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An Investigation Into The Reading Strategies of Grade One
Children

University — Université

University of Alberta

Degree for which thesis was presented — Grade pour lequel cette thèse fut présentée

Master of Education

Year this degree conferred — Année d'obtention de ce grade	Name of Supervisor — Nom du directeur de thèse
1982	Dr. F. MacCannell

Date	Signature
October 12, 1982	Pat N. March.

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THE UNIVERSITY OF ALBERTA

AN INVESTIGATION INTO THE READING STRATEGIES OF
GRADE ONE CHILDREN

by

Ⓒ PATRICIA A. MARCH

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF EDUCATION

DEPARTMENT OF ELEMENTARY EDUCATION

EDMONTON, ALBERTA

FALL, 1982

THE UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR: PATRICIA A. MARCH

TITLE OF THESIS: AN INVESTIGATION INTO THE READING STRATEGIES

OF GRADE ONE CHILDREN

DEGREE FOR WHICH THESIS WAS PRESENTED: MASTER OF EDUCATION

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fulfilment of the requirements for the degree of MASTER OF

EDUCATION in DEPARTMENT OF ELEMENTARY EDUCATION.

Frances M. Mac Connell
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Supervisor

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Date: _October 12, 1982_

This thesis is dedicated to my mother and in memory of my father, whose love, encouragement and support made this document possible.

ABSTRACT

This study used an analysis of oral reading miscues to attempt to identify the strategies beginning readers use to process print information. Categories were devised to evaluate the degree to which the graphophonic, syntactic and semantic cues were utilized. As well, the level of reading proficiency was investigated to determine whether this variable influences the strategies young readers use.

Sixteen proficient and sixteen less proficient readers selected from classrooms in the Edmonton Public School system participated in the study. Instructional reading levels of the children were determined by the Diagnostic Reading Scales test (Spache).

The data for the study were gathered by having the sample population read individually a story passage at their instructional level. Miscues produced by each child were recorded and coded later using a modified version of the Reading Miscue Inventory. The data were then analyzed both descriptively and statistically.

The findings from this study showed that the sample of young readers relied heavily on the graphophonic and syntactic cues found in print. Less reliance was placed on the semantic cues. Miscues often looked and sounded like the text and were structurally acceptable, however the meaning of the sentence was not maintained.

Significant differences occured in the degree to which the syntactic and semantic cues were used when proficiency was studied. Proficient readers made more miscues which were syntactically and semantically acceptable to the text than did less proficient readers. Their rate of correction for unacceptable miscues was also significantly high,

indicating they monitored their responses for acceptable language and meaning.

ACKNOWLEDGEMENTS

Sincere thanks are extended to Dr. F. MacCannell, thesis supervisor, for her kind assistance, friendly encouragement and generous time throughout the preparation and completion of this thesis.

Appreciation is also extended to Dr. L. Marckworth Stanford and Dr. D. Dillion, committee members, for their willingness to read this study and their helpful suggestions throughout its various stages.

Also I would like to thank the principals, teachers and children who participated in the study. Without their co-operation this research would not have been possible.

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CHAPTER I

INTRODUCTION

In the late 1960's Kenneth Goodman termed reading as a "psycholinguistic guessing game" in which he conceptualized reading as a selective language process by which the reader attempts to reconstruct the author's message (K. Goodman, 1970, p. 260). Meaning resides, not in the print, but in the mind of the reader while attempting this reconstruction. In doing so, the reader brings the sum total of his past experiences, plus his background knowledge of language to the task, in order to guess what he thinks is the author's message. "What appears to be intuitive in any guessing is actually the result of knowledge so well learned that the process of its application requires little conscious effort" (K. Goodman, 1970, p. 264). Efficient reading does not result from precise perception and identification of all elements on the printed page (letters, words, sentences, punctuation marks), but from skill in selecting the fewest and most productive available language cues necessary to produce guesses (predictions) which succeed in constructing the intended meaning. In order to sample the print effectively a reader utilizes the information of the three cueing systems inherent in written language. These are: (1) graphophonic information, including knowledge of letters, sounds and sound-symbol relationships; (2) syntactic information, including grammatical structures such as

1

sentence patterns and pattern markers; and (3) semantic information, including relationships and concepts within a language that establish meaning.

A reader, who efficiently samples the three language cue systems in order to select the fewest and most productive cues necessary for generating the intended meaning, must also monitor his reading, in order to confirm whether or not his predictions are appropriate. Since the primary task in reading is to arrive at an acceptable reconstruction of the author's message, it is essential that an efficient reader confirm or disconfirm his predictions by asking himself "Does it sound like language?", "Does it make sense?". If the reader disconfirms his prediction, he must then correct or alter his prediction until he is able to produce an appropriate response. The strategies of predicting, confirming and correcting, and the utilization of the graphophonic, syntatic and semantic language cues have been the focus of numerous studies (Carson, 1980; Clay, 1968; Y. Goodman, 1967; King, 1978; McKinnon, 1959; Weber, 1970), to better understand the reading process, and ultimately assist those children who are not proficient readers.

In order to gain insight into the strategies readers bring to the reading task, as well as establish the degree to which readers utilize the three cue systems, many of the studies have analyzed oral reading miscues (errors). Based on the assumptions that readers employ the same strategies when oral reading as they do when reading silently, and that unexpected responses (miscues) are reached via the same reading and language processes as expected responses, miscues allow the

investigator to pinpoint the possible involvement of any and all of the related language cue systems. Reading strategies are determined, not by the quantity of miscues, but by their quality. Does the miscue sound like language? Is the miscue meaningful in relation to the text being read? Once the miscue has been produced by the reader, it is then important to assess the effectiveness of the strategies used when meaning is disrupted. "This qualitative analysis of miscues can provide specific information regarding a reader's strengths and weaknesses, which can be used to plan a personalized reading program" (Y. Goodman, 1972, p. 32). "A student's own strategies are the strengths that a reading program must be built on" (Y. Goodman, 1980, p. 32).

Findings from several past studies have shown that: (1) more proficient readers employ strategies which differ from those used by less proficient readers; and (2) proficient readers utilize the three language cue systems differently than less proficient readers (Biemiller, 1970, 1979; Carlson, 1975; Clay, 1968; Cohen, 1974; Y. Goodman, 1967; Jensen, 1972; McKinnon, 1959, Weber, 1970a, 1970b). However, generalizations across this research are limited, as data was collected through various research designs. Several studies had children read contextual materials (sentences or stories), while others used words in isolation or word lists. Some studies focused on the beginning reader, while others examined children who were developmentally much older (grades four, five and six). As well, most of this research has been conducted in large metropolitan areas in the United States and included children from different ethnic groups.

Researchers, such as Biemiller, Cohen, and Weber, studied children who resided in the New York area. Y. Goodman selected a sample which was comprised of mainly Negro children and Clay studied the strategies of young Australian readers. There has been very little research on children's reading strategies done in Canada, especially the Western region. Carson (1979) and King (1978) both conducted their research in Western Canada; however, neither study found significant differences between the reading strategies of proficient and less proficient readers. Carson did report that the strategies of the beginning readers in her study reflected the type of instructional program they were exposed to.

The design of this research was based on earlier studies investigating young children's oral reading strategies and their utilization of the language cueing systems. This was done in order to determine whether a sample population of children in Western Canada display reading strategies similar to the findings presented in earlier studies conducted in the United States or in other countries.

PURPOSE

The purpose of this study was to investigate the reading strategies grade one children employ in order to process print information and meaningfully reconstruct the author's message. Differences between proficient and less proficient readers were investigated to determine whether reading proficiency influences the strategies and the utilization of language cue systems of young readers.

One of the original intents which was seriously pursued by the researcher was to investigate the influence of the type of instructional reading program on the strategies of young children. The original design, review of literature, and data collection and analysis included this aspect of research. The statistical procedure used in this study was chosen in order to examine the degree of influence between the type of instructional program and reading proficiency in beginning readers. However, due to the sample population assigned to the researcher the data concerning program influence was found unsuitable and therefore has not been presented in this report. Further discussion in regards to this question is presented in Chapter V.

DEFINITION OF TERMS

Terms used in this study are defined as follows:

Strategies are a number of complex plans used in reading to reconstruct the author's intended meaning.

Language Cue Systems are information cues inherent in written language such as: graphophonic, syntactic; and semantic.

Graphophonic Information refers to the relationship between the sounds of the language and their graphic representation.

Syntactic Information refers to the grammatical structures of the English language, such as sentence patterns and pattern markers.

Semantic Information refers to the relationships and concepts within a language that establish meaning.

<u>Miscue</u> is any divergence a reader makes from the text while reading orally.

<u>Proficient Readers</u> are those subjects in the grade one sample group whose test results and teacher's judgement indicated they were the best readers in the class.

<u>Less Proficient Readers</u> are those subjects in the grade one sample group whose test results and teacher's judgement indicated they were below average readers in the class.

<u>Instructional Reading Level</u> is the subject's grade level in oral reading where he can read and comprehend material with the help of a teacher.

RESEARCH QUESTIONS AND HYPOTHESES

On the basis of related literature reviewed, the following research questions and hypotheses were formulated:

Strategies of Beginning Readers

Research Question 1

Do the miscues of beginning readers indicate a strong reliance on the syntactic cue system to identify unknown words?

Research Question 2

Do the miscues of beginning readers indicate that the syntactic cue system is utilized to a greater degree than the graphophonic cue system?

Research Question 3

Do the miscues of beginning readers indicate that the syntactic cue system is utilized to a greater degree than the semantic cue system?

Strategies of Proficient and Less Proficient Readers

Hypothesis 1

Proficient readers will make significantly more miscues that are graphophonically similar to the expected response than will less proficient readers.

Hypothesis 2

Proficient readers will make significantly more miscues that are syntactically acceptable to the text than will less proficient readers.

Hypothesis 3

Proficient readers will make significantly more miscues that are semantically acceptable to the passage meaning than will less proficient readers.

Hypothesis 4

Proficient readers will correct significantly more miscues than less proficient readers.

DESIGN OF THE STUDY

The test population consisted of 32 grade one children selected

from eight classrooms that were assigned to the researcher by the
Edmonton Public School system. Sixteen of the children were defined as
proficient readers in their classroom and the remaining 16 children
were defined as less proficient readers in their classroom.

The children were asked individually to read a story orally which
corresponded to their instructional reading level as determined by the
Diagnostic Reading Scales (Spache). Miscues were recorded and analyzed
according to a modified version of the Reading Miscue Inventory
(Goodman and Burke, 1972) to determine the differences between the
types of errors and a statistical analysis was conducted to determine
if any significant differences occurred between reading groups.

ASSUMPTIONS

Miscue analysis is based on the premise that nothing a reader
does when reading is accidental. Every response, whether corresponding
to the text or not, results from the interaction of a reader with print
as he seeks to establish a meaning. Responses which are expected, and
correspond to the text, mask the strategies the reader uses during this
interaction. However, responses which do not correspond to the text
and are not expected (miscues) allow investigators the opportunity to
study the way in which readers process print information and pinpoint
the possible involvement of any and all of the related language
systems. Goodman (1969) considers that the same reading process and
the same strategies and language processes underlie all reading.
Therefore, miscues are "generated through the same processes as

expected [responses]" (p. 12). This study has incorporated the above assumption in its design.

LIMITATIONS

The following limitations should be observed when considering the findings of this study.

1. Due to the nature and size of the sample, the extent to which the findings can be generalized to all beginning readers is limited.

2. As an oral reading of a passage was necessary in order to obtain miscues for analysis, the findings of this study are limited to the strategies beginning readers use in oral reading. This may not reflect an accurate account of what the reader does when reading silently.

3. Since the children were asked to read orally only one passage, the degree to which they utilized the cueing systems may not accurately reflect the strategies they would use with other materials over an extended period of time.

SIGNIFICANCE

Previous research suggests that beginning readers utilize all three of the language cueing systems when reading orally. However the degree to which each system was utilized varied between readers.

Proficient readers balanced their use of the cueing systems whereas less proficient readers tended to over rely on one or two of the cues. This variation is thought to be due in part to developmental aspects in children's growth but where overreliance occurs, the reader needs guidance and experience in learning how to integrate effectively the three cueing systems so as to grasp the author's intended meaning as accurately and efficiently as possible.

Insight into the reading strategies and the utilization of the language cueing systems by young children, as well as the differences in strategies of proficient and less proficient beginning readers is of great importance to primary educators, for these aspects are the basis on which reading programs are built. This study was designed to provide further insight into the forementioned aspects so that better understanding may be developed on how beginning readers process and comprehend print information.

OVERVIEW OF THE THESIS

Chapter II contains a review of the literature related to the purpose of the present study. Although several studies have been conducted to determine the strategies and cue systems readers employ, this review of literature will include only those investigations related to beginning readers. It was considered inappropriate in this study to compare the findings of studies using sample populations who are cognitively at higher stages of development with studies using populations which are at a lower stage in their cognitive growth.

Chapter III describes the research design employed in the study. The sample, instruments, pilot study, procedure and data analysis are explained.

Chapter IV presents the results of the miscue analysis and discusses the findings in two sections: the strategies of beginning readers and reading stragies of proficient and less proficient readers.

Chapter V contains a brief summary of the study, the main findings and conclusions, recommendations for further research and implications for further reading instruction.

CHAPTER II

A REVIEW OF RELATED LITERATURE

In relation to this study various researchers in the past have investigated the strategies beginning readers employ when processing print information as well the differences between strategies used by proficient and less proficient readers.

Researchers such as Au, 1977; Carson, 1979; Clay, 1968; Francis; 1977; Y. Goodman, 1968; McKinnon, 1959; and Weber, 1970a looked at the oral reading errors of beginning readers to determine the strategies young readers use to process print information. Y. Goodman, (1967); Clay, (1968); Weber, (1972b); and Carson, (1979) investigated the differences in strategies employed by proficient and less proficient readers. Biemiller (1970) and Flemming (1974) investigated the stages young readers progress through as they learn to read. In 1979, Biemiller also investigated the shift in strategies of beginning readers as passage difficulty increases. Investigations into the strategies of older readers have been conducted by Beebe, 1976, 1980; Brody, 1973; Burke, 1977; Carlson, 1975; K. Goodman and Burke, 1970; Guthrie, 1973; and Jensen, 1972.

The samples within these studies include children who range from the age of five upward to junior high level. As this range encompasses several important stages of cognitive development and learning in children, the findings of such research are difficult to generalize.

Therefore the decision was made to review and discuss only those studies focussing on the young reader. This discussion is divided into two sections: those studies investigating the strategies of beginning readers and those comparing the strategies of proficient and less proficient beginning readers.

STRATEGIES OF BEGINNING READERS

One of the earliest studies which examined the reading strategies of beginning readers was done by McKinnon (1959). He examined anecdotal notes in first graders' reading profiles on ten occasions in order to "seek further understanding of the ways by which young children working together become aware of the meanings of written symbols" (p. 41). In his report, McKinnon noted that many of the children's errors were dependent more upon the grammatical structure of a sentence than on the graphic similarity to the expected response. How the word was used in a sentence appeared more important to a young reader, rather than how it looked. He also found that young readers would occasionally reread a word or phrase. He believed this rereading occurred when a child recognized that an error had been made, or when the child wished to confirm what he had read.

