frequently substituted pronouns incorrectly, thereby losing meaning. In order to correct this problem, better use of graphic cues should be taught but this should be done in the contextual setting where semantic cues could also be used. Her retelling score also indicated a loss of meaning as the story progressed. Linn could recall events earlier in the text but could not recall the conclusion correctly. She was also unable to draw inferences. It is, therefore, important for Linn to learn to correct her miscues when loss of meaning occurs.

In examining Linn's use of cues over varying portions of the text, an increase in MPHW was made from 7.0 in the first portion to 7.7 in the middle portion and 10.5 in the final portion. With this increase in MPHW there was a decrease in her Comprehension Pattern with a range of 74.1% in the beginning portion, 67.3% in the middle portion, and 59.5% in the last portion. This further supports the conclusion that there was a loss of meaning in reading as Linn progressed through the text. Interestingly, although Linn's use of graphic and phonemic cues was relatively constant throughout the text, she showed very marked strength in grammatical function in the middle section of the text. In the first section, 70% of her miscues were of the same function as the textual word, in the second section, 90% were the same, and in the last section only 62.7% were identical.

Table 5 reports Linn's miscue behavior.

Lisa's profile is based on 181 miscues (8.2 MPHW), 74.0% of which were substitutions. Lisa made effective use of graphic cues. Fifty-eight and two-tenths percent of her substitution miscues resulted in high graphic similarity, 17.9% some similarity, and 23.9% no similarity. Sound similarity was used somewhat less effectively with 52.2% high similarity, 22.4% some similarity, and 25.4% no similarity.

TABLE 5

MISCUE BEHAVIOR OF LINN

	Portion of text			Total
	1/3	2/3	3/3	
Miscues	54	52	79	185
MPHW	7.0	7.7	11.0	8.4
Substitutions	---	---	---	70.3%
Graphic similarity				
High	45.0%	45.2%	44.1%	44.6%
Low	27.5	16.1	25.4	23.8
None	27.5	38.7	30.5	31.5
Phonemic similarity				
High	47.5	48.4	40.7	44.6
Low	25.0	19.4	30.5	26.2
None	27.5	32.3	28.8	29.2
Grammatical function				
Same	70.0	90.3	62.7	71.5
Different	30.0	9.7	35.6	27.7
Indeterminate	0.0	0.0	1.7	0.6
Grammatical relationships				
Strength	59.3	55.8	55.7	56.8
Partial strength	9.3	11.5	7.6	9.2
Weakness	16.7	15.4	26.6	20.5
Overcorrection	14.8	17.3	10.1	13.5
Comprehension				
No loss	74.1	67.3	59.5	67.0
Partial loss	11.1	15.4	17.7	14.1
Loss	14.8	17.3	22.8	18.9

Her substitution of words of the same grammatical function was the highest in her group with 73.1% having identical function, 23.9% different, and 3.0% indeterminate.

Like Linn, Lisa's use of grammatical relationships exhibited some weakness with 49.7% strength, 16.6% partial strength, 21.0% weakness, and 12.7% indicated overcorrection. Lisa's Comprehension Pattern was moderately effective with 56.6% showing no loss, 18.8% partial loss, and 34.9% loss. Lisa's retelling score of 65 was the highest in her group.

Lisa's retelling showed that she has to learn to separate significant from insignificant information. She was able to recall many events in great detail but could not tie the story together and lost meaning as she progressed through the text. Lisa's regressions for correction were shorter than those of the other readers and she made many anticipation regressions frequently involving one word. This, coupled with the observation that as she came to the last section of the text she began to fingerpoint, indicates that Lisa is at times a word-by-word reader.

Lisa's performance as she progressed through the varying portions of the text shows that she exhibited her greatest strength in the middle portion of the text.

Although she made her greatest number of MPHW in this section (8.0 MPHW were made in the first portion, 8.4 were made in the middle portion, and 8.4 were made in the last portion), her use of the interrelated semantic and syntactic cues was the most effective. Her miscues showed 66.7% no loss in her Comprehension Pattern and 63.2% strength in her Grammatical Relationships Pattern.

The last section of the text yields further information that Lisa was reading word by word. Although her substitution miscues indicated that she was using graphic and sound cues most effectively in this section and these miscues were of the same grammatical function more than in any other section of the text, her Comprehension Pattern and Grammatical Relationships Pattern were much lower than in any other portion of the text. Forty-four and four-tenths percent of her miscues resulted in no loss of comprehension and only 36.5% resulted in strength in using grammatical relationships. In the last portion of the text, Lisa was using graphic and sound cues to a far greater extent that she was using semantic and syntactic cues.

