

AN ANALYSIS OF THE ORAL READING ERRORS  
OF GRADE ONE PUPILS IN TERMS OF  
TWO TEACHING EMPHASES

by

Joy Alberta Bryce

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Department of Education

The University of British Columbia  
2075 Wesbrook Place  
Vancouver, Canada  
V6T 1W5

Date September, 1978

## ABSTRACT

This study examined differences in oral reading behaviour of 58 grade one children attending school in Richmond, B.C. Half the subjects received initial reading instruction through a phonics approach; half the subjects received initial reading instruction through a language experience approach. Among the findings were that subjects taught by the phonics approach, which emphasized letter-sound correspondence, produced more oral reading errors, more nonwords, and more substitutions with graphic and sound similarity to the response word than did children instructed by the language experience approach. Subjects taught by the language experience approach produced fewer errors and more substitutions syntactically and semantically acceptable, and more substitutions that did not alter the meaning of the sentence than the children instructed by the phonics approach. An analysis of the children's substitution errors for high, middle and low achievement groups was also discussed.

## TABLE OF CONTENTS

| Chapter   | Page |
|---|------|
| I. INTRODUCTION . . . . .   | 1    |
| Need for the Study . . . . .  | 2    |
| THE PROBLEM . . . . .   | 4    |
| Definition of Terms . . . . .                                       | 4    |
| GENERAL PROCEDURES . . . . .  | 7    |
| SUMMARY . . . . .   | 8    |
| ORDER OF PRESENTATION . . . . .                                     | 8    |
| II. RELATED RESEARCH . . . . .                                      | 10   |
| Background . . . . .  | 10   |
| Whole Word Approach . . . . .                                       | 13   |
| Phonics Approach . . . . .  | 17   |
| Comparison of Approaches . . . . .                                  | 18   |
| SUMMARY . . . . .   | 26   |
| III. DEVELOPMENT AND ADMINISTRATION OF THE<br>INSTRUMENTS . . . . . | 28   |
| Selection of Subjects . . . . .                                     | 28   |
| Selection of Subgroups . . . . .                                    | 29   |
| Reading Instruction Provided . . . . .                              | 29   |
| Instruments Used . . . . .  | 30   |
| Collection of Data . . . . .  | 30   |
| Classification and Coding of Data . . . . .                         | 31   |
| Scoring of the Data . . . . .                                       | 36   |
| Data Analysis . . . . .   | 36   |
| SUMMARY . . . . .   | 37   |

| Chapter  | Page |
|--|------|
| IV. PRESENTATION AND INTERPRETATION OF DATA . . . . .                        | 38   |
| Part 1: Oral Reading Behaviour . . . . .                                     | 38   |
| Part 2: Substitution Components . . . . .                                    | 44   |
| SUMMARY . . . . .  | 56   |
| V. SUMMARY, FINDINGS, CONCLUSIONS, AND<br>EDUCATIONAL IMPLICATIONS . . . . . | 59   |
| SUMMARY . . . . .  | 59   |
| Administration of Instruments . . . . .                                      | 60   |
| Treatment of the Data . . . . .  | 60   |
| FINDINGS . . . . .   | 61   |
| Part 1: Reading Behaviour . . . . .  | 61   |
| Part 2: Substitution Components . . . . .                                    | 62   |
| CONCLUSIONS . . . . .  | 64   |
| RECOMMENDATIONS . . . . .  | 65   |
| SUGGESTIONS FOR FURTHER RESEARCH . . . . .                                   | 68   |
| BIBLIOGRAPHY . . . . .   | 70   |

## LIST OF TABLES

| Table |   | Page |
|-------|---|------|
| 1.    | Means, Standard Deviation and t-value for Reading Behaviours for Phonics and Language Experience Beginning Readers . . . . .  | 40   |
| 2.    | Comparison of Means, Standard Deviation and t-values for Substitution Components for the Phonics Group and the Language Experience Group . . . . .  | 45   |
| 3.    | Comparison of Means, Standard Deviation and t-value for Nonwords for High, Middle, and Low Achieving Phonics and Language Experience Beginning Readers . . . . .  | 49   |
| 4.    | Comparison of Means, Standard Deviation, t-value for Graphic Similarity of Substitution Errors, Words and Nonwords, for High, Middle and Low Achieving Phonics and Language Experience Beginning Readers . . . . .                | 51   |
| 5.    | Comparison of Means, Standard Deviation and t-value for Sound Similarity of Substitution Errors, Words and Nonwords, for High, Middle and Low Achieving Phonics and Language Experience Beginning Readers . . . . .               | 53   |
| 6.    | Comparison of Means, Standard Deviation and t-value for No Meaning Change and Contextually Appropriateness of Substitution Errors for High, Middle, and Low Achieving Phonics and Language Experience Beginning Readers . . . . . | 55   |

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## Chapter I

### INTRODUCTION

Considerable research has focused on the relationship between reading achievement and the method of reading instruction employed (Robinson, 1974; Chall, 1967; Bond & Dykstra, 1967; Weber, 1968). In recent years, however, some researchers have felt that in order to understand the child's ability to acquire reading skills, or his failure to do so, we should look not solely to the method of instruction and achievement but also to the strategies the child employs in his attempt to read. Barr (1974) states:

In order to understand the processes used by beginning readers, we . . . must obtain independent evidence of what beginning readers do by observing them as they learn to read. (pp. 13-14.)