In 1967, Y./Goodman did a longitudinal study on six grade one students who were identified in kindergarten as likely to have difficulty later in learning to read. The purpose of the study was to "describe the observed development of oral reading phenomena in selected beginning readers" (p. 250). In nine successive monthly

intervals, the children were asked individually to read orally an unfamiliar story to the investigator. Miscues were recorded and analyzed using Goodman's Taxonomy of Miscues to obtain information regarding development. Among her findings Goodman noted that the early readers employed all three of the language cue systems (graphophonic, syntactic and semantic) to some extent. Miscues were more likely to be syntactically acceptable in a sentence rather than semantically acceptable, thus indicating that "a reader's knowledge of syntactic structure represents a greater reading resource for him than his ability to come up with meaningful readings" (p. 255). Regression for the purpose of correcting miscues was noted in all children. Goodman believed this "demonstrated that children were aware of many of their own problems in reading and attempted to correct some of the problems" (p. 72). When the children attempted to correct, they produced responses which were acceptable syntactically more than 75% of the time.

Most of the corrections occurred for miscues that were acceptable syntactically to the portion of the sentence preceding the error. Seldom did the children correct miscues which were acceptable at the sentence or passage level. Goodman suggests that the children were aware of which miscues were more acceptable in the context, therefore they did not regress to correct the passage.

Clay (1968) observed 100 five year old readers weekly, over a period of a year, and recorded their substitution errors. These errors were then analyzed according to their syntactic acceptability with the textual stimulus. Results showed that these young readers were guided by the syntactic framework of sentences rather than by the phoneme-

grapheme relationships in the words. Approximately 72% of the total

errors were structurally acceptable while only about 41% of the total

errors were graphophonically similar. Clay concluded that a "young

child's guesses in points of uncertainty in his reading tend to be

dominated by his control over the syntax of his language" (p. 437).

Clay noted the children occasionally attempted to correct their errors

(26% of the errors were corrected) and she believed these corrections

may have stemmed from a cue in the language that indicated to the child

"something is wrong". The child then searched for a response which

resolved the problem (p. 437). A word identification task given to the

students at the end of the year was used to divide the children into

four groups: high, high-medium, low-medium and low. It was noted that

these groups exhibited different correctional behavior while reading

orally: the high group corrected one in three errors; the high-medium

group corrected one in four errors; the low-medium group correct one in

eight errors; and the low group corrected one in 21 errors. Clay

concluded that the high group was able to correct many errors by

relating information from the three language cue systems (graphophonic,

syntactic and semantic). The poor rate of correction for the low group

indicated their inability to relate such cues.

Another longitudinal study of beginning readers was conducted by

Weber (1970a). Oral reading errors of a first grade class were

analyzed over a period of six months. Results showed that the class

did utilize the three cueing system, however the majority of errors

"conformed to the constraints of preceding grammatical content" (p.

427). Over 91% of the errors were syntactically compatible with the

portion of the sentence that preceded them. Weber therefore believed that "beginners bring their knowledge of grammatical structure to bear on their performance from the outset" and that "the preceding structure of a sentence may be the principal source of information for identifying a word" (p. 443). She also found a tendency for the degree of graphic similarity of errors to be inversely proportional to the degree of syntactic acceptability. In other words, the more a child attended to the graphic constraints the less he attended to syntactic constraints.

Biemiller (1970) investigated the shifts in error patterns of 42 first grade children over a period of eight months of instruction using contextual material. Three error patterns were identified and Biemiller suggested that they formed a developmental sequence. Beginning readers progressed through stages in which the syntactic and graphic cue systems are employed in varying degrees.

1.   In the first stage, the majority of substitution errors is contextually constrained; words are gramatically and semantically acceptable. The children use information learned orally and rely little on graphic cues.

2.   In the second stage, fewer substitution errors are contextually restrained. Children rely more on the graphic cues.

3.   In the third stage, errors are both contextually and graphically constrained. The children show the ability to use simultaneously contextual and graphic cues to process print information.

Flemming (1974) replicated Biemiller's study and although the results supported Biemiller's notion of developmental stages in reading, Flemming expanded the three stages to five.

These studies tend to support the hypothesis that beginning readers do utilize the three language cue systems in varying degrees when processing print information, and that they tend to be guided heavily by the syntactic framework of the sentence.

STRATEGIES OF PROFICIENT AND LESS PROFICIENT READERS

Several studies have been conducted where proficient and less proficient beginning readers were studied to determine whether reading strategies differ due to reading proficiency.

Y. Goodman (1967) in her investigation of the oral reading behaviour of six beginning readers over a year, found the average readers were better able to integrate the three language cue systems than were the less able readers. The average readers produced a greater percentage of miscues which were syntactically and semantically acceptable within a sentence or passage and they reflected a finer discrimination of sound/symbol relationship between words. As well, the better readers regressed and corrected more miscues which were totally unacceptable syntactically and semantically. The slower readers tended to rely more on the graphic cues when reading and regressed less often to correct unacceptable miscues.

In Weber's longtudinal study (1970b) the children in the sample had been divided into high and low reading groups on the basis of the

classroom teacher's judgement. When errors were evaluated for graphic proximity to the text and for grammatical and semantic acceptability, several differences between the reading groups appeared. In graphic proximity, the better readers more closely approached the correct response than did the slower readers. Both groups produced a large proportion (91%) of errors that were grammatically acceptable to the preceding context and of those errors approximately 63% were also acceptable within the sentence. It was found that the better readers corrected errors that did not conform to the structure of the written sentence far more frequently than they did acceptable errors, while the low group showed no such corresponding differences in their corrections.

Of the errors judged for semantic appropriateness, both groups had a high proportion of errors which were consistent in meaning with the rest of the sentence (92.8% versus 91.1%). Weber indicated that the high proportions show an overlap between syntactic and semantic acceptability and says that "the semantic aspects could not be separated from syntactic aspects through the analysis of errors" (p. 449).

Carson's (1979) study of children's concepts of reading included six low achievers in reading and six high achievers, chosen from a classroom by teacher judgement. Classroom reading situations were observed, and each child was interviewed. The interview consisted of an oral reading session where miscues were recorded, and an oral questionnaire where the children were asked to verbalize about reading strategies. Verbalized concepts of reading strategies were then compared with actual strategies employed. Children's responses to the

oral questionnaire showed confusion about the nature of effective reading strategies for both groups, although at times the higher achievers gave responses which were more meaningful. Responses of individual children were frequently inconsistent with their other responses and the actual strategies they employed. An analysis of the children's reading miscues by a modified Reading Miscue Inventory found the strategies of both groups to be quite similar. Both high and low achievers relied primarily on the graphic and syntactic cues to identify words, however the high achievers did attempt to use the phonetic and semantic cues more often than the low achievers, indicating they were beginning to integrate the language cue systems. All subjects in the high group employed some self-correction, whereas only half of the subjects in the low group attempted to correct miscues.

While Y. Goodman, (1967); Clay, (1968); Weber, (1970b); and Carson, (1979) studied the strategies of proficient and less proficient readers using material at their instructional level, Biemiller (1979) investigated the reading strategies of two groups as they read passages of increasing difficulty. Fifty-nine children near the end of grade one were asked to read four passages ranging from preprimer to second grade level. Achievement groups were based on the most difficult passage a child could read without making more than 25% errors. Strategies were inferred on the basis of the proportions of errors indicative of graphic or contextual strategies. Results indicated that the poorest readers were less likely to adopt a strategy which utilized graphic cues when confronted with difficult material than were the other children. The abler readers appeared more flexible in shifting

strategies toward the use of graphic cues when confronted with difficult material, thus they produced more graphic substitution errors than did less able readers. Proportions of contextual errors did not vary across passage or groups, however the most able group was found to increase their use of graphic cues and decrease their use of contextual cues as passages became more difficult.

SUMMARY

Reading is viewed by many theorists as a language-processing activity in which the reader utilizes the three language cue systems along with his knowledge of how language works and his prior experiences in order to meaningfully reconstruct the author's message. Research on the oral reading behaviour of children has been found to be one way of studying the strategies used by readers as they proceed through this process.

The findings from oral reading research indicate that as soon as children begin reading, they attempt to use information from all three language cue systems. However, they seem to rely heavily on their knowledge of syntactic structure as a resource for identifying an unknown word. As they progress toward proficiency, readers become better able to use and integrate cue information, by relying more heavily on syntactic and semantic cues. Responses which do not fit the structure of the sentence are often corrected by young readers.

The studies cited, while not matched in design or the instruments used for evaluation, have indicated some commonalities in the results

concerning strategies of beginning readers and strategies of good and poor readers.

Differences between proficient and less proficient readers showed that proficient readers were better able to integrate cues from all three systems, especially the syntactic and semantic areas, and thus had more success in retaining passage meaning and correcting inappropriate miscues than less proficient readers. One study, Carson, (1979) found no differences between the strategies of high and low achievers.

The design of the present study was based on the preceding literature reviewed in order to investigate oral reading strategies and the utilization of the three language cueing systems on a sample population of children in Western Canada. A comparison of reading strategies between proficient and less proficient readers was also investigated to gain further understanding of how young children differ in their approaches to processing print information.

CHAPTER III

DESIGN OF THE STUDY

This chapter describes the selection of the sample, the instruments employed, the pilot study for passages, the administration and scoring of the instruments, and the coding and analysis of data.

SELECTING THE SAMPLE

The test sample was drawn from 11 grade one classrooms assigned to the investigator by the Language Arts co-ordinator for the Edmonton Public School Board in May of the school year. The researcher had requested classrooms which had a range of approaches for the teaching of reading.

The initial test population consisted of eight children from each class, four who were judged by their teacher as proficient readers (above average) and four who were judged as being less proficient readers in the class (below average).

The Diagnostic Reading Scales test (Spache) was administered by the investigator to each of the children on an individual basis to verify the teacher's judgement of reading abilities and also to determine an instructional reading level for each child. Where the teacher's judgement and test results differed about the child's reading

ability, the child was dropped from the study. As well, children whose instructional reading level was below 1.6 or above 4.5 on the Diagnostic Reading Scales were eliminated, as these children were considered to be at the extreme ends of the test population.

From the instructional scores of the remaining children, two groups were selected; proficient readers and less proficient readers. All of the proficient grade one readers obtained instructional reading scores on the Diagnostic Reading Scales varying from 3.8 to 4.5 (Table I), while all the less proficient grade one readers had instructional reading levels varying from 1.6 to 2.3 (Table II). These ranges were used to set the criteria for selecting the two groups of children for the study. On the basis of these criteria, two proficient and two less proficient readers were selected from each classroom to continue with the study. A balance between the number of boys and girls was established, so sex would not be a variable factor within the investigation.

Since the investigator wished to look at only eight classrooms, three classrooms were eliminated from the study. One classroom was dropped, as the teacher was on an exchange program from Britain and was unfamiliar with the Alberta curriculum and the reading series she was using. Two other classrooms were randomly selected to be dropped from the study, but remained as alternate classrooms. One of these alternate classrooms was used for the pilot study of selected passages.

Table I

The Instructional Reading Scores of Proficient First Grade Readers
as Determined by the Diagnostic Reading Scales (Spache)
in May of the School Year

Subject No.	Sex	Instructional Reading Score
01	F	3.8
02	M	3.8
03	M	3.8
04	F	3.8
05	F	4.5
06	M	3.8
07	F	3.8
08	F	3.8
09	F	3.8
10	M	3.8
11	M	3.8
12	F	4.5
13	F	3.8
14	M	3.8
15	M	3.8
16	F	4.5

Table II

The Instructional Reading Scores of Less Proficient First Grade Readers
as Determined by the <u>Diagnostic Reading Scales</u> (Spache)
in May of the School Year

Subject No.	Sex	Instructional Reading Score
17	M	1.6
18	M	1.6
19	M	2.3
20	F	2.3
21	F	2.3
22	F	2.3
23	M	2.3
24	F	1.6
25	M	1.8
26	M	1.8
27	F	2.3
28	F	2.3
29	F	1.8
30	M	2.3
31	F	2.3
32	M	2.3

In summary, the sample under investigation consisted of a total of 32 children; 16 who met the criteria as proficient beginning readers and 16 who met the criteria as less proficient readers.

<div align="center">INSTRUMENTS</div>

Results from three instruments were used in this study: The Diagnostic Reading Scales (Spache, 1963), passages from Reading 360 (Ginn, 1973) and the Reading Miscue Inventory (Goodman and Burke, 1972).

<div align="center">Diagnostic Reading Scales (Spache, 1963)</div>

This scale is an individually administered reading test which measures reading levels from mid first grade (1.6) to eighth grade (8.5). In this test, passages of increasing difficulty are to be read by the students in order to establish their instructional reading level. The Diagnostic Reading Scales was chosen as a measure of reading ability as the instructional level which it established is compatible with teachers' judgments over 50 percent of the time at the first grade level. As well, several studies have found the validity and the reliability of the Diagnostic Reading Scales to be high, especially for subjects reading at the first to fourth grade level (Barr, 1972).

<div align="center">Story Passages</div>

Since the reading ability of the subjects in the study varied considerably it was essential to select main passages which would be

suitable for all readers. Previous research often had all children, regardless of proficiency, read passages in which the readability levels of the materials were comparable. As differences in the strategies employed by young children may result due to some children reading at their independent level while others may be reading at their frustration level, this study was designed so as to minimize this occurrence. In the present research, children from the two proficiency groups were asked to read passages corresponding to their instructional reading levels. This meant that the passages differed in their readability levels for the two proficiency groups. Selections from Reading 360, a primary reading series, were selected for this research as the story structure and length of passages were comprable at both levels of reading.

The story "The Shoemaker and the Elves" from Level 6 of the Reading 360 series was selected as the main oral reading passage for the less proficient readers (Appendix A). According to Fry's Readability Scale this passage is at a grade two level. The story "The Dragon in the Clock Box" from Level 10 was selected as the main oral reading passage for the proficient readers, and was estimated by Fry's Readability Scale to be close to the fourth grade level (Appendix B). Both passages were ten pages in length.

Y. Goodman (1972) stated that the strategies of a reader can be determined from a minimum of 25 miscues, therefore this study was designed so that each child was required to make at least 25 miscues during his oral reading. Prior to the pilot study it was not known whether the reading of the main passage would generate the required number of miscues, or whether the passage would be at the appropriate

reading level for each child, therefore additional passages were selected. Passages which closely corresponded to the reading level of the main selection were selected for both reading groups. If a child generated 13 or more miscues on the main passage but had not produced at least 25 miscues by the story's end, that child would be asked to read the additional passage until the investigator had obtained at least 25 miscues.

Alternate passages were also selected at levels lower and higher than the main passage in case the child found the original selection too easy or too difficult. The criterion was established, so that a child who had not made at least 13 miscues by the end of the main passage was considered as not reading at his instructional level. This child would then be asked to read a passage at a slightly higher level. A child who miscued frequently, in every second or third word, was considered to be reading at his frustration level and would be asked to read a passage at a slightly lower level.