The miscue behavior for Lisa is summarized in Table 6.

Margaret's reading generated 158 miscues (7.3 MPHW). Seventy and two-tenths percent of these were

TABLE 6

MISCUE BEHAVIOR OF LISA

	Portion of text			Total
	1/3	2/3	3/3	
Miscues	61	57	63	181
MPHW	8.0	8.4	8.4	8.2
Substitutions	---	---	---	74.0%
Graphic similarity				
High	59.6%	53.7%	60.9%	58.2%
Low	14.9	19.5	19.6	17.9
None	25.5	26.8	19.6	23.9
Phonemic similarity				
High	44.7	48.8	63.0	52.2
Low	21.3	24.4	21.7	22.4
None	34.0	26.8	15.2	25.4
Grammatical function				
Same	76.6	63.4	78.3	73.1
Different	19.1	36.6	17.4	23.9
Indeterminate	4.3	0.0	4.3	3.0
Grammatical relationships				
Strength	50.8	63.2	36.5	49.7
Partial strength	14.8	8.8	25.4	16.6
Weakness	21.3	15.8	25.4	21.0
Overcorrection	13.1	12.3	12.7	12.7
Comprehension				
No loss	59.0	66.7	44.4	56.4
Partial loss	21.3	17.5	17.5	18.8
Loss	19.7	15.8	38.1	24.9

substitution miscues. Graphic and sound cues were used equally well. Fifty-eight and five-tenths percent of her miscues had high graphic similarity, 15.3% had some similarity, and 26.1% had no similarity. Her use of sound cues showed 55.8% high similarity, 20.7% some similarity, and 23.4% no similarity.

Sixty-eight and four-tenths percent of her substitution miscues were of the same grammatical function as the stimulus word, 27.9% were different, and 3.6% were indeterminate.

Margaret's Comprehension Pattern and Grammatical Relationships Pattern were the lowest in her group although still moderately effective. In the Grammatical Relationships Pattern, 45.6% of her total miscues showed strength, 13.9% partial strength, 33.5% weakness, and 7.0% indicated overcorrection. Forty-nine and four-tenths percent of her miscues caused no loss of comprehension, 17.1% partial loss, and 33.5% loss. Margaret's retelling score of 48 was the lowest in both groups.

Margaret's use of graphic and sound cues is very good yet she is the weakest reader in her group in that she does not use semantic and syntactic cues as effectively. Her lower no loss score in comprehension, less effective use of grammatical relationships, and low retelling score indicate that there are many miscues

causing loss of information. Margaret needs to realize that the specific purpose of reading is for meaning and that by using correction strategies, when loss of meaning occurs, she could become a more effective reader.

Further indication that Margaret is losing meaning and not using proper correction strategies is that her most effective reading took place in the first portion of the text. All of the interrelated cues were being used effectively. As Margaret progressed through the text, she generated an increasingly greater number of MPHW and at the same time, more miscues resulted in loss of comprehension. In the first portion, three times as many miscues resulted in no loss of comprehension as in loss; in the middle section, one and a half times as many miscues resulted in no loss in comprehension as in loss; and in the last section, approximately an equal number of her miscues resulted in no loss of comprehension as in loss of comprehension.

The miscue behavior of Margaret is reported in Table 7.

Group Means for the Total Text

Table 8 summarizes the mean miscue categories for the three proficient and the three remedial readers. All figures based on miscues for the total text will be discussed below. The section following will analyze the data

TABLE 7

MISCUE BEHAVIOR OF MARGARET

	Portion of text			Total
	1/3	2/3	3/3	
Miscues	47	43	68	158
MPHW	6.1	6.3	9.0	7.3
Substitutions	---	---	---	70.2%
Graphic similarity				
High	65.6%	46.9%	61.7%	58.5%
Low	12.5	18.8	14.9	15.3
None	21.9	34.4	23.4	26.1
Phonemic similarity				
High	62.5	43.8	59.6	55.8
Low	15.6	25.0	21.3	20.7
None	21.9	31.2	19.2	23.4
Grammatical function				
Same	68.8	59.4	74.5	68.4
Different	26.0	40.6	21.3	27.9
Indeterminate	6.3	0.0	4.3	3.6
Grammatical relationships				
Strength	55.3	39.5	42.6	45.6
Partial strength	10.6	16.3	14.7	13.9
Weakness	31.9	37.2	32.4	33.9
Overcorrection	2.1	7.0	10.3	7.0
Comprehension				
No loss	66.0	51.2	36.8	49.4
Partial loss	10.6	14.0	23.5	17.1
Loss	23.4	34.9	39.7	33.5