It has been suggested that the processes used by children learning to read might be successfully investigated by an analysis of oral reading errors (Smith, Goodman & Meredith, 1970; Goodman & Goodman, 1977; Weber, 1970; Biemiller, 1970; Barr and Page, 1974; Hood, 1976). Such an analysis should not be simply a tabulation of errors (such as insertions, omissions, and substitutions) that the child makes. An evaluation of each of these types of error should be made to determine how closely the error approximates the correct response in categories such as syntactic, semantic, and graphophonics appropriateness. "The number of miscues a reader makes is much less significant than the meaning of the language which results when a miscue has occurred." (Y. Goodman, 1972, p. 32.)



Many educators (Weber, 1970; Weber, 1968; Goodman, 1969; Burke, 1973) believe that errors should not be treated simply as "incorrect" responses. As Weber (1970) states:

Even casual observation shows that, in one way or another, an error is partially correct. The correct features of an error are significant because they reveal what the reader chose as the basis for his response in a particular instance. More generally, correct features of errors can be seen to reflect the sorts of information that a reader regularly utilizes in identifying words. He uses the same strategies, presumably, whether or not the response is fully accurate. (p. 429.)

Goodman (1965, 1969) suggests that the term error might have negative connotations. He prefers to use the term "miscue" to indicate any deviation from the written material. "Miscues are the windows of the reading process at work." (Goodman & Goodman, 1977, p. 323.)

It would thus appear that an analysis of oral reading errors on a qualitative as well as quantitative basis will provide important information for the teacher. Barr and Page (1974) state:

Teachers who are able to observe, analyze, and interpret oral reading responses possess one of the most useful skills for assessing children's reading. From understanding gained about the students' reading processes, a teacher can plan appropriate instruction and evaluate its effectiveness. (p. 103.)

### Need for the Study

A number of educators have emphasized the importance of studying the oral reading behaviour of children as it relates to reading instruction. Chall (1973) states:

The implications of these kinds of error data for understanding the beginning reading process and for diagnosis and teaching based on individual needs are enormous. (p. 189.)

Weber (1968) reviewed the literature pertaining to oral reading

errors and concluded that the child's errors may be due to the type of reading instruction that child has received. A few studies have compared and analyzed the oral reading errors of beginning readers who have been taught by different reading methods (for example, Barr, 1972; Elder, 1971; DeLawter, 1974; Burke, 1973; Norton, 1976). These studies found that children taught by a phonics approach tended to use oral reading strategies related to the letters. Many of their errors were nonwords and/or words not from their reading vocabulary. On the other hand, children taught by the sight word approach tended to use oral reading strategies related to the whole word. They used few or no nonword responses and tended to choose their substitutions from words being taught at that particular time.

Most research analyzing the oral reading errors of beginning readers has been concerned with a sight word basal reader approach and/or a phonics approach. There appears to have been only three studies which have mentioned language experience (Dank, 1976; DeLawter, 1974; Ewoldt, 1976). However, in each of these studies the language experience approach did not refer to a teacher developed program using the child's natural language and self selected sight words. Instead, basal readers called language experience readers were used such as the Ginn 360 and the Chandler Language Experience Readers. As MaryAnne Hall (1978) has recently pointed out in her survey of language experience research:

Investigations of children's oral reading performance, using miscue analysis procedures, could be conducted with language experience materials. . . . However, no study investigating children's reading performance in conjunction with the language experience approach was located in this survey of the literature. (p. 40.)

The intention of this study is to analyze and compare the oral

reading behaviour of children learning to read by a language experience method with children learning to read by a phonics method.

### THE PROBLEM

The purpose of the present study is to determine the extent to which children instructed in initial reading by a language experience approach differ in their reading behaviours from children who have been instructed in initial reading by a phonics approach.

This study seeks to answer specifically the following questions:

1. What is the effect of alternative instruction on the following aspects of reading--oral reading errors, repetitions, self-corrections, comprehension and fluency?

2. What is the effect of alternative instruction on the following aspects of substitution errors--words/nonwords, graphic similarity of words, graphic similarity of nonwords, sound similarity of words, sound similarity of nonwords, no meaning change and contextual appropriateness?