The readability of passages from the Reading 360 program, as estimated by the Fry's Readability Scale are presented in Table III. Estimates were based on three samples of 100 words each, taken from the beginning, middle and end of each passage.

Reading Miscue Inventory

A modified version of the Reading Miscue Inventory (Goodman and Burke, 1972) was used to evaluate each child's reading miscues. A number of recent studies have used the Reading Miscue Inventory, or modified versions of it, to analyze children's reading miscues

Table III

Readability of Selected Passages for Proficient and Less Proficient
Grade One Readers Based on Fry's Readability Scale

Selected Passages	Estimated Grade Level of Passages
Proficient Readers	
Main Passage	4.0
Additional Main Passage	4.0
Alternate High Passage	5.0
Alternate Low Passage	3.5
Less Proficient Readers	
Main Passage	2.0
Additional Main Passage	2.0
Alternate High Passage	3.5
Alternate Low Passage	1.5

quantitatively (Barr, 1972; Carson, 1979; Dank, 1976; King, 1978; Ramig and Hall, 1980). In these studies the strategies of readers were inferred from the types of miscues they produced. The following types of miscues selected from the Reading Miscue Inventory were recorded for the children in this study:

(a) Substitutions - the reader says a word which is different from the word in the text.

Text	Reader
Example: the old man went	the old man said

(b) Insertions - the reader adds a word to the text.

Text	Reader
Example: the old man	the little old man

(c) Omission - the reader leaves out a word.

Text	Reader
Example: the old man made shoes	the ____ man made shoes

(d) Reversals - the reader interchanges words, phrases or clauses.

Text	Reader
Example: It is ready	Is it ready

(e) Repetition - the reader repeats more than one word.

Text	Reader
Example: They liked the new shoes	They liked the new shoes (pause) the new shoes.

PILOT STUDY

Prior to the main study, one of the alternate classrooms was selected for a pilot study of the main passages. Two very proficient readers and two less proficient readers who met the criteria for the reading groups were asked individually to read the passage appropriate to their instructional level orally to the investigator. The reading was taped and the investigator recorded miscues as the subject read.

At both levels, the passages appeared to correspond to the instructional reading level of the subject. Subjects from both groups were able to read their appropriate passage without too much difficulty. However, the passage was difficult enough to produce at least 25 miscues per subject. One very proficient reader was asked to read the passage which was scored higher than the grade four level, as she generated only six miscues on the main study. At the higher level, the investigator was able to obtain 25 miscues f[...]e subject. No other alternate passages were used with either group. Therefore it was established that the main passages corresponded to the instructional reading levels of the two groups and were appropriate for the study.

COLLECTION OF DATA

The data was collected from grade one children in the month of May. There was at least a one week break between the testing of the instructional reading level of the children and their oral reading of the main passages. The investigator worked with each child

individually, explaining to the child that she wanted to know how grade one students learn to read. She asked each child to help her by reading a story out loud. They were shown the tape recorder and it was explained that their reading would be taped so the investigator would have a copy of their reading to replay at a later date. As well the children were told that it would be difficult for the investigator to remember how each helper read, so she would be making notes on her copy of the story as each helper read the story. All attempts were made at having the children feel that they were helping the investigator and were not being tested.

Before each child read the main passage, it was explained that no help would be given by the investigator on difficult words. Rather, the investigator wanted to see what the helper would do with a difficult word when left on his own.

As the child read, the investigator recorded the miscues on a copy of the story.

CODING OF DATA

In order to determine the strategies being used by the readers in processing print, it was necessary to establish categories into which the miscues would be coded. The taxonomy used in the Reading Miscue Inventory was used as a basis for establishing categories for this study. A modified version of the Reading Miscue Inventory Coding Sheet (Figure 1) was used to code and analyze children's miscues according to three specific categories, Graphophonic Similarity, Syntactic

MISCUE #	TEXT	READER	GRAPHOPHONIC SIMILARITY						SYNTACTIC ACCEPT.			SEMANTIC ACCEPT.			CORRECTION
			N	P	Y	N	P	Y	N	P	Y	N	P	Y	

TEACHER _____ READER _____ DATE _____

TOTALS

Figure 1

Reading Miscue Inventory Coding Sheet

Acceptability and Semantic Acceptability. Within each category miscues were scored on the degree to which they were similar or acceptable to the text;

Y   <u>Y</u>es, the miscue is similar or acceptable

P   The miscue is <u>P</u>artially similar or acceptable

N   The miscue is <u>N</u>ot similar or acceptable.

<u>Graphic and Phonetic Similarity</u>. These similarities are dependent upon how closely the miscue looked and sounded like the expected response. Although this category is usually referred to as Graphophonic Similarity, for the purpose of coding and analysing data, this study broke the category into two parts, Graphic Similarity and Phonetic Similarity. In this manner, comparisons of responses within the category could be made to determine if the degree of similarity between an expected and given response was due to the child cueing in on the graphic or phonetic features of the printed word. Both parts of this category are coded and analyzed in the same manner. Only single words or non word responses are analyzed. Responses are broken into three parts using the following criteria (King 1978).

1.   <u>one syllable words</u> - vowel or consonant clusters were kept together (e.g. h/a/nd).

2.   <u>two syllable words</u> - the first syllable was the first unit, the last letter or letter cluster was the last unit, and the remainder was the middle cluster (e.g. hold/i/ng).

3.   <u>three syllable words</u> - each syllable was a part or unit (e.g. qui/et/ness).

4.   <u>four to five syllable words</u> - the first syllable was the
first unit, the last syllable was the last unit and the
remainder was the medial unit (e.g. con/vocat/ing,
pre/occupa/tion).

Miscues were then coded according to their degree of similarity
to the expected response in the following manner

Y   A high degree of similarity exists between the miscue and
the text (2 of 3 parts similar).

Example:

<u>Text</u>	<u>Reader</u>
<u>Th</u> ere	<u>Wh</u> ere

P   Some degree of similarity exist between the miscue and the
text (1 of 3 parts similar).

Example: Graphic similarity

<u>Text</u>	<u>Reader</u>
<u>s</u>aid	<u>sh</u>oes

Phonetic similarity

<u>Text</u>	<u>Reader</u>
<u>t</u>o	<u>t</u>alk

N   Similarity does not exist between the miscue and the text (no
similar parts).

Example:

<u>Text</u>	<u>Reader</u>
is	the

<u>Syntactic Acceptability</u>. This acceptability is dependent upon
the degree to which the miscue forms a structure which is grammatically
acceptable. Miscues were coded in the following manner:

Y   The miscue forms a sentence which is grammatically

acceptable in relation to prior and subsequent sentences in

the text.

Example:

Text	Reader
The man went	The woman went

P_1 The miscue forms a sentence which is grammatically

acceptable but is not acceptable in relation to prior or

subsequent sentences in the text; (often a change in tense).

Example:

Text	Reader
I find	I found

P_2 The miscue is grammatically acceptable only with the

sentence portion that comes before or after it; (often

occurs in anticipation of a different structural form).

Example:

Text	Reader
Seven new pairs	Seven new pairs
of shoes	for . . .

N   The miscue occurs in a sentence that is not grammatically

acceptable.

Example:

Text	Reader
One morning	On morning

Semantic Acceptability. This acceptability is the degree to

which the miscue forms a structure which is semantically acceptable.

Since semantic structure is dependent on grammatical structure, semantic acceptability should never be marked higher than grammatical acceptability. Miscues were coded in the following manner:

Y   The miscue occurs in a sentence which is semantically acceptable and is acceptable in relation to prior and subsequent sentences in the text.

Example:

Text	Reader
They are <u>nice</u> shoes	They are <u>pretty</u> shoes

P_1 The miscue occurs in a sentence which is semantically acceptable but is not acceptable in relation to prior and subsequent sentences in the text.

Example:

Text	Reader
The old <u>woman</u> . . .	The old <u>man</u> . . .
Then <u>she</u> . . .	Then <u>she</u> . . .

P_2 The miscue is semantically acceptable only with the sentence portion that comes before or after it.

Example:

Text	Reader
They <u>all</u> come	They <u>are</u> . . .

N   The miscue occurs in a sentence that is not semantically acceptable.

Example:

Text	Reader
The <u>money</u> is here	The <u>my</u> is here

<u>Correction</u>. Is the miscue corrected.

Y   The miscue is corrected.

N   The miscue is not corrected.

ANALYSIS OF THE DATA

In order to determine the strategies of the beginning readers in this study, a comparison of the number of miscues across the categories of graphophonic similarity, and syntactic and semantic acceptability was performed. Since the criterion for establishing the degree of similarity between the miscue and the text is different from the criterion for establishing the degree of acceptability of a miscue within the text, a statistical analysis of miscues across categories was not conducted. Instead, the total number of miscues in each category, based on the first 25 miscues made by each child, was converted to percentages, and a comparison of percentages between categories was made. In order to present the comparisons of miscue analysis across and within categories, the findings are discussed as descriptive information.

In order to determine whether reading proficiency influenced the strategies of beginning readers, a two way analysis of variance was conducted (p = .05) for the categories of graphophonic similarity, syntactic and semantic acceptability and the number of corrected miscues.

To determine the extent to which the beginning readers utilized only one or two of the language cueing systems, the miscue categories

were grouped in various patterns and the number of miscues

corresponding to each pattern were recorded. Within each pattern, one

or two of the miscue categories were coded as N (not similar or

acceptable) in order to establish the extent to which the remaining

categories were utilized. All remaining categories could be similar or

acceptable either fully or partially, for example:

Grapho.	Synt.	Sem.
Y/P	N	N

The findings are discussed as descriptive information.

SUMMARY

A sample of 32 grade one students was selected from eight

classrooms within the Edmonton Public School Board. From each of these

classrooms, two proficient readers and two less proficient readers were

selected on the basis of teacher judgement and reading scores from the

Diagnostic Reading Scales (Spache). The group of proficient readers

had instructional reading scores ranging between 3.8 and 4.5, and the

group of less proficient readers had instructional reading scores

ranging between 1.6 and 2.3.

Two passages were selected, one for each group, from the Ginn 360

reading series. Each proficient reader was asked to read a passage

orally at a grade four level, while each less proficient reader was

asked to read a passage orally at a grade two level. As each child

read, miscues were recorded by the investigator and the reading was

taped. If the investigator had not obtained at least 25 miscues from

the child on the main passage, alternate passages were given. The

childrens' miscues were coded and analyzed according to a modified

version of the Reading Miscue Inventory Coding Sheet. The data were

then analyzed both descriptively and statistically.

Chapter IV presents the results of the miscue analysis and

discusses the findings with regard to the strategies of beginning

readers and the strategies of proficient and less proficient readers.

CHAPTER IV

ANALYSIS AND DISCUSSION OF THE DATA

This chapter presents the results of the miscue analysis and discusses the findings under three sections. The first section summarizes and discusses the strategies of the beginning readers in this study, the second section presents and discusses the reading strategies of proficient and less proficient readers and the third section discusses the common patterns found in miscues.

STRATEGIES OF BEGINNING READERS

A comparison of miscues across and within the graphophonic, syntactic and semantic categories was used to answer the following research questions about the strategies of the beginning readers in this study:

Research Question 1

Do the miscues of beginning readers indicate a strong reliance on the syntactic cue system to identify unknown words?

Research Question 2

Do the miscues of beginning readers indicate that the syntactic cue system is utilized to a greater degree than the graphophonic cue system?

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Research Question 3

Do the miscues of beginning readers indicate that the syntactic

cue system is utilized to a greater degree than the semantic cue

system?

Syntactic Acceptability

The results of Table IV show that 32% of the miscues made by the

children in the study were syntactically acceptable to the text. The

proportion of total miscues for this category is lower than the propor-

tion of total miscues for the categories of phonetic and graphic

similarity (50% and 49% respectively). Therefore it may seem that the

beginning readers in this study did not rely heavily on the syntactic

cues to process print information (Research Question #1).

It is important to note, however, that 45% of the miscues made by

the children were syntactically acceptable to part of the sentence.

This means that the miscue was syntactically acceptable to the portion

of the sentence which occurred prior to the miscue, for example;

> And you can make seven
> [for]
> little pairs of shoes.

This child used the syntactic structure of the first part of the

sentence to predict what would be coming next. If the sentence had

read;

> And you can make seven
> little pairs for them.

the child's prediction would have been correct.

Table IV

Miscue Category Totals and Percentages for
Beginning Readers

Miscue Categories	Miscues*	
	Percentage of Total Miscues	Percentage of Total Miscues Fully or Partially Accepted
Phonetically Similar		
No	20.00	
Partially	29.13	80.01
Yes	50.88	
Graphically Similar		
No	28.38	
Partially	22.88	71.63
Yes	48.75	
Syntactially Acceptable		
No	22.75	
Partially	45.00	77.25
Yes	32.25	
Semantically Acceptable		
No	32.38	
Partially	48.88	67.63
Yes	18.75	

* Based on the first 25 miscues made by each child.

Approximately 48% of the children's miscues which were partially

acceptable syntactically were corrected. As the children read, they

became aware that their predicted structure did not fit with the text

and corrected such miscues in order to make a sentence that was struc-

turally correct. Whether or not the children were aware of the

improper sentence structures in their uncorrected miscues is not

known. However, since the children frequently attempted to correct

miscues which did not fit structurally within the text, one would

assume that the uncorrected responses might indicate that the chidren

were not aware that these miscues were structurally unacceptable. Such

correction behavior is a major indicator of the children's use of the

syntactic cueing system and therefore must be included in miscue

analysis. If the categories of miscues that are partially and fully

syntactically acceptable are combined for the purpose of studying

children's use of the syntactic cueing system, and the rate of correct-

ing miscues is noted, a more realistic account for how this cue system

is utilized by young readers is presented. If, for this study, the two

levels of syntactic acceptability are grouped together, the children's

use of the syntactic cueing system is evident in approximately 77% of

their miscues. The resulting high percentage of miscues acceptable

syntactically to the text or up to the point where the miscue occurred,

indicates a heavy reliance on the syntactic cue system by the young

readers in this study.

Y. Goodman (1967) in her study uses the term syntactic

acceptability "regardless of whether it was fully acceptable in the

story, acceptable only in the sentences, or only acceptable with what

came prior to and including the miscue" (p. 178). Her results show that "one third of all the children's miscues resulted in sentences or story material which was acceptable English syntax" (p. 184) and that the rate of correction was higher for miscues which were syntactically acceptable only with what came before the miscue.

In her study, Clay (1968) felt that "the young child's guesses at points of uncertainty in reading, tend to be dominated by his control over the syntax of the language" and that "the spontaneous corrections of errors in reading probably stems from an awareness, however vague, that not all relationships between words are a neat fit" (p. 437).

Weber (1970a) in her study also judged syntactic appropriateness of miscues only up to the point where the error occurred in the sentence. "An error was judged acceptable to preceding grammatical context if the written sentence could be completed beyond the error in any way, not necessarily by the remainder of the sentence" (p. 442). Her results showed a large proportion (91%) of miscues that were syntactically acceptable in this manner.

These findings support the results found in this study for the proportion of syntactically acceptable miscues (combining the levels of full and partially acceptable) and the rate of correction. Such find- ings, as Weber (1970a) says "give little support to the notion that even beginners read sentences word by word; they rather indicate that beginners bring their knowledge of grammatical structure to bear on their performance from the outset" (p. 443).