TABLE 8

MEAN MISCUE BEHAVIOR OF GROUP R AND GROUP P OVER VARYING PORTIONS OF THE TEXT AND THE TOTAL TEXT

	Group Remedial				Group Proficient			
	Portion of text			Total	Portion of text			Total
	1/3	2/3	3/3		1/3	2/3	3/3	
Total miscues	54.0	50.6	70.0	175	40.3	41.3	49.0	132
MPHW	7.0	7.5	9.3	8.0	5.2	6.2	6.5	5.7
Substitutions	---	---	---	71.5%	---	---	---	74.2%
Graphic								
High	56.7%	48.6%	55.6%	53.8%	75.8%	57.3%	66.7%	66.0%
Low	18.3	18.1	20.0	19.0	13.7	22.5	20.1	19.2
None	25.0	33.3	24.5	27.2	10.5	20.1	13.2	14.8
Phonemic								
High	51.6	47.0	54.4	50.9	63.4	48.3	62.8	57.9
Low	20.6	22.9	24.5	23.1	21.5	24.3	24.6	24.6
None	27.8	30.1	20.1	26.0	15.1	23.8	12.9	17.5
Grammatical function								
Same	71.8	71.0	71.8	71.0	81.4	61.6	65.7	68.8
Different	24.7	29.0	24.8	26.5	18.6	37.6	25.2	27.4
Indeterminate	3.5	0.0	3.4	2.3	0.0	0.8	9.1	3.3

(continued)

TABLE 8 (continued)

	Group Remedial				Group Proficient			
	Portion of text			Total	Portion of text			Total
	1/3	2/3	3/3		1/3	2/3	3/3	
Grammatical relationships								
Strength	55.1	52.8	44.9	50.7	55.7	49.5	51.6	52.2
Partial strength	11.6	12.2	15.9	13.2	23.0	14.8	23.7	20.7
Weakness	23.3	22.8	28.1	25.0	16.9	24.7	21.2	20.8
Overcorrection	10.0	12.2	11.0	11.1	4.7	11.1	3.5	6.3
Comprehension								
No loss	66.4	61.7	46.9	57.2	56.3	51.3	51.7	53.1
Partial loss	14.3	15.6	19.6	17.0	21.5	23.3	22.2	22.3
Loss	19.3	22.7	33.5	25.8	24.5	25.4	26.0	25.3

of miscues over the varying portions of the text.

Every reader in Group R made more miscues than did anyone in Group P with the mean number of miscues for Group R being 175 as compared to 132 for Group P. The percentage of miscues that were substitutions was essentially equal in both groups (Group R, 71.5%; Group P, 74.0%).

A comparison of utilization of phonemic (sound) cues and graphic cues within the groups indicates that the R group did not rely on one of these cueing systems in preference to the other while the P group showed moderately greater strength in use of graphic cues than of phonemic cues. In addition, the P group showed greater strength than the R group in the use of both sound and graphic cues.

Very little difference was found between the groups' use of syntactic cues as indicated by the percentages of their substitutions showing relative strength of grammatical function. Approximately 70% of the substitutions made by both groups had the same grammatical function as the stimulus words.

The scoring of miscues for grammatical relationships showed the P group as having slightly greater strength than the R group in this respect. Seventy-three percent of the P group's substitutions as compared to 64%

of the R group's substitutions showed full or partial strength for grammatical relationships. Both groups showed a 25% loss as regards comprehension and, conversely, a similar level of strength on this measure. Interestingly, in spite of only a small difference in the groups on the measure of grammatical function and comprehension, the P group gave a slight but discernibly stronger indication of comprehension as judged by their retelling scores (Table 9).

Group Means for the Varying Portions of the Text

In order to determine whether the subjects' profiles were uniform or tended to show any patterns of change during the course of oral reading, the selection was divided into three equal parts prior to scoring. This breakdown is shown in Table 8.