Syntactic Acceptability and Graphophonic Similarity

The results displayed in Table IV show that almost half of the miscues made by the beginning readers in this study were highly phonetically and graphically similar to the text (2 of 3 parts similar). Miscues made by the children closely resembled the word in the text not only by the way it looked, but also in the way it sounded. Most of the miscues in the "yes" categories for phonetic and graphic similarity resembled the text in beginning and ending features, indicating that the children focused on the initial and final parts of a word in order to process the print information. Miscues, coded as partially similar to the text in graphic and phonetic features (1 of 3 similar parts), represented between 23% to 29% of the total miscues. Many of these miscues resembled the printed word by having a similar initial part. This suggests that when the children utilized the graphophonic cueing system, they first looked at the initial part of a word, then at the final part, in order to process the printed word and produce it orally.

These findings are supported by Y. Goodman (1967) who found that "readers in early grades use initial letters and, to a lesser extent, final letters to determine their word attack" (p. 118). In comparing the proportions of miscues which are syntactically acceptable and graphically and phonetically similar (32%, 49% and 51% respectively), it appears the young readers in this study relied more heavily on phonetic cues than graphic and syntactic cues. If, however the categories of partial acceptability and partial similarity (1 of 3 parts similar) are included in the proportions of total miscues compared

between categories, results indicate that the beginning readers in this study utilized sytactic cues (77%) almost to the same degree as they utilized phonetic cues (80%). They did not appear to rely on the graphic cues quite as heavily (72%). The high percentages of similar or acceptable miscues, combining partial and full categories, suggest that the beginning readers are utilizing a balanced mixture of graphophonic and syntactic cues to process print information. The extent to which the miscues of children in this study are partially or highly similar graphophonically to the text may be the result of two factors; maturity and/or passage difficulty. Research studies, such as Y. Goodman's has shown that "as readers get older, regardless of developing proficiency, they produce miscues which have closer phonetic and graphic similarity to the text" (Y. Goodman, 1976, p. 119). Biemiller (1970) also found an increase in the graphic similarity of miscues for grade one readers over the year. At the beginning of the school term 21% of the children's miscues were graphically similar to the text and this gradually increased to 50% as the readers developed during the year. Weber (1970a) found the average number of graphically similar miscues for grade ones increased during the course of the school year.

Results from a study by Biemiller in 1979 showed that young readers relied more heavily on graphic information when confronted with difficult material, regardless of proficiency. The heavy reliance of phonetic and graphic cues by the readers in this study could be attributed to the level of difficulty of the passages that they were required to read. Each child was asked to read a passage relating to his instructional reading level. Reading at this level may cause young

readers to utilize the graphophonic cues to a greater extent than they would normally use them.

Syntactic and Semantic Acceptability

The results of Table IV show that only approximately 19% of the children's miscues were coded as totally acceptable semantically within the entire text. The proportion of this category is far below the number of miscues coded as totally acceptable syntactically, suggesting that the children in this study utilized the syntactic cues to a greater degree than the semantic cues (Research Question #3). This finding holds true, even if the categories of partial acceptability are included in the miscue totals, (77% of the miscues were syntactically acceptable to some degree, while 67% of the miscues were semantically acceptable to some degree).

These results support the findings of studies conducted by Y. Goodman (1967) and Weber (1970a) who found that the syntactic acceptability of miscues produced by beginning readers was higher than the semantic acceptability of these miscues.

Young readers, using their prior knowledge of how language works, find it easier to utilize the syntactic cues to process print information. In combining their intuitive knowledge of language structure with syntactic cues, the young readers make predictions on the grammatical structure of the sentence. Sentences are composed of combinations of phrases and clauses which are put together in syntactic sequence. Knowing how language works   it easier to predict how these clauses and phrases will be combin   However, "while syntax is

generated from a finite set of rules and structures, meaning relation-
ships are infinite and therefore less predictable" (Burke, 1978, p.
86). Semantic information must be organized into a system of cues,
including internalized sentence, phrase and clause relationships,
analogies or meanings and personal knowledge in an attempt to
reconstruct the author's meaning for comprehension. In order to
utilize the semantic cues effectively, the concept development and
vocabulary of the beginning reader must be at a stage where such
relationships and meanings are comprehensible. Otherwise the young
reader is incapable of processing print meaningfully.

STRATEGIES OF PROFICIENT AND LESS PROFICIENT READERS

In order to determine if there were differences in reading
strategies between proficient and less proficient readers the following
hypotheses were formulated.

Hypothesis 1

Proficient readers will make significantly more miscues
that are graphophonically similar to the expected response than
will less proficient readers.

Hypothesis 2

Proficient readers will make significantly more miscues
that are syntactically acceptable to the text than will less
proficient readers.

Hypothesis 3

Proficient readers will make significantly more miscues

that are semantically acceptable to the passage meaning than will

less proficient readers.

Hypothesis 4

Proficient readers will correct significantly more miscues

than less proficient readers.

In order to determine whether differences occurred in the reading

strategies of proficient and less proficient readers in this study, a

two-way analysis of variance was conducted on the mean scores of mis-

cues within cells. These scores were based on the first 25 miscues

made by each child. Mean scores within cells and the F values for the

phonetically and graphically similar miscues, and syntactically and

semantically acceptable miscues are presented and graphically illus-

trated in Figures 2, 3, 4 and 5. Results indicate no significant

differences between the number of phonetically and graphically similar

miscues for proficient and less proficient readers. However signifi-

cant differences did occur between the two proficiency groups for

miscues which were syntactically and semantically acceptable within the

passage.

Graphophonic Similarity

The results of the two-way analysis of variance showed no signi-

ficant differences between the number of phonetically and graphically

similar miscues for proficient and less proficient readers (Figures 2

and 3). Hence, Hypothesis 1, which states that a proficient reader

will make significantly more miscues that are graphophonically similar

to the expected response, was rejected. This finding does not support

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Raw Scores for Phonetically
Similar Miscues

High

Proficiency

Low

| 13.44 |
| 12.00 |

Raw
Scores

F = 1.834 (df = 1,28) p   .186

Bar Graph of Raw Scores for
Phonetically Similar Miscues

Raw Scores
for
Phonetically
Similar
Miscues
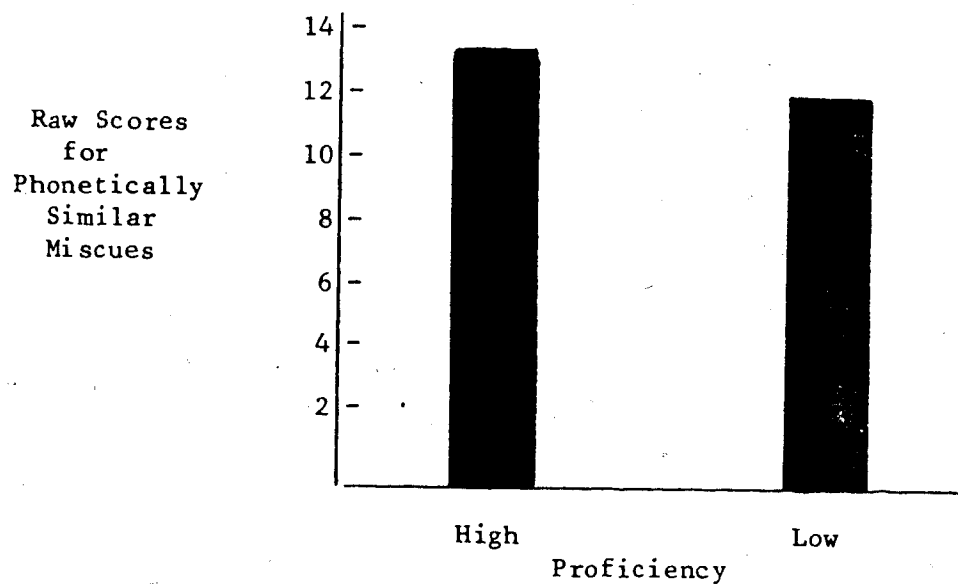

High   Low
Proficiency

Figure 2

Raw Scores for Miscues that are Phonetically Similar
to the Text with Reference to Proficiency

Raw Scores for Graphically
Similar Miscues

High Proficiency	
High	12.56
Low	11.81

Raw
Scores

F = .530 (df = 1,28) p .473

Bar Graph of Raw Scores for
Graphically Similar Miscues

Raw Scores
for
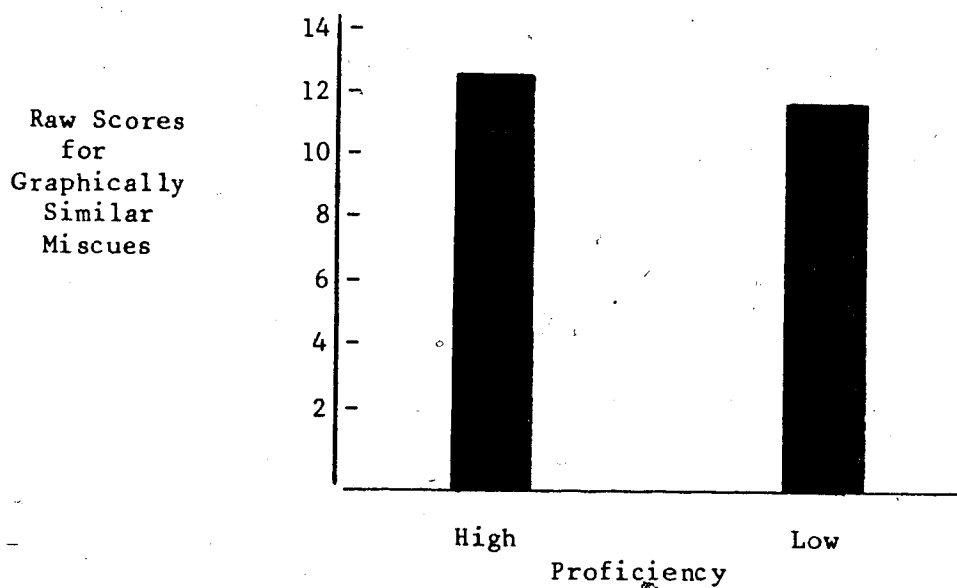Graphically
Similar
Miscues

High   Low
Proficiency

Figure 3

Raw Scores for Miscues that are Graphically Similar
to the Text with Reference to Proficiency

the results of prior research, which has shown that as readers develop

in proficiency they move towards the utilization of syntactic and

semantic cues and away from graphic and phonemic concerns (Au, 1977;

Jensen, 1972). Y. Goodman (1967), in her study, found that although

efficient readers used the graphophonic cueing system to predict and

select appropriate cues towards gaining meaning, they used it infre-

quently. However she states that "even the proficient reader begins to

make greater use of the graphic display when the going gets tough"

(Y. Goodman, 1976, p. 120). Interesting results have also been found

when beginning readers were asked to read materials of varying

difficulty. Biemiller (1979) gave first graders a successssion of

stories to read, each more difficult than the previous one. He found

that as the stories got harder, the readers produced   miscues with

closer graphic and phonetic similarity, regardless of reading

proficiency. Proficient readers appeared to shift to a greater use of

graphophonic cues as passage difficulty increased.

The high utilization of graphophonic cues by the proficient

readers in the present study support Goodman's and Biemiller's previous

findings on the shifting strategies these readers employ when presented

with print material at or above their instructional level.

Syntactic Acceptability

The difference between proficient and less proficient readers in

relation to the extent of information used from the syntactic cueing

system proved to be significant (Figure 4). Thus, Hypothesis 2, which

states that proficient readers will make significantly more miscues

Raw Scores for Syntactically
Acceptable Miscues

High

Proficiency

Low

| 11.25 |
| 8.81 |

Raw
Scores

F = 5.636 (df = 1,28) p   .025

Bar Graph of Raw Scores for
Syntactically Acceptable Miscues

Raw Scores
for
Syntactically
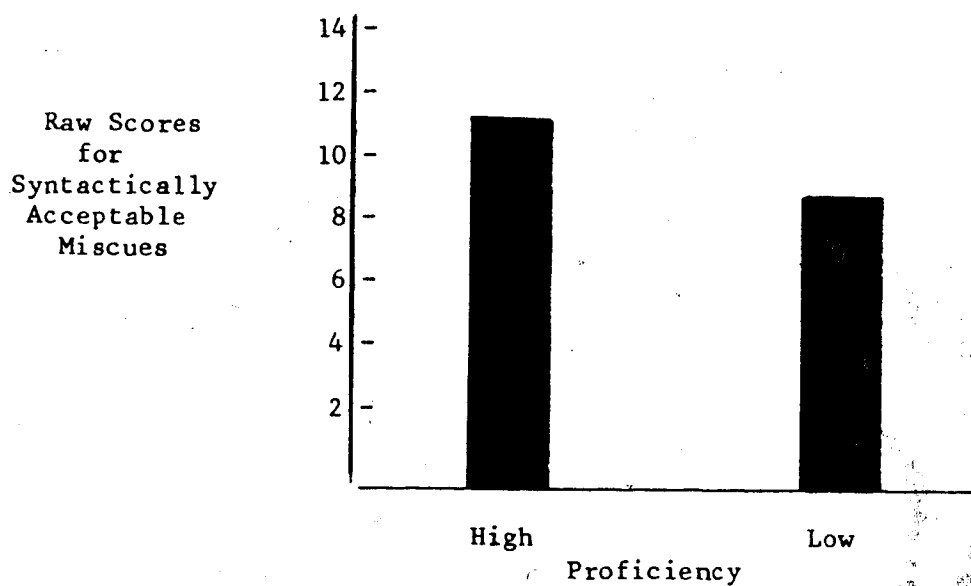Acceptable
Miscues

High   Low
Proficiency

Figure 4

Raw Scores for Miscues that are Syntactically Acceptable
to the Text with Reference to Proficiency

that are syntactically acceptable to the text, could not be rejected. This result lends credence to the findings of prior research where it was found that the proportions of syntactic miscues tend to increase as readers become more proficient.

Y. Goodman (1967) found that the "average readers had a higher percentage of miscues which did not involve changes in syntax and meaning than the slower readers" and that "although the children showed great fluctuations from month to month the overall pattern (of syntactically acceptable miscues) ...was in an upward direction".

Jensen (1972) also found the proficient readers to make more miscues which were syntactically acceptable, as did Cohen (1974) and Biemiller (1970, 1979). Although Weber (1970a) did not find a signifi-cant difference between the number of miscues which were made by her high and low reading groups, she did find a large proportion of the miscues to be grammatically acceptable, indicating that even beginning readers "use the constraints of preceding grammatical context to reduce the range of responses" (p. 443).

Semantic Acceptability

The results from the analysis of variance showed a significant difference between the number of miscues semantically acceptable to the text for proficient and less-proficient readers (Figure 5). Thus, Hypothesis 3, which states that proficient readers will make signifi-cantly more miscues that are semantically acceptable within the text, could not be rejected.

Raw Scores for Semantically
Acceptable Miscues

High Proficiency	7.50
Low	2.19

Raw
Scores

$F = 49.245$ (df $= 1,28$) p .000

Bar Graph of Raw Scores for
Semantically Acceptable Miscues

Raw Scores
for
Semantically
Acceptable
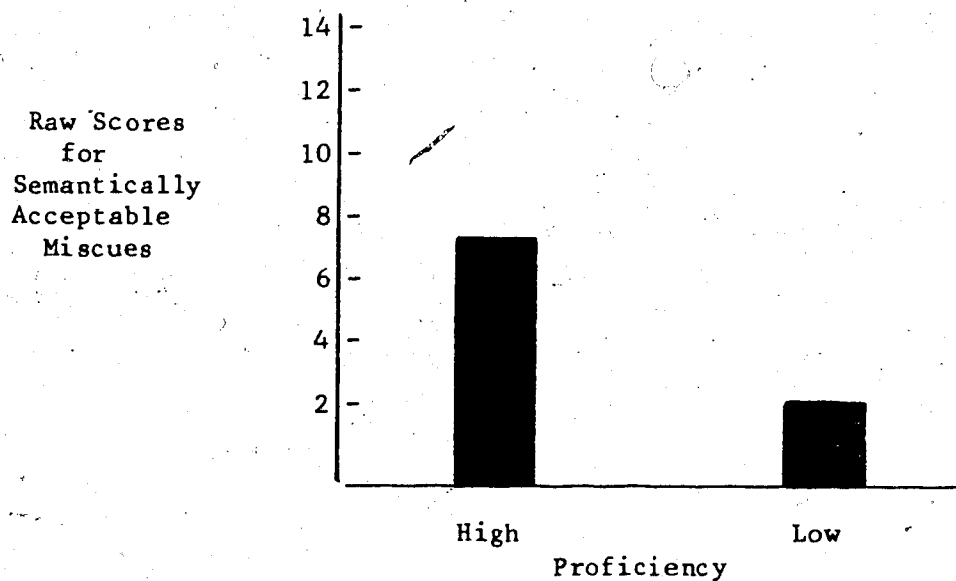Miscues

High   Low
Proficiency

Figure 5

Raw Scores for Miscues that are Semantically Acceptable
to the Text with Reference to Proficiency .

Semantic acceptability is dependent on syntactic acceptability in that the meaning of language cannot be processed independent of syntax. If a miscue is not syntactically acceptable it cannot be semantically acceptable. Proficient readers who produce more miscues that are more acceptable syntactically should then be able to produce more miscues that are acceptable semantically, thus indicating an integration between the two cueing systems. From Figures 4 and 5, it is evident that the proficient readers in this study did produce significantly more miscues which were syntactically and semantically acceptable than the less proficient readers. This proportion of high quality miscues suggest that good readers constantly integrate their backgrounds with that of the author as if they are putting the author's ideas into their own language.

In her study, Y. Goodman (1967) found that the average readers also had a greater number of semantically acceptable miscues, and thus expressed the idea that they were better able to integrate the two cue systems. This integration of proportions between the semantic and syntactic cue systems was also noted by Weber (1970a) who stated that "clearly, the contextual constraints within sentences were operative in shaping readers' responses, but the semantic aspects could not be separated from syntactic aspects through the analysis of errors" (p. 449).

Correctional Behavior of Proficient and Less Proficient Readers

In order to establish if there were differences in the correctional behavior between the two proficiency groups, an analysis

of variance test was run on the number of corrections made by each group. The results indicated a significant different between the groups, and the raw scores and the F values for miscues corrected by proficient and less proficient readers are presented and graphically illustrated in Figure 6. A breakdown of when the children corrected miscues is given in Table V.

On the basis of these results, Hypothesis 4, which states that proficient readers will correct significantly more miscues than less proficient readers, cannot be rejected. Correction attempts by a reader indicate that the child is monitoring his predictions in order to confirm them. If, by subsequent language cues, the reader's prediction is disconfirmed, the reader must go back and reprocess the language cues more carefully in order to obtain sufficient information to make an accurate prediction. Attempts to correct also indicate that the reader is aware of the structure of the language and is getting meaning from the print. Corrections are a natural part of the reading process and are indicative of the strengths a reader has.

The children in this study corrected 227 of their miscues. This represents approximately 28% of the total miscues made. Of these, 145 were corrections made by the proficient readers and 82 were made by the less proficient readers. This difference was found to be statistically significant. Past research by Clay (1968) and Weber (1970b) has also found this to be true.

The majority of the corrections for both groups occurred in miscues which were syntactically acceptable to what was read prior to the miscue but did not fit the remainder of the sentence. The

Raw Scores for
Miscues Corrected

High

Proficiency

Low

9.06	
5.13	

Raw
Scores

$F = 9.877$ (df = 1,28) p   .004

Bar Graph of Raw Scores for
Miscues Corrected
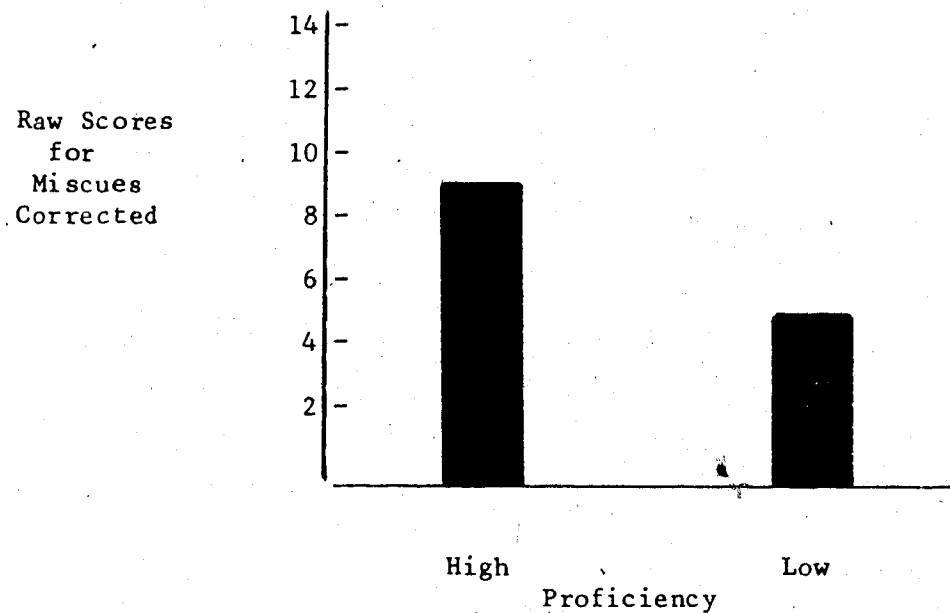
Raw Scores
for
Miscues
Corrected

High   Low
Proficiency

Figure 6

Raw Scores for Miscues Corrected
with Reference to Proficiency

Table V

Number of Miscues Corrected by Proficient and Less
Proficient First Grade Readers on the Miscue
Categories

| | | | Dependent Variables | | |
Group	Graphophonically Not Similar	Syntactically Not Acceptable	Partially Syntactically Acceptable	Semantically Not Acceptable	Total
Proficient	28	35	65	17	145
Less Proficient	14	16	44	8	82

proficient readers corrected a greater proportion of these kinds of miscues, although in actual numbers, they had made fewer miscues that were partially acceptable than the less proficient readers. The proficient readers also corrected more syntactically unacceptable miscues than the less proficient readers; which indicated that the proficient readers were more aware of the structure of the language and how it works. These findings are similar to those found by Y. Goodman (1967) in her study of beginning readers. Results of the present study show that proficient readers corrected more miscues which were acceptable syntactically and semantically, but not graphophonically similar. This suggests that the proficient readers were paying close attention to the graphic and phonetic aspects of their utterances as well. As previously mentioned, this high utilization of graphophonic cues by the proficient readers may be due to the level of difficulty of the passage. It is logical to suspect that with a shift towards greater use of graphophonic cues comes a shift in the correction of the number of miscues which are not graphophonically similar to the text.

Results of the miscue analysis showed that both groups seldom corrected miscues that were not semantically acceptable or were semantically acceptable only with the portion of the sentence that preceded the miscue. Miscues which did not fit the sentence structure or did not resemble the text in their phonetic and graphic aspects were corrected more often than miscues which did not produce a meaningful utterance. Both groups seemed to think that it was more important to correct miscues which did not sound like language, than to correct miscues which were not meaningful.

COMMON PATTERNS FOUND IN MISCUES

To determine the extent to which beginning readers utilized only one or two of the language cueing systems, another analysis of the data was conducted. Whereas the traditional miscue analysis found that the three systems were operating in various degrees for both reading groups, it was unable to focus on reading strategies in which only one or two of the systems were operating. In studying the degree to which various language systems are utilized, researchers are better able to distinguish on which systems a reader's strategies are primarily based.

In order to determine whether the sample population utilized the three language systems independently or in association with other systems, the three miscue categories were grouped into various patterns. The same coding of miscues, either similar and acceptable fully, partially or not at all, was used. The number of miscues which corresponded to each pattern was recorded and analyzed descriptively.

The patterns for these miscue categories and the number of each that occurred are found in Table VI. Miscues in which two of the language systems are operating together, while the third system is not utilized at all, are represented by patterns 1 and 2.

Pattern 1 indicates miscues which show no similar graphophonic features to the expected response but are acceptable syntactically and semantically, either fully or partially. This pattern occurred in 162 of the 800 miscues produced by the sample population. Both proficient and less proficient readers produced and corrected approximately the same number of miscues within this category. Although this type of

Table VI

Miscue Category Patterns and Totals of Miscues for
Beginning Readers

Miscue Category Patterns			Proficient		Less Proficient		Total	
Grapho.	Synt.	Sem.	Miscues	Corrected	Miscues	Corrected	Miscues	Corrected
1. N	Y/P	N	78	28	84	22	162	50
2. Y/P	Y/P	N	29	6	51	7	80	13
3. Y/P	N	N	49	22	74	15	123	37
4. N	Y/P	N	5	0	11	0	16	0

Y - Yes the miscue is similar or acceptable
P - the miscue is Partially similar or acceptable
N - No the miscue is not similar or acceptable

pattern represents only 20% of all miscues produced, it does demonstrate that although young readers utilize the syntactic and semantic cues found in print they may not always attend to the graphic features of the expected response, not even the initial consonant.

Since the ultimate purpose of reading is to grasp the author's intended meaning, miscues of this type are not considered as serious as other types. However, if the majority of a reader's miscues correspond to this pattern, exercises should be given in which the reader must attend to the graphophonic features found in print. One such activity may be the leaving out of various words within a passage and replacing them with only the initial consonant. As the reader progresses through the passage, he must predict, on the basis of syntactic and semantic cues, what the missing word is. However, he must attend to the given consonant in order to narrow his predictions down to those words which begin a certain way.

Pattern 2, which is shown in Table VI, indicates miscues which are coded as graphophonic similarity and syntactic acceptability, either fully or partially, but are not acceptable semantically. This pattern was found in 80 of the 800 total miscues. Although this figure represents only 10% of the total miscues produced, the number of this type of miscue produced by proficient and less proficient readers is notably different. Over 60% of the miscues which show a reliance on only the graphophonic and syntactic cues found in print were produced by the less proficient readers. This finding indicates that this group was attending more to the way a response looked and sounded, rather than to how meaningful it was. This result supports the earlier

discussion of data which found that the less proficient readers

produced fewer miscues which were semantically acceptable to the text.

Readers who display a significant number of miscues which show an

overreliance on graphophonic and syntactic cues, and are not attending

to meaning, need to be encouraged to ask themselves "Does this make

sense?" Examples of exercises to help readers better utilize semantic

cues are found in Chapter 5.

Note that the third logically possible pattern in which there

could be two interacting categories, Y/P N Y/P, does not occur for

the reason noted on page 37; semantic acceptability does not occur

independently of syntactic acceptability.

Patterns in which only one system in apparently utilized were

also analyzed. Pattern 3 on Table VI indicates that 123 of the 800

total miscues were similar in some degree to the expected response but

were not acceptable either syntactically or semantically. The young

readers appeared to solely attend to the graphophonic features of the

unknown word, while ignoring the syntactic and semantic cues around

it. For example

Text	Reader
until it's <u>hatched</u>	until it's <u>hatches</u>

The less proficient readers produced approximately 60% of this miscue

pattern and corrected only about 20% of them, while the proficient

readers produced close to 40% and corrected almost half. As mentioned

previously, activities to help readers focus in on syntactic and

semantic cues are discussed in Chapter 5.

Pattern 4, in which only the syntactic system was utilized either fully or partially, represented the fewest miscues. Only 16 of the 800 miscues fit into this pattern and it should be noted that neither the proficient or less proficient readers corrected miscues corresponding to this pattern. This type of miscue was often a nonsense word such as;

Text	Reader
pairs of new shoes	pairs of won shoes

Again, exercises focusing on the semantics cues found in print are necessary when such a strategy is utilized. .

The remainder of the miscues can be classified into two remaining patterns; the first where a miscue is not similar or acceptable at all, N N N, such as in a wild guess, and the second where a miscue is similar or acceptable either fully or partially for all three systems, Y/P Y/P Y/P. Miscues found within this last pattern are the most desirable, since they indicate that the reader is employing a strategy in which all three language systems are utilized. For the young readers in this study, this pattern occurred in approximately 389 of the 800 total miscues (49%). As well, over 50% of the corrections which took place for all young readers, occurred within this pattern.

SUMMARY

Strategies for Beginning Readers

Results indicate the young readers in this study brought their knowledge of how language works to the reading task. Close to 32% of the children's miscues were fully acceptable syntactically with the text and another 45% were acceptable within the portion of the sentence that preceded the miscue. The rate of correction for partial miscues was 40%, indicating that the children knew how language should sound and were often able to detect and correct syntactic structures when they were not acceptable.

Half of the young readers' miscues were highly similar phonetically and graphically to the text, with almost another 25% resembling the text in at least one part. The heavy reliance on graphophonic cues may be related to maturity and/or to the level of passage difficulty.

The least used cue system was the semantic. Only 19% of the children's miscues were fully acceptable semantically within the text, while 48% of them were acceptable to the sentence portion that preceded the miscue. One possible reason for the beginning readers not utilizing the semantic cues as well as they utilized the graphophonic and syntactic cues may be due to the large number of possible meaning relationships semantic cues hold. Depending on the concept development and vocabulary of the child, utilizing the semantic cues in order to reconstruct meaningfully the author's message may be a difficult task.

Differences between Proficient
and Less Proficient Readers

There were no significant differences between reading levels on

the number of miscues which were graphophically acceptable to the

text. However, the results of the analysis of variance did show

significant differences between the proficient and less proficient

readers in the number of miscues that were syntactically and

semantically acceptable within the text. These results indicate that

the proficient readers were better able to utilize the syntactic and

semantic cues in order to produce miscues which were acceptable to the

story.

Although prior research has shown that proficient readers rely

significantly less on graphophonic cues, the proficient readers in this

study did not follow this pattern. This may have been due to the level

of difficulty of the passage they were asked to read orally. It is

possible that the proficient readers had to shift their strategy and

make greater use of the graphophonic cues.