The mean number of MPHW made by both groups was found to increase with each succeeding segment of the text with Group R showing a greater tendency than Group P in this respect. Group R had a greater mean number of miscues than Group P in all three sections. Both groups showed lower graphic and phonemic acceptability of substitutions in the second segment than in the first and third segments. Here, too, the greater strength of the P group was observed in all three sections.

TABLE 9

RETELLING SCORES FOR
GROUP R AND GROUP P

Group R	Score	Group P	Score
Linn	58	Nancy	57
Lisa	65	Cathy	72
Margaret	48	Linda	65

The measurement of grammatical identity of substitutions with stimulus words (grammatical function) was found to reveal a difference between the groups. The R group was exceedingly consistent with 70 to 71% of their substitutions in each third of the text having the same grammatical function as the text words. The P group, on the other hand, showed a marked decline from 81% in the first segment to 62% and 66% in the second and third segments, respectively. It should be noted that the mean grammatical function scores for the whole test was the same for both groups.

On the measure of full strength of grammatical relationships, both groups exhibited a gradual decline after the first third of the reading. The combined scores of full and partial strength also showed a slight decline as the test progressed with Group R having its lowest score in the last third and Group P showing a marked dip in the second third.

Group R consistently made 10-12% overcorrections, whereas Group P made 4.7, 11.1, and 3.5% in the three portions of the text.

Although the overall mean test score for no loss of comprehension was higher for Group R than Group P, the retarded readers showed a marked and steady decrease on this score as the test progressed. This was accompanied

by a steady increase in full loss of comprehension. The P group, after showing a slight decline in the no loss category following the first segment, demonstrated a high level of constancy for all comprehension scores throughout the test.

CHAPTER V

SUMMARY, CONCLUSIONS, AND DISCUSSION

Summary

The purpose of this study was to determine through the use of the RMI whether qualitative differences in strategies used during oral reading could be discerned between proficient and retarded readers that had been judged to be reading at the same level by the Gates-MacGinitie Reading Test.

Several aspects of reading behavior, as studied by analysis of miscues, seemed to differ between the retarded and proficient readers. As has been mentioned earlier, the small number (three) of subjects in each group precludes a statistical comparison of their performances. The following discussion of the observations made also does not give adequate weight to the considerable variability observed within the groups.

Discussion and Conclusions

The most obvious difference between the groups was that Group R made substantially more miscues than Group P. This is of some interest in light of the fact that the members of both groups had been determined to have equal

reading proficiency on the basis of a standardized silent reading test, the Gates-MacGinitie. In addition, although both groups made increasingly more miscues as they proceeded through the oral reading, the magnitude and rate at which this increase occurred was conspicuously greater among the retarded readers. The increased commission of miscues by the R group was accompanied by a decline in grammatical relationship and comprehension scores and an increase in observable signs of word-by-word reading such as finger-pointing, single-word regressions, and overcorrection. These results, along with the observation that there was no decrement in strength of graphic, phonemic, and grammatical function as the Group R miscue rate increased, suggest that these readers, when possibly fatigued or frustrated, may rely more heavily on the simpler, mechanical strategies (graphic, phonemic, and grammatical function) than on strategies based on more sophisticated semantic and syntactic cueing systems. This may be so in spite of the data indicating that they do not use the less complex cueing systems as efficiently as the P group or any more effectively than they themselves used the more complex strategies during the first third of the test. The much more gradual increase in miscues made by the P group in successive segments of the oral reading was not accompanied by any striking changes in scores for

grammatical relationship or comprehension. There was, however, an irregular decrement in the use of grammatical function and phoneme-grapheme cues.

The general increase in miscues and decrease in grammatical relationships of the miscues observed in successive stages of the oral reading in this study do not agree with several reports in the literature. Menosky (1971) observed that fourth-grade readers made less miscues and the ones they made had greater syntactic acceptability in the last three quarters of an orally read passage as compared to the first quarter.

Y. Goodman (1967), working with first-graders, observed higher miscue rates by the slower readers with shorter passages than longer ones. She concluded that the short passages did not allow these students to take adequate advantage of cues from the story-line, style of the author, and greater likelihood of redundancy in longer passages. The above situation was not true of the more proficient readers who made miscues at a greater rate in long passages than in short ones. This apparent paradox may be explained by the following possibilities. The slower readers, in progressing from short texts to longer ones, were going from passages heavy with "primerese" and light on content of interest to passages of greater interest written in language more similar to their own. The

average readers, on the other hand, when progressing from shorter to longer passages, were confronted with texts that were primarily of greater difficulty (new vocabulary and more complex sentence structure).

Differences between the groups, such as the greater number of miscues made by the R group and that group's greater consistency in grammatical function scores, may reflect some aspects of the classroom activities of the two groups. For instance, the P group spends more time reading aloud in their third-grade classrooms than does the R group in fifth- and sixth-grade classrooms. In addition, the R group, as a function of the level of language arts lessons in their classrooms, may be more consciously aware of parts of speech than the third-graders.

As has been mentioned earlier, there were several aspects of the R group's performance indicative of their focus being centered on single words as opposed to clauses or phrases. The R group overcorrected 11.1% of their miscues (as compared to 6.3% for the P group). Excessive overcorrection has been observed to occur more commonly among "low" first- and fourth-grade readers as compared to "high" readers in the same grades (Clay, 1968; Y. Goodman, 1967; Menosky, 1971; Weber, 1970a) and is regarded as characteristic of word-by-word readers (Burke, 1973;

Y. Goodman & Burke, 1972a; Menosky, 1971). In addition, the R group appeared to make more single-word regressions than the P group and were more prone to exhibit finger-pointing. These, too, are behaviors associated with regard of the single word as the reading unit of concern (Y. Goodman & Burke, 1972a).

Another observation in this study that does not support previous findings concerns the relative use of graphic and phonemic cues. Although the P group showed greater strength than the R group, neither group showed any preference for one cueing system over the other. Numerous studies have reported greater utilization of graphic cues than phonemic cues by readers at various grade levels (Burke, 1973; Goodman & Burke, 1969; Y. Goodman, 1967; Menosky, 1971).

The general weakness in retelling performance for both groups in this study is not unlike the finding of Menosky (1971), that all of her subjects (grades 2, 4, 6, and 8) were weak in making inferences and drawing conclusions during retelling. In fact, this has been a general finding of all the studies that have used either the RMI or the Goodman Taxonomy. The generality of this finding may be that the passages used for miscue analysis are, by design, selected on the basis that they are sufficiently difficult to generate an adequate number of miscues.

Faced with this level of challenge to their reading abilities, the subjects may not be able to give very much attention to story-line, continuity, character development, or subplots.

In conclusion, both groups made at least moderate use of all cueing systems but differences between both individuals and groups lend credence to the possibility of the use of the RMI as a diagnostic tool.

Suggestions for Further Research

There are sufficient indications from the present study that further examination of the RMI as a diagnostic tool is warranted. Several experimental designs would be needed to verify and/or enlarge on the findings presented here. The present design should be replicated with a larger and more heterogeneous sample if generalizations about differences between retarded and proficient readers are to be made.

In order to determine whether the RMI is sufficiently broad and sensitive as a diagnostic tool, a study comparing the RMI and the Goodman Taxonomy as applied to retarded readers would be useful.

If either the RMI or the Goodman Taxonomy is to be regarded as a useful diagnostic tool, longitudinal studies that include efforts directed at specific remediation of individual weaknesses will have to be done.

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APPENDIX B

RETELLING SHEETS

"My Brother Is a Genius" from Adventures Now and Then

Character Analysis

Recall--15 points	Development--15 points
Author--older brother	Bright, high school student who studies while baby-sitting for his baby brother.
Andrew	Precocious baby who is a genius.
Mother Father	Proud parents of Andrew and the author.
Mr. Barnaby	Very busy and nervous TV executive.
Miss Brown	Mr. Barnaby's secretary. Keeps telling everyone that Mr. Barnaby is busy.

Theme--20 points

Things don't always turn out as you expect them to.

Plot--20 points

1. The older brother thinks of an idea for an original English project involving his baby brother.
2. The older brother presents his plan and manipulates things so that Andrew is used in the advertisement.
3. Complications develop. Will the older brother be able to successfully use Andrew in his project!

Events--30 points

1. The older brother is forced to baby sit for Andrew.
2. The older brother reads aloud the words for his English test. Andrew falls asleep while he reads words from the dictionary that begin with S.
3. While Andrew is sleeping, the older brother gets an idea for an original project which he hopes will get him an award in his English class.