Significant differences in syntactic and semantic cues indicate

that the proficient readers were better able to use their knowledge of

language to predict acceptable sentence structures. As a result, it

was possible for them to integrate the two cue systems in order to

grasp the meaning of the language and produce more miscues which were

also semantically acceptable in the text.

There was a significant difference in correction behavior between

the proficient and less proficient readers. Proficient readers

corrected more miscues which were not syntactically acceptable or were

acceptable only with the portion of the sentence that preceded the miscue. As well, they corrected more mistakes which were acceptable syntactically and semantically, but were not graphophonically similar to the text. Very few miscues which were syntactically acceptable but semantically unacceptable were corrected by either group. This suggests that both groups thought it more important to correct miscues which did not sound like language, rather than correct miscues which were not meaningful.

Common Patterns Found in Miscues

An analysis of data revealed that several major patterns occurred for the miscues produced by the sample population. The majority of miscues fit a pattern in which the miscue was similar or acceptable either fully or partially for all three language cueing systems. Miscues which corresponded to a pattern such as N Y/P Y/P or Y/P N N, each represented approximately 20% of the total miscues, however proficient readers corrected almost half of their miscues which were unacceptable syntactically and semantically. This was not true for the less proficient readers. Miscues which fit the pattern Y/P Y/P N, accounted for 10% of the total miscues, while miscues corresponding to the pattern N Y/P N, were found in only 2% of sample population miscues.

Results from these patterns indicate that the beginning readers in this study utilized several strategies when they processed print information and that these strategies varied in the degree to which they were utilized.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

This chapter contains a brief summary of the study, the main findings and conclusions, recommendations for further research and implications for reading instruction.

SUMMARY

The purpose of this study was to investigate the reading strategies grade one children employ in order to process print information. Differences between proficient and less proficient readers were also investigated to determine whether reading proficiency influences the strategies and utilization of language cue systems of young readers. The sample consisted of 16 proficient and 16 less proficient grade one readers from Edmonton Public Schools. Prior to the sample selection each child was individually given the Diagnostic Reading Scales test (Spache) to determine their instructional reading level. Sixteen of the children who scored between 3.8 and 4.5 on the Diagnostic Reading Scales were chosen randomly as the proficient readers while sixteen of the children who scored between 1.6 and 2.3 on the test were chosen randomly as the less proficient readers. Each child in the selected sample was then individually asked to read orally a lengthy passage corresponding to his instructional level. Miscues

produced by the child during this reading were recorded and later coded using a modified version of the Reading Miscue Inventory. The data were then analyzed both descriptively and statistically.

FINDINGS AND CONCLUSIONS

Strategies of Beginning Readers

Research Question 1

Do the miscues of beginning readers indicate a strong reliance on the syntactic cue system to identify unknown words?

The results of this study show that the majority of the miscues made by the beginning readers were acceptable syntactically to the text, either totally or partially. Approximately 32% of the children's miscues were totally acceptable syntactically, while another 45% of the miscues produced by the children were acceptable syntactically to the portion of the sentence that preceded the miscue. Miscues which are partially acceptable syntactically indicate that the young readers utilized the syntactic cues within the sentence to predict what they would be reading next. When predictions failed to produce a structurally acceptable sentence, the children often corrected the miscue so the response was structurally correct. Approximately 40% of the miscues which were partially acceptable syntactically were corrected by children as they read. This correctional behavior further indicates that the beginning readers in this study utilized the syntactic cues to help process print information.
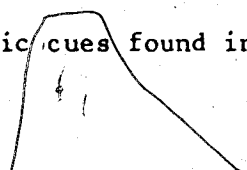
Research Question 2

Do the miscues of beginning readers indicate that the syntactic cue system is utilized to a greater degree than the graphophonic cue system?

The data for this study shows that the beginning readers did not utilize the syntactic cue system to a greater degree than the graphophonic cue system. The children in this study relied on the graphophonic and the syntactic cue systems to the same extent. Although prior research has suggested that young readers rely mainly on the syntactic cues system to process print information, results from other studies indicate that as beginning readers are confronted with more difficult material, their reliance on the graphophonic cueing system increases. The heavy reliance on graphophonic cues for proficient readers in this study may be due to the level of difficulty of the passage they read orally. It is possible that the proficient readers found it necessary to shift their reading strategies and place a heavier reliance on the graphophonic cues to aid them in processing print.

Research Question 3

Do the miscues of beginning readers indicate that the syntactic cue system is utilized to a greater degree than the semantic cue system?

An analysis of results show that the beginning reader in this study utilized the syntactic cue system to a greater degree than the semantic cue system. The young reader, as an oral language user, has considerable knowledge of how language works and uses this knowledge along with the syntactic cues found in print, to predict how sentences

will be structured. As sentences are generated from a finite set of rules and structures, the syntactic structure of a sentence is quite predictable. However, as there numerous meaning relationships which can occur in a sentence, few beginning readers have the prior knowledge, concepts or vocabulary necessary to cue into the semantic aspects of a sentence in a manner which will assist them in predicting the author's intended meaning.

Strategies of Proficient and
Less Proficient Readers

Hypothesis 1 -

Proficient readers will make significantly more miscues that are graphophonically similar to the expected response than will less proficient readers (Rejected).

No significant differences in means were found between the phonetic and graphic similarity of miscues for proficient and less proficient readers. Although prior research has found that as readers become more proficient they rely less on graphophonic cues, it has also been found that proficient readers shift to a greater use of graphophonic cues when the reading material becomes more difficult. Passage difficulty may account for the extent to which the proficient readers in this study used the graphophonic cues.

Hypothesis 2

Proficient readers will make significantly more miscues that are syntactically acceptable to the text than will less proficient readers (Not Rejected).

Results indicated that proficient readers produced more miscues which were syntactically acceptable to the passage than did less proficient readers. These results support the findings of prior research, which have indicated that proficient readers are better able to use the grammatical context cues found in sentences in order to produce syntactically acceptable sentences in this oral reading.

Hypothesis 3

Proficient readers will make significantly more miscues that are semantically acceptable to the passage meaning than will less proficient readers (Not Rejected).

An analysis of miscues showed that proficient readers produced more miscues that were semantically acceptable to the passage meaning. Semantic acceptability is dependent on syntactic acceptability, in that the meaning of language cannot be processed without syntax. Readers who produce syntactically acceptable miscues are therefore more likely to produce miscues that are also semantically acceptable. This integration of the syntactic and semantic cueing systems is evident in the results of this study, as proficient readers did make significantly more miscues which were acceptable both syntactically and semantically, than did the less proficient readers.

Hypothesis 4

Proficient readers will correct significantly more miscues than less proficient readers (Not Rejected).

A significant difference in the mean score for proficient and less proficient readers was noted. Proficient readers corrected more miscues than did the less proficient readers. These corrections

occurred mainly in miscues that were acceptable syntactically to what the reader had read up to the point of the miscue, but not beyond. As well, they corrected more miscues that were totally unacceptable syntactically, and partially or totally unacceptable semantically.

Common Patterns Found in Miscues

Analysis of the data indicated that the miscues produced by the sample population corresponded to several patterns. These patterns were generated by the degree to which miscues were graphophonically similar or syntactically and semantically acceptable to the text. Miscues which were similar or acceptable either fully or partially for all three cueing systems accounted almost half of the total number of miscues produced by the beginning readers. Results also indicated that 20% of the miscues corresponded to a pattern where no graphophonic features were utilized, yet the miscue still remained acceptable syntactically and semantically. Another 20% of the miscues fit a pattern where only the graphophonic features were attended to. Of this type, the proficient readers corrected almost half of their miscues. Further results showed that only 10% of the miscues corresponded to a pattern where only the graphophonic and syntactic cues were utilized, while miscues which attended only to syntactic cues alone, represented 2% of the total number produced.

RECOMMENDATIONS FOR FUTURE RESEARCH

This study investigated the reading strategies of young children near the end of their first year of formal schooling. Strategies employed by the children were established on the basis of miscues they produced on a story passage which they read orally. Strategy differences due to the proficiency levels of the children were also examined. On the basis of the findings and results of this study, the following recommendations are made to future investigators of those areas:

1. The sample of children should be selected soon after the start of their first year of formal reading instruction and followed through their school year. Samples of the children's oral reading might be taken periodically (every four months) so that the investigator not only can investigate their reading strategies at any one point in time, but also note changes or developments in their reading strategies.

2. The children in the sample might be asked to read various print material (stories, directions, content material such as their science texts) in order to investigate whether beginning readers utilize different strategies when reading various types of materials.

3. In light of additional information on reading strategies resulting from the analysis of miscue co-occurring patterns, future research might pursue the question of the independence or interdependence of the three language cueing systems in young

reader's strategies.

The results of this study support earlier findings which showed that although beginning readers utilized all three language cueing systems to process print information, they relied more heavily on the syntactic and graphophonic cues than on the semantic cues (Goodman, 1967; Clay, 1968; Weber, 1970a). Yet, when the proficiency of the young readers was examined, results showed that proficient readers utilized the syntactic and semantic cues inherent in written language significantly more than did less proficient readers. Past studies by Goodman, 1967 and Carson, 1979 reported similar findings.

Reasons as to why some children utilize the cues found in the syntactic and semantic structures better than others is still open for futher investigation. Possibly it stems from preschool experiences, classroom instruction, the developmental progress of the child or perhaps from all three areas. Continuing examination of children's learning strategies is needed if educators wish to provide better reading instruction in the futur

Influence of the instructional Program
on Reading Strategies

As mentioned in Chapter I, one of the original intents which was seriously pursued by the researcher was to investigate the influence of the type of instructional reading program on the strategies of young children. Results from several studies indicate that the strategies readers employ and the degree to which the three language cueing systems are utilized by them are influenced by the instructional method

of reading (Barr, 1972; Dank, 1976; DeLawter, 1975; Elder, 1971; Ramig and Hall, 1980). The original design and data analysis of this research included this aspect and the statistical procedure, a two-way analysis of variance, was chosen in order to examine the degree of influence between the type of reading program and the level of reading proficiency.

When the application for classrooms was made to Edmonton Public Schools, criteria set by the researcher indicated that selected classrooms have reading programs based on either phonetic principles (sound/symbol association) or on the children's knowledge of language and past experiences (whole language approach). When school visitations were made, it was found that the selected classrooms were actually eclectic in nature and did not emphasize one type of program over another. This finding was supported when the statistical analysis from the two "supposed" types of classrooms showed no significant differences between them. As a result, this study was unable to pursue the investigation of program influence on the strategies of beginning readers.

The researcher remains convinced that findings of past studies warrant further attention in this aspect with regard to reading programs presented to children. In past studies it was found that children taught reading through a phonetic approach had a higher proportion of non-responses and nonsense words than children taught by other methods (Barr, 1972; Cohen, 1974; DeLawter, 1975; Dank, 1976). They attempted to use a strategy which utilized phonetic cues and when this strategy failed the children elected not to respond. This finding

was especially true for children who were poor readers (Cohen, 1974).
Better readers in Cohen's study combined information cues provided by
context along with selective sampling of letters much earlier than
poorer readers and continued to develop this strategy further as the
year progressed. Children taught by a decoding method appeared to
overuse the decoding strategy, whereas children taught by a meaning
approach did not rely on any one strategy (DeLawter, 1975; Dank,
1976). As well, children taught by a meaning approach generated more
miscues which were semantically acceptable and had a better
understanding of what they read.

As a result of this experience with the difficulty in finding
classrooms which emphasized a particular methodology, several
suggestions for future research in this aspect are given:

1. Specific definitions and criteria should be established for the
   type of reading program and classroom which are to be selected.
   As classrooms seldom display any methodology in its purest form,
   criteria must be set in order to make the two types of classrooms
   to be studied as divergent as possible.

2. The types of instructional reading programs and the classroom
   should be established at the beginning of the school year. As
   the school year progresses the programs need to be monitored to
   ensure they continue to maintain the criteria set by the research.

IMPLICATIONS FOR READING INSTRUCTION

Although beginning readers utilize information from the three language systems, they appear more concerned with producing responses which look and sound like the expected form, rather than producing responses which are meaningful to the text. This has been shown, not only from the findings of this study but from previous research conducted on this topic. Since the ultimate purpose of reading is to reconstruct the author's intended message, strategies which rely heavily on graphophonic and syntactic cues may hinder the comprehension of print materials. Emphasis on producing meaningful responses is an important component in reading instruction to ensure that readers integrate all the language systems effectively.

Research has shown that proficient readers e█████ly integrate and utilize the information provided from all the language systems when processing print. They are especially good at combining syntactic and semantic cues to aid in their comprehension of stories. They monitor their responses not only for language but for meaning. This is indicated by their higher rate of correction for syntactically and semantically unacceptable miscues. Less proficient readers need to be guided in how to integrate their intuitive knowledge of language and their personal experiences as an oral language user along with meaningful information to aid them in their comprehension of stories.

Several ways in which the above task can be accomplished are given below.

Language Patterns

Most children's books contain patterns (syntactic structures) which provide young readers with the sounds and structures of language. It is these patterns which attract children to certain books and become their favorites, having to be read over and over again. These language patterns can provide rhythm:

> I Know an Old Lady Who Swallowed a Fly
> She'll Be Coming Round the Mountain
> Down By the Bay

Patterns can be repetitive:

> The Little Red Hen
> Three Billy Goats Gruff
> Happiness Is

Patterns can be cumulative:

> The House That Jack Built
> The Fat Cat
> The Great Big Enormous Turnip

As a child reads he will begin to sense the pattern of the story and will so start to predict what is to happen, both in language and plot. Gradually he will see, sense and learn what he must do when he reads.

Context Clues

When children read, they must continually think, anticipate and predict what the author's message could be. The utilization of context

clues provides the reader with information to assist him in making meaningful predictions. Sentences with given blanks, such as:

A _____ is red.
Happiness is _____.
There's a _____ in the _____.

provide children with clues that enable them to predict what words would fit into the blank spaces. Given responses should be confirmed to see if they make sense, and a discussion of words, both meaningful and non-meaningful will help children to begin to utilize context clues to make meaningful predictions.

Later longer passages may be used (close).

Blackie was a little _____. He had two pink ears, four white _____ and a long tail. _____ was called Blackie because his fur was _____.

In order for the blanks to be filled with meaningful responses the child must utilize the semantic cues found in the passage. Several responses are possible for each blank and should be accepted so long as they do not alter the meaning of the passage.

Predicting and Confirming for Comprehension

The process of predicting and confirming is the basis for story comprehension. However this process is a difficult and complicated task unless the reader can bring his own knowledge to the task at hand. Syntactic and semantic information given in the story will be more useful to the reader if he can combine prior experiences and

knowledge about the topic when making predictions. As well, the reader's knowledge of how language works and of how stories are structured further assist the reader in his task. When all these aspects are brought together the task of comprehending the author's message is not nearly as difficult.

When a story is to be read by a child, or his teacher, the child is asked to predict about the story based on limited information from the title, pictures or several introductory paragraphs, as well as what he knows about the topic. Questions asked might be:

What might this story be about?
What do you know about _____?
Who might be in this story?
Do you know any other stories that have _____ in them?

Each prediction is discussed to see if the child is utilizing information and his past experiences when forming predictions. Several pages of the story are then read before the child is asked to confirm his predictons;

Is this story about _____?
Did _____ happen?
What do you think will happen now?