4. The next day, the older brother goes to school and calls the local television station during lunch-time.

5. After school, he visits Mr. Barnaby in his office and presents his idea of using a typical baby for an advertisement.

6. The older brother persuades Mr. Barnaby to use Andrew as the typical baby.

7. Mr. Barnaby decides to visit Andrew at his home to see if he is typical.

8. Mr. Barnaby visits the home that evening and decides that Andrew is indeed the typical baby.

9. Plans are made with the parents to be at the television studio a week from Saturday to do a "live" commercial.

10. The older brother continues to study his word definitions aloud for his English test while baby sitting for Andrew. He feels that this is a good way to make time pass quickly.

11. The day of the program arrives but the older brother discovers that Andrew is a genius. Andrew can say "big" words.

12. The big brother tries to locate Mr. Barnaby by phone to inform him but is unsuccessful.

13. The family arrives at the station and is rushed into the studio.

14. Andrew is put into a crib and the program is about to start when Mr. Barnaby discovers that Andrew is a genius.

15. The older brother gets a dictionary and puts Andrew to sleep by reading words beginning with S.

16. The show goes on.

17. Andrew wakes up at the end of the program.

18. Mr. Barnaby herds the family out of the studio onto the street giving Father a check.

19. Mother is proud that Andrew is not typical and Father appreciates the check which will be used for Andrew's college education.

20. The older brother feels quite certain that he will win the prize for the most original project.

APPENDIX C

SAMPLE SCORING SHEET

control room, and there was a blare of music. At first I thought the noise would wake Andrew, but he went on sleeping. The S's had done it.

I don't remember what Mr. Barnaby said during the televised program. But I remember the cameras moving close to the crib and Mr. Barnaby bending over and saying soothing things to Andrew--but not too loudly. There were tears in Mr. Barnaby's eyes as he finished his speech. His voice was swallowed up in a loud blare of "Rock-a-by Baby," which woke Andrew, but by then the program was over, anyway.

Mr. Barnaby took us out of the studio clear to the front door, patting his face with a large handkerchief. When we were out on the street, I saw that my mother

was smiling broadly. "It serves him right for calling a child of mine typical," she said.

My father was folding the check Mr. Barnaby had given him. "This will make a nice start on paying for Andrew's college education," he said. "Though I'm not sure he needs one," he added.

APPENDIX D

SAMPLE CODING SHEET

Reader Linda Date 11/6/72 Selection My Brother Is a Genius
Teacher Class School

Line	Miscue Number	Reader	Text	DIALECT 1	INTONATION 2	GRAPHIC SIMILARITY 3			SOUND SIMILARITY 4			GRAMMATICAL FUNCTION 5		
						Y	P	N	Y	P	N	Y	P	N
612-76		But	Be				✓			✓				✓
614-77		— I	•		✓									
615-78		I	he					✓			✓	✓		
701-79		wink	week			✓			✓			✓		
703-80		my	the					✓						✓
703-81		Then	the			✓				✓	✓			✓
705-82		I	he					✓			✓	✓		
708-83		the	he				✓				✓			✓
713-84		One	The				✓				✓			✓
714-85		he	we				✓			✓		✓		
716-86		a	the					✓	✓			✓		
718-87		pointing	pointed			✓			✓			✓		
718-88		Philosophigal $	Philosophical			✓			✓			✓		
718-89		the	and					✓			✓			✓
720-90		distinstly $	distinctly			✓			✓			✓		
722-91		is	isn't											
724-92		Herizontal	Horizontal			✓			✓			✓		
725-93		—	•		✓									
726-94		•	)		✓									
801-95		a	an				✓				✓	✓		
809-96		said	asked				✓				✓	✓		
810-97		the	this				✓			✓				✓
814-98		the	one					✓			✓			✓
815-99		clearing	glaring			✓			✓			✓		
815-100		in	and					✓			✓			✓
			COLUMN TOTAL		3	7	7	7	7	4	10	12	0	9
			PERCENTAGE											
			QUESTION TOTAL			21			21			21		