Predictions which are not confirmed can be discussed and new predictions based on story information can be made. The story then continues. This procedure of predicting and confirming may occur several times within the selection depending on its length and structure. When the story is completed, a final discussion of the story can be made, either by reviewing the predictions made, or by

having the child retell the story in his own words. This final synopsis gives an indication of what degree the child has understood the message of the story. Depending on the child's background and his utilization of story information, his level of comprehension will vary from story to story.

The above are but a few exercises which can be used with young readers to promote the use of syntactic and semantic information found in print. A reference list of materials which deal further with the above exercises is found in Appendix C.

CONCLUDING STATEMENT

This research replicated past studies which found that beginning readers employed certain strategies and language cueing systems when reading. As little research had been conducted in Canada, especially the Western region, this study was undertaken in order to ascertain whether beginning readers from this region employed strategies similar to those found in research done in the United States and overseas. Results from the sample population in the present study indicate that young readers in Western Canada process print material much in the same manner as children in other countries, thus supporting the findings of previous research conducted in this area.

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APPENDICES

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APPENDIX A

Story Passage for Less Proficient Readers

The Woman and the Shoemaker

The Shoemaker

A long, long time ago, a little old man and a little old woman lived in a little old house.

In the house there was a shop where the little old man made shoes. The little old woman helped him. They were happy when they had made many shoes.

One night the little old man said to the little old woman, "We have no money. We must have money to get the leather to make the shoes. We can't make shoes without leather. What can we do?"
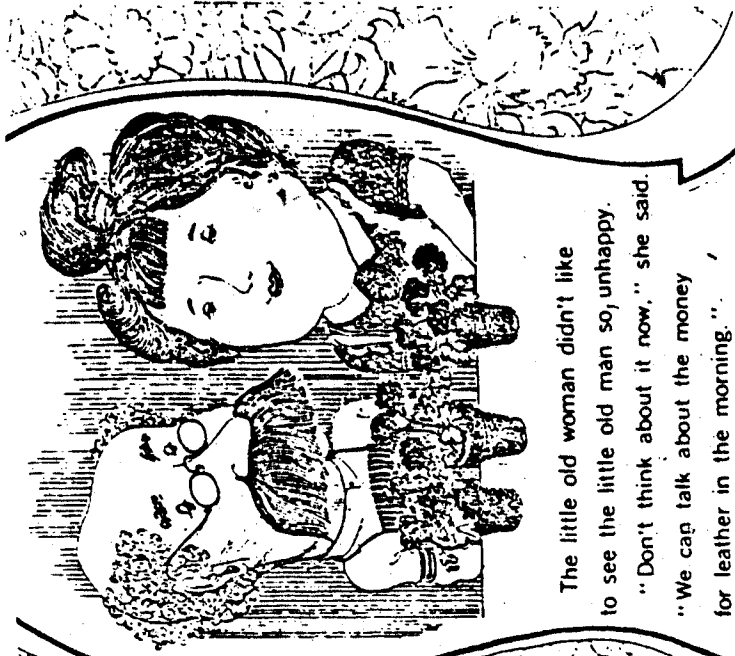
The little old woman didn't like to see the little old man so, unhappy. "Don't think about it now," she said. "We can talk about the money for leather in the morning." So the little old man and the little old woman went to bed.

In the morning the shoemaker
came down into his store. There
before him were seven new pairs of shoes.

"How can this be?" the shoemaker
asked the little old woman. "Last night
I had no leather to work with.
Today I find seven new pairs of shoes!
And they are well-made shoes too.
How can this be?"

That day people came into the shoemaker's
store. They liked the new shoes,
and they gave the shoemaker money for them.

Late that day the old man went out
to get more leather to make more shoes.
When he got back, he didn't have time
to make the shoes.

So the shoemaker went to bed.

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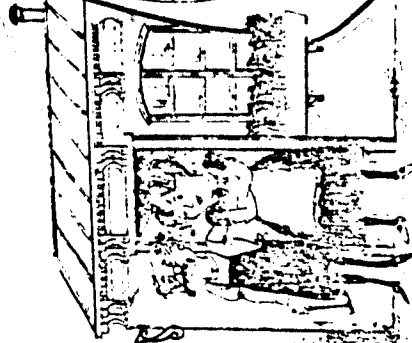
When morning came, the shoemaker was surprised again.

"What's this?" he asked.

"Again I find seven new pairs of shoes! How did they get here?"

Once more people came into the store for the shoes, and once more they gave the shoemaker money for them.

That night the old man talked with his wife.

"Tonight I won't go to bed," he said. "I'll stay up and see who comes to help me with my work."

"I'll stay with you," said the little old woman. "We'll watch and see who it is that works here for us."

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The Helpers

Soon the little old man and the little old woman saw something strange.

Seven little elves came into the store. The elves jumped about and sang. Then they began to work on the shoes. In no time at all they had made seven new pairs of shoes.

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All the next day the little old man
and the little old woman worked.
They made seven little red coats
and they made seven little pairs
of red shoes.
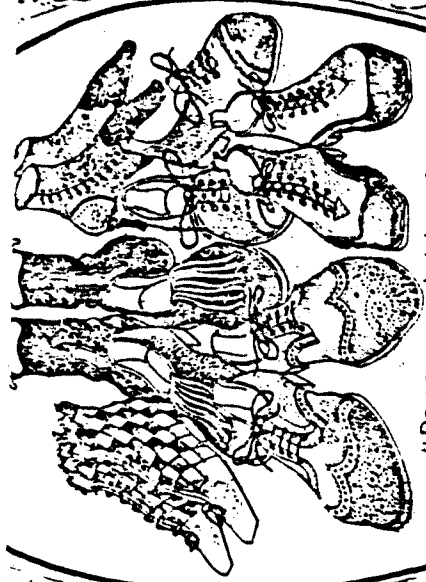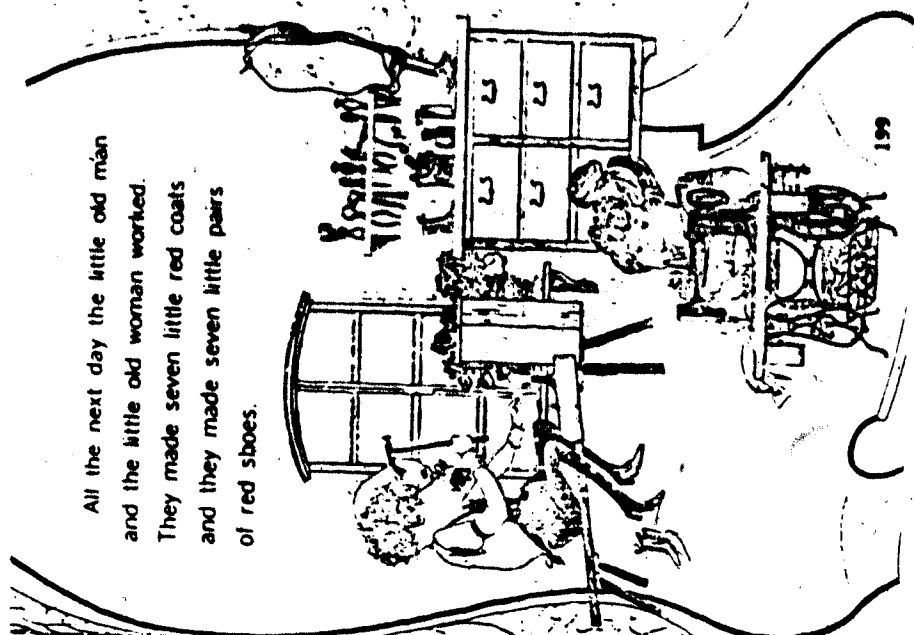
"Do you see what I see?"
asked the little old man.
"The elves have no coats
and they have no shoes.
But they did all this work for us!"

"I think we can help them,"
said the little old woman.
"I will make seven coats for them.
And you can make seven little pairs
of shoes."

"Let's hide and watch for the elves
to come," said the shoemaker.
So that is just what they did.
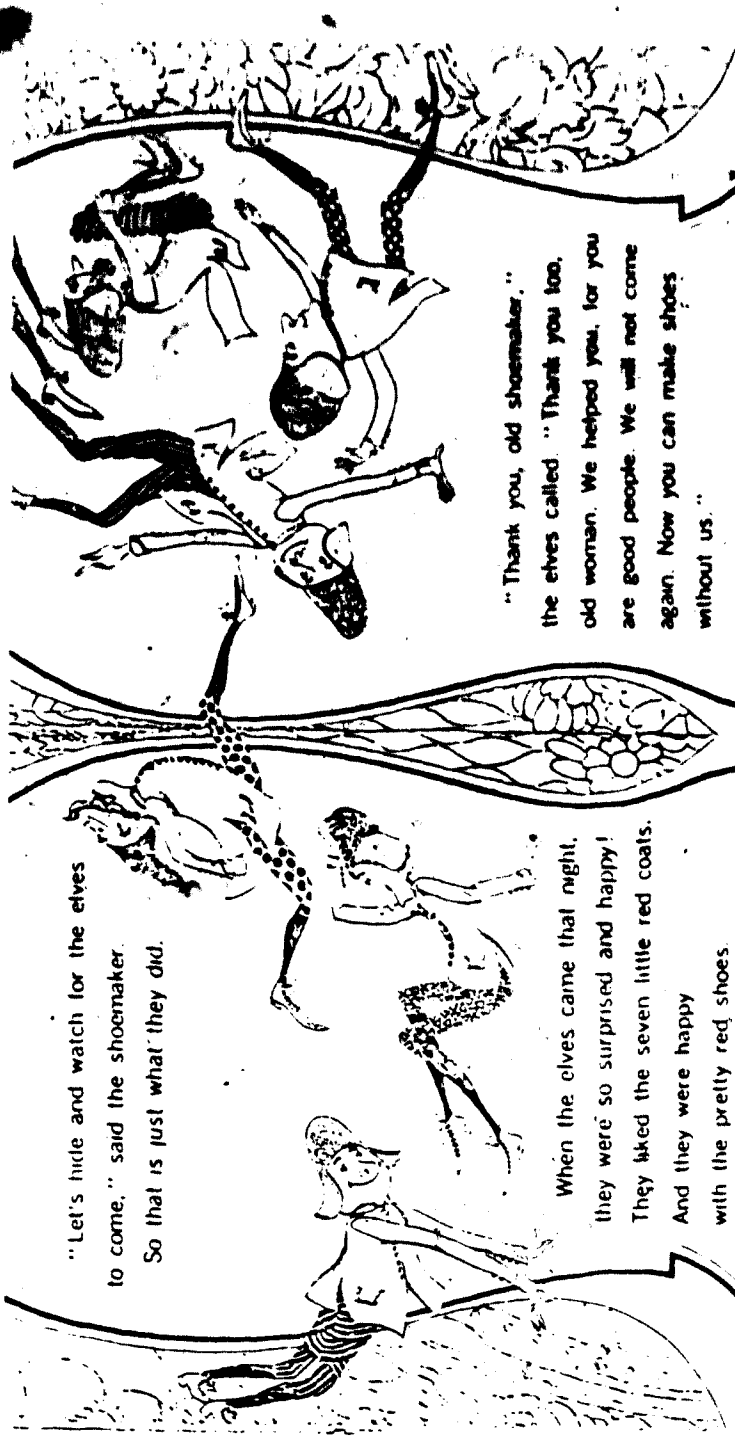
When the elves came that night,
they were so surprised and happy!
They liked the seven little red coats.
And they were happy
with the pretty red shoes.

The elves put on the new things
and jumped around and sang.

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"Thank you, old shoemaker."
the elves called. "Thank you too,
old woman. We helped you, for you
are good people. We will not come
again. Now you can make shoes
without us."

And no one ever saw the little elves,
not ever again.

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APPENDIX B

Story Passage for Proficient Readers

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When he played with his toys on the side porch, he put the clock box on the porch step, in the sun. When he ate supper, he set it under his chair. When he went to bed, he laid it next to his pillow.

"Can you tell me what you have in the clock box?" asked Joshua's mother, when she was tucking him in.

"Yes, I can."

"Well—what?"

"It's a dragon's egg," said Joshua.

"I see. . . . Joshua—is it really?"

"Yes, it is. Really," said Joshua, and went to sleep.

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THE DRAGON IN THE CLOCK BOX
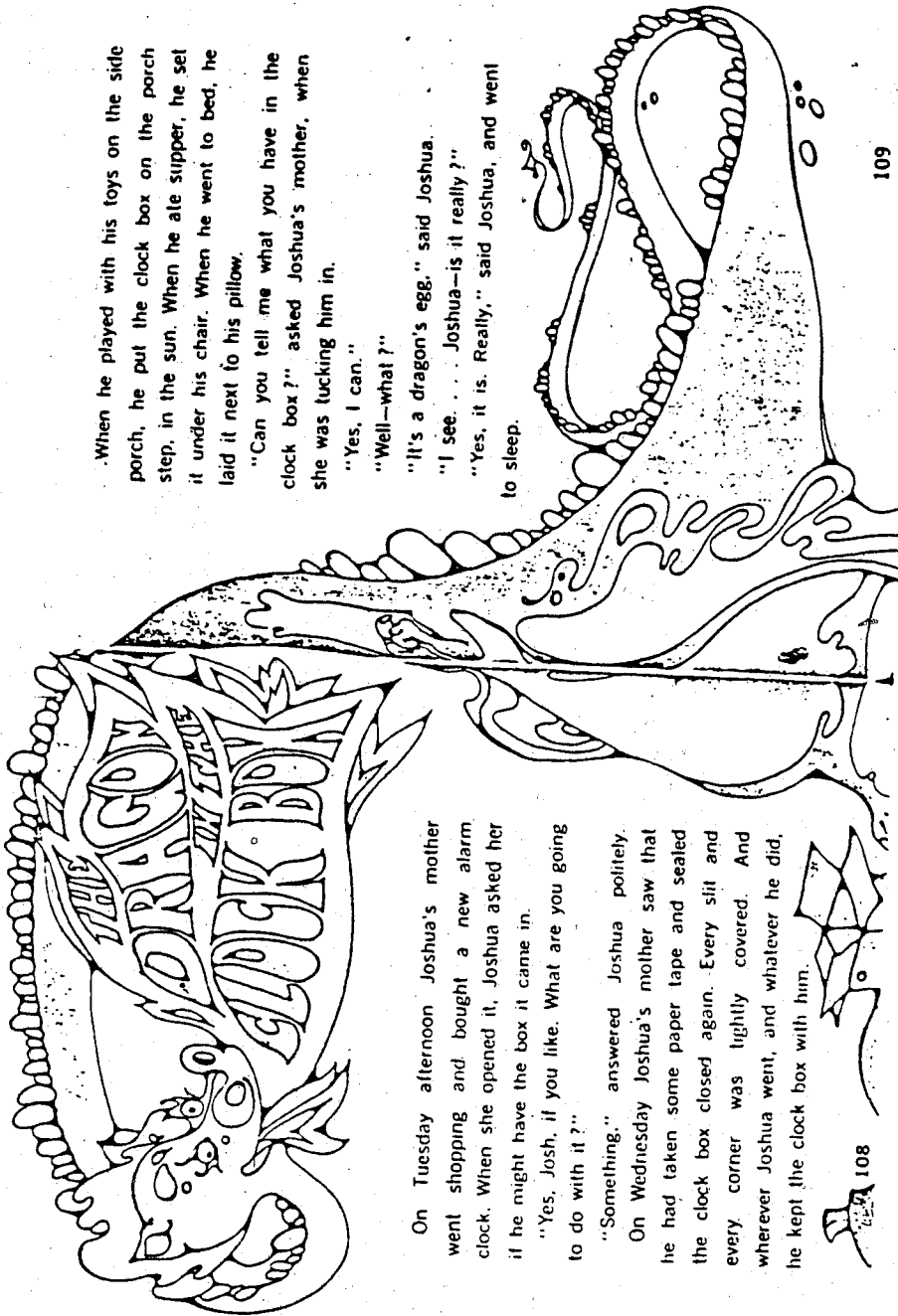
On Tuesday afternoon Joshua's mother went shopping and bought a new alarm clock. When she opened it, Joshua asked her if he might have the box it came in.