3/3

Text	SIMILARITY 1	INTONATION 2	GRAPHIC SIMILARITY 3			SOUND SIMILARITY 4			GRAMMATICAL FUNCTION 5			CORRECTNESS 6	GRAMMATICAL ACCEPTABILITY 7	SEMANTIC ACCEPTABILITY 8	MEANING CHANGE 9									
			Y	P	N	Y	P	N	Y	P	N					No Loss	Partial Loss	Loss	Strength	Partial Strength	Weakness	Overcorrection		
e		✓		✓			✓				✓	N	P	P	Y	✓		✓	✓		✓			
		✓			✓			✓	✓			Y	P	P	Y	✓			✓					
eek			✓			✓			✓			Y	P	P	Y	✓			✓					
ne					✓			✓			✓	Y	P	P	Y	✓						✓		
he			✓			!	✓				✓	Y	P	P	Y	✓						✓		
					✓			✓	✓			Y	P	P	Y	✓						✓		
e				✓				✓			✓	Y	P	P	Y	✓			✓					
e				✓				✓			✓	Y	P	P	Y		✓					✓		
he				✓			✓		✓			Y	P	P	Y	✓		✓				✓		
inted			✓		✓	✓		✓	✓			Y	P	P	Y	✓						✓		
hilosophical			✓			✓			✓			Y	P	P	Y	✓				✓		✓		
nd					✓			✓			✓	Y	P	P	Y			✓				✓		
stinctly			✓			✓			✓			Y	P	P	Y		✓	✓		✓				
in t												Y	P	P	Y		✓		✓					
orizontal			✓			✓			✓			Y	P	P	Y		✓		✓					
		✓										Y	P	P	Y		✓		✓					
		✓										Y	P	P	Y		✓		✓					
n				✓				✓	✓			Y	P	P	N	✓					✓			
sked				✓				✓	✓			Y	P	P	Y	✓			✓					
his				✓			✓				✓	Y	P	P	N	✓			✓					
e					✓			✓			✓	Y	P	P	Y	✓			✓					
ring			✓			✓			✓			Y	P	P	Y			✓		✓				
nd					✓			✓			✓	N	P	P	Y			✓			✓			
COLUMN TOTAL		3	7	7	7	7	4	10	12	0	9	COLUMN TOTAL				14	5	6	11	3	7	4		
PERCENTAGE												PERCENTAGE												
QUESTION TOTAL			21			21			21			PATTERN TOTAL				25			25					

A PSYCHOLINGUISTIC COMPARISON OF ORAL READING BEHAVIOR OF PROFICIENT AND REMEDIAL READERS

AN ABSTRACT OF A THESIS

SUBMITTED TO THE FACULTY

OF THE GRADUATE SCHOOL OF EDUCATION

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RUTGERS UNIVERSITY

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BY

DEBORAH P. BRODY

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OF

MASTER OF EDUCATION

COMMITTEE CHAIRMAN: DR. MARTIN KLING

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ABSTRACT

This study used the Reading Miscue Inventory (RMI), an abbreviated derivation of the Goodman Taxonomy of Reading Miscues, to examine and compare the reading strategies used by proficient (Group P) and retarded (Group R) readers, both of which were reading at the fourth-grade level. The intent of the study was to determine whether qualitative differences in the reading strategies, of these two groups of three students, could be discerned by the RMI.

As was expected, differences between groups were observed and described although the size of the groups was too small to permit statistical evaluation of these differences.

Group R made more miscues and showed less efficient use of graphic and phonemic cues. During the reading of the first third of the text, the R group showed strength in the use of syntactic and semantic cues equal to or greater than that of the P group. In the successive segments of the text, the R group's use of these cueing systems declined markedly, whereas the P group's use of these cues was relatively constant throughout the reading. The possible implications of these findings are discussed.

The differences observed between groups and

individuals indicate that the RMI deserves development as a diagnostic tool with utility in the area of reading remediation.

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1958-1959:	Fifth-Grade Teacher School Number 35 Jersey City, New Jersey
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COURSE WORK FOR MASTER'S DEGREE IN READING

		Instructor
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Courses in Special Field (Reading)		
299:561	Foundations of Reading	Fry and Mountain
299:564	Remedial Reading	Fry
299:565	Remedial Reading Laboratory	Zelnick
299:566	Seminar in Reading Research and Supervision	Kling
299:599	Master's Thesis Research	Kling
Courses in Education Outside Special Field		
290:501	Introduction to Educational Tests and Measurements	Geyer
290:514	Introduction to Adolescent and Young Adult	Montare
290:525	Psychology of Exceptional Children	Holowinsky
290:540	Introduction to Learning	Cox
610:581	Reading Materials for Children	Van Orden
Purdue University, September 1967-June 1968		
M.A. 598	Number Systems	Jensen
M.A. 523	Foundations of Remedial Reading	Ray