"Yes, Josh, if you like. What are you going to do with it?"

"Something," answered Joshua politely.

On Wednesday Joshua's mother saw that he had taken some paper tape and sealed the clock box closed again. Every slit and every corner was tightly covered. And wherever Joshua went, and whatever he did, he kept the clock box with him.

108
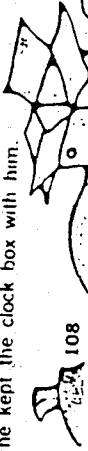
On Thursday, at breakfast time, Joshua's father asked him. "How is your dragon's egg doing this morning, Josh?"

"It isn't doing. It's just waiting."

"What on earth is it waiting for?" asked Joshua's big sister.

"For it to be time," answered Joshua. "I would like some toast, please."

"Time to hatch, I suppose?" Joshua's sister giggled as she passed him the toast.

"Yes, time to hatch," said Joshua, without smiling even a little bit. "I would like some jam on it, please."

"I hear you have a dragon's egg in that box of yours," said Joshua's big brother when he came home from high school late in the afternoon. "How did it get there?"

"The mother dragon laid it there," said Joshua. "Before."

"Before? What do you mean, before? Before what?" asked Joshua's big brother.

"Before I sealed it up, of course," Joshua explained to him, and he picked up the clock box and went out of the room with it.

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That evening Joshua's father wanted to know how any air could get into the box when it was taped shut.

"It doesn't need air yet," explained Joshua. "It just needs to be warm and quiet. Until it's hatched."
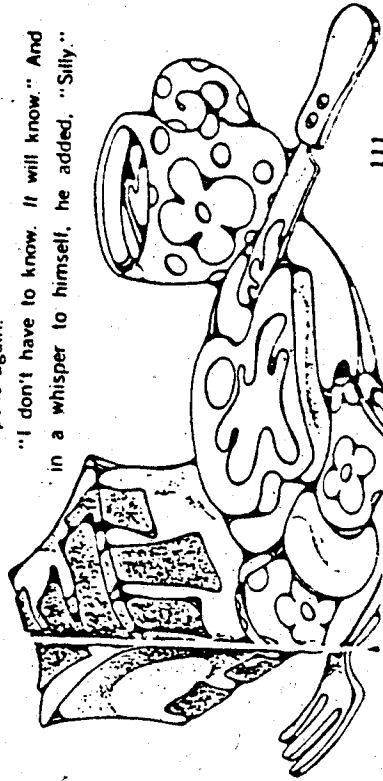
"When is it going to hatch?" asked Joshua's big brother.

"When it's ready to," Joshua told him.

"But how will you know when it's ready to?" Joshua's big sister asked him, not laughing this time.

Joshua looked at her for a minute before he spoke again.

"I don't have to know. It will know." And in a whisper to himself, he added, "Silly."

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On Friday morning Joshua came down to breakfast a little bit late. He put the clock box on the table close to his plate, instead of under his chair. There was a small, neat hole cut in one corner of it.

"He's a boy dragon," Joshua said to his mother as he sat down.

"He hatched. Last night. Very late."

"How can you tell?"

"It was time."

"Did you hear it?"

"Him, not it. No, he was very quiet. But it was time, and he was ready, so I knew. So I made a hole just now. Because now he needs air."
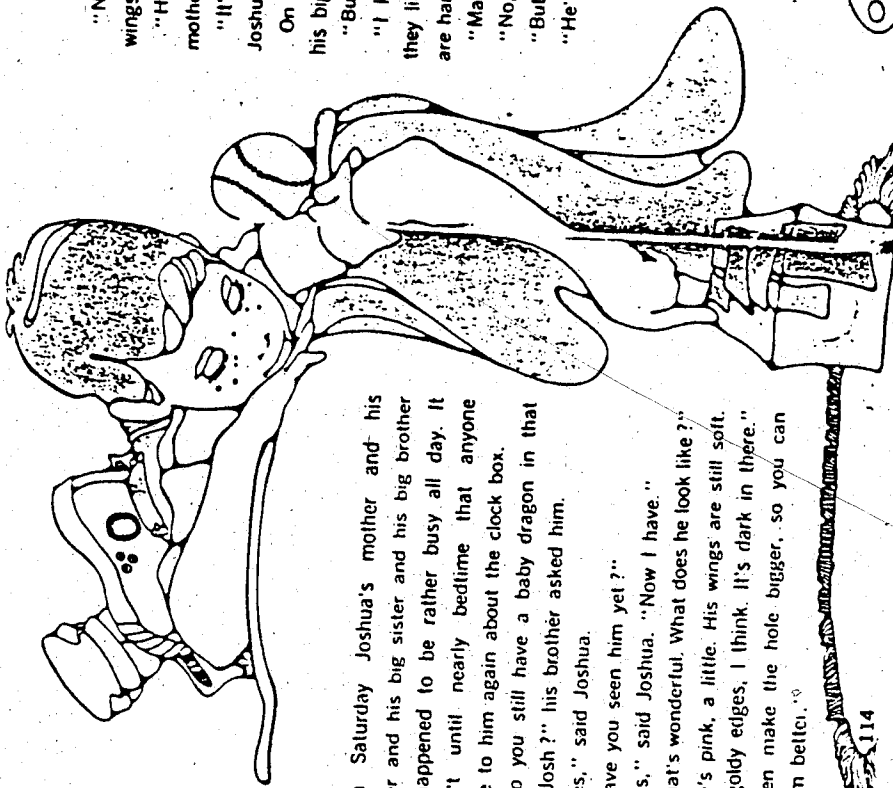
"And now you can peek through the hole to see what he's like," said Joshua's sister.

"I know what he's like. He's like a baby dragon. Just hatched."

"But you could look, just to be sure, couldn't you?"

"I am sure," explained Joshua. "And he doesn't want me to look yet. Because he's so young. He wants to be alone for a while."
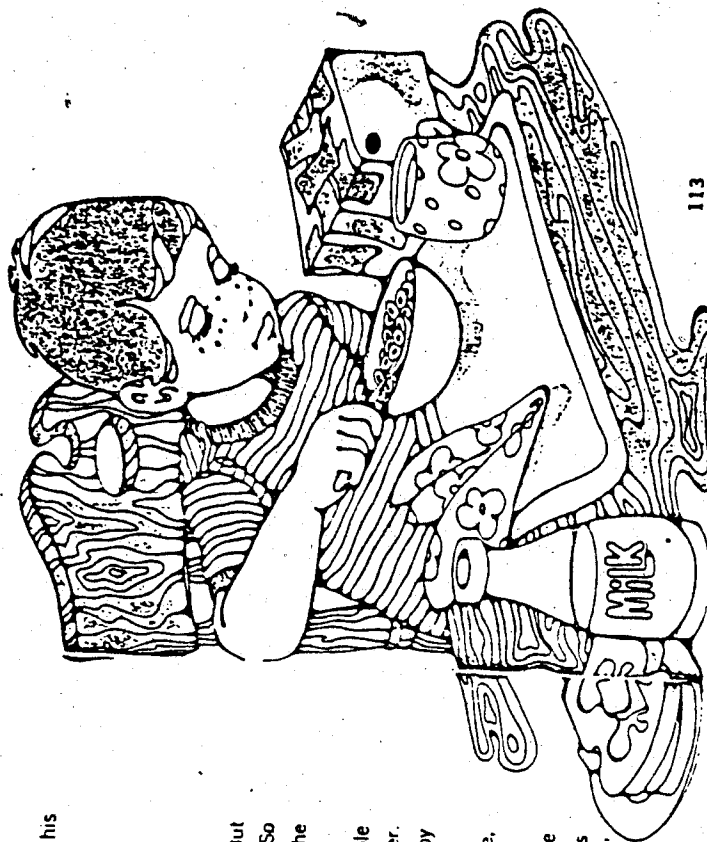
On Saturday Joshua's mother and his father and his big sister and his big brother all happened to be rather busy all day. It wasn't until nearly bedtime that anyone spoke to him again about the clock box.

"Do you still have a baby dragon in that box, Josh?" his brother asked him.

"Yes," said Joshua.

"Have you seen him yet?"

"Yes," said Joshua. "Now I have."

"That's wonderful. What does he look like?"

"He's pink, a little. His wings are still soft. With goldy edges, I think. It's dark in there."

"Then make the hole bigger, so you can see him better."

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"No, I can't. He wants it dark. While his wings are so soft it has to be dark."

"How do you know that, Joshua?" his mother asked him.

"It's always that way with dragons," said Joshua. "With baby-boy dragons."

On Sunday, just before lunch, Joshua told his big sister, "His name is Emmeline."
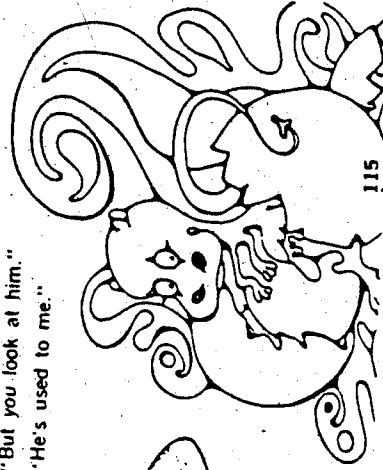
"But Josh, that's a girl's name!"

"I know, but he's a Chinese dragon. And they like to have girls' names. And his wings are hardly soft at all now."

"May I see him?"

"No, he's too shy."

"But you look at him."

"He's used to me."

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Monday evening Joshua's father asked him what he had been feeding the dragon.

"They don't eat when they're little," said Joshua. "Not baby dragons. Not while their wings are still even a little bit soft."

"Well, then, what are you going to feed him when his wings get strong?"

"I won't have to feed him then," answered Joshua, and he laid his hand gently on the clock box.

And then it was Tuesday again, and Joshua came to the breakfast table without the clock box. But everyone was in a hurry to start the day, and no one noticed.

It was later, when Joshua's mother was making his bed, that she saw the clock box on the floor. The tape had been torn off and the box was open wide. It was empty.

"Joshua! Your dragon's gone!"

Joshua was busy taking his marbles out of a bag, and he didn't even turn around when he answered her.

"He was big enough last night. And his wings were strong. He flew away."

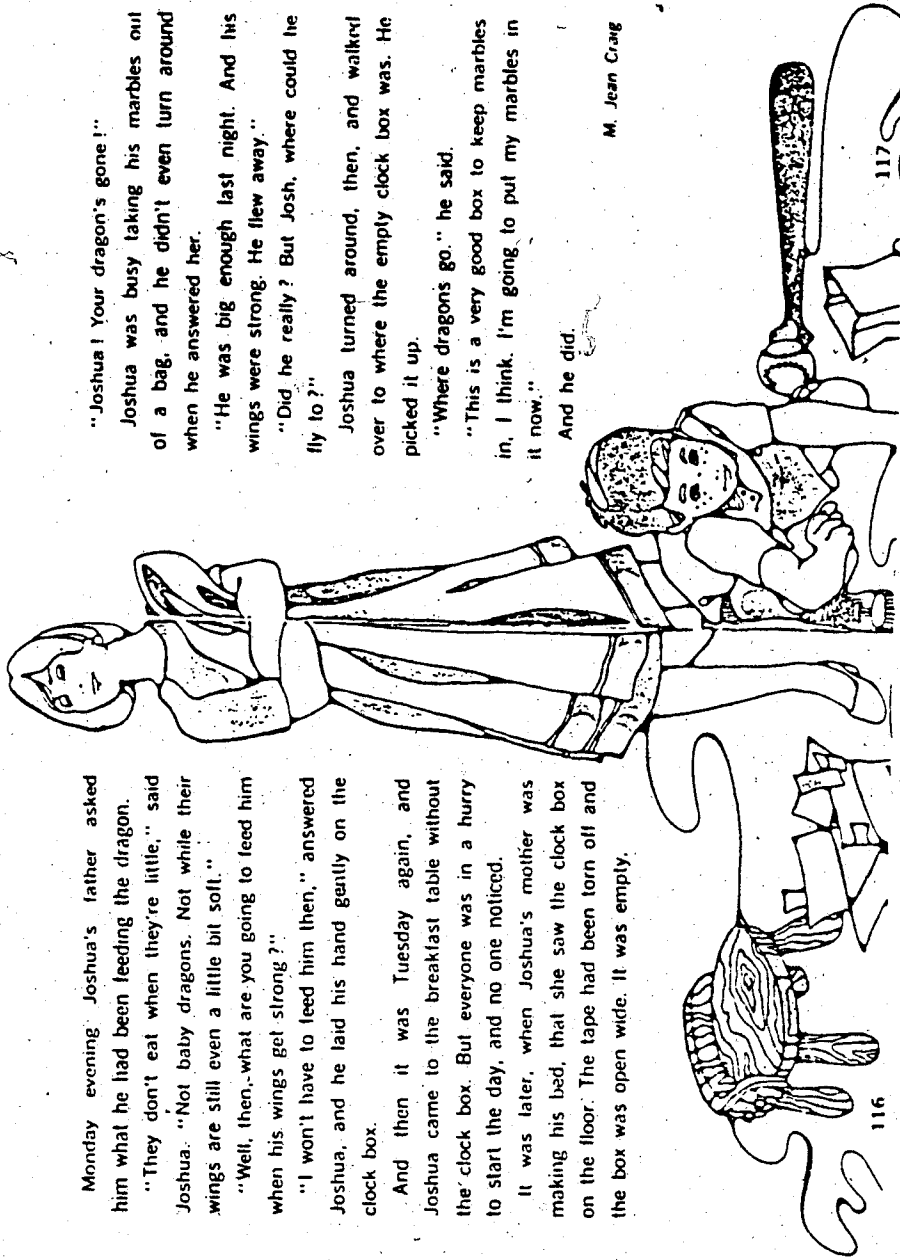"Did he really? But Josh, where could he fly to?"

Joshua turned around, then, and walked over to where the empty clock box was. He picked it up.

"Where dragons go," he said.

"This is a very good box to keep marbles in, I think. I'm going to put my marbles in it now."

And he did.

M. Jean Craig

APPENDIX C

Reference List of Materials for the Teaching
of Reading Strategies

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