(a) What are the effects of treatment on the seven components for the children instructed through a phonics approach and for the children instructed through a language experience approach?

(b) What are the effects of treatment on these seven components for achievement subgroups--high, middle and low phonics subgroups and high, middle and low language experience subgroups?

### Definition of Terms

For the purpose of this study the following terms were defined:

### Language Experience Approach.

The Language Experience Approach is a process of teaching reading which utilizes the child's own oral language and concepts to develop an initial sight vocabulary and beginning word recognition skills. . . . (Dorchester, 1974, p. 3.)

This approach to reading begins with the children choosing the words they want to learn--their "key vocabulary" as developed by Sylvia Ashton Warner (1963). The children proceed from words to sentences, from dictating to writing their own stories and from reading their own compositions to reading commercial materials. The child's first introduction to reading is via the whole word and reading for meaning is stressed from the beginning. Phonetic analysis and structural analysis are also a part of this program.

Phonics Approach. This approach to reading refers to the code emphasis approach developed in the Language Patterns Series published by Holt, Rinehart and Winston. The pupils learn the names and sounds of the letters of the alphabet. Once the children have learned a few of these sound-symbol relationships and can blend the sounds into words they progress through a series of readers. The vocabulary in the readers is controlled and initially only phonetically regular words using short vowel sounds and consonants are introduced. Once the process of blending has been mastered, sight words and irregular spellings are introduced gradually. In summary, the child's first introduction to reading is via the sounds and blending the sounds together to make words--the emphasis is on the synthesis of words rather than upon memorization of whole words.

High, Middle and Low Subgroups. Subjects were divided into subgroups on the basis of their number of substitution errors. The abbreviations

used in this paper for each subgroup and the number of subjects within each subgroup is listed below:

|                         |             |
|-------------------------|-------------|
| high phonics subgroup   | 9 subjects  |
| middle phonics subgroup | 10 subjects |
| low phonics subgroup    | 9 subjects  |
| high LE subgroup        | 9 subjects  |
| middle LE subgroup      | 10 subjects |
| low LE subgroup         | 9 subjects  |

Oral Reading Errors. An error occurs when the observed oral reading of the child differs from that in the written text. Oral reading errors were analyzed according to the following categories:

- No Response or Don't Know
- Insertions
- Omissions
- Substitutions
- Sounding Out

Reading Behaviour. This refers to the various ways in which children process information when reading. Aspects considered will be the type of oral reading errors produced, the number of repetitions and corrections produced, the speed at which they process information and the understanding of the information processed.

Substitution Components. Substitution errors were analyzed for:

- words/nonwords
- graphic similarity of words
- graphic similarity of nonwords
- sound similarity of words
- sound similarity of nonwords
- no meaning change
- contextual appropriateness

Subjects. (a) The subjects for this study were randomly selected from grade one public school classes located in the geographic area of

Richmond, B. C.

(b) All non-readers, repeaters, transfers in and children who could read before entering grade one were eliminated.

(b) All subjects with observable visual and auditory defects were eliminated.

#### GENERAL PROCEDURES

The general procedures were as follows:

1. The literature was surveyed to find existing information on the subject, to note the research design used in similar studies and to determine if there was a need for further investigation.

2. A study was made of reading achievement tests and diagnostic tests to determine the suitability of using such.

3. The schools were selected in consultation with the Supervisor of Early Childhood Instruction in the city of Richmond, B. C. They were located in similar socioeconomic areas.

4. The exceptional children, i.e., those with observable visual and auditory defects, those who had repeated grade one, transfers in, pre-grade one readers and non-readers were eliminated.

5. Twenty-eight children from each treatment group (i.e., 28 taught by the language experience approach and 28 taught by the phonics approach) were selected at random.

6. Student data--age, sex, and birthdate--were collected.

7. The following instruments were administered and data collected during the last two weeks of May, 1978.

(a) Wide Range Achievement Test (Jastak, 1965).

- (b) Spache Diagnostic Reading Scales (1972). Tests 1A, 1C, 2A, 3A, and 3C were used.

8. The following data were tabulated:

- (a) reading grade level,
- (b) oral reading errors according to the above-mentioned categories,
- (c) comprehension on each selection,
- (d) self-corrections,
- (e) time required to read each selection,
- (f) repetitions.

9. The treatment of the data was as follows:

The results of each child's oral reading were tabulated and mean scores computed for oral reading errors, repetitions, self-corrections, fluency and comprehension. Mean percentages were computed for substitution components. The t-test for independent samples was used to determine differences between groups and between subgroups.

## SUMMARY

Chapter one has introduced the purpose of the study which was to analyze the oral reading behaviours of beginning readers taught by either a phonics approach or by a language experience approach. The need for this study and a brief description of the general procedures were also included.

## ORDER OF PRESENTATION

The content and organization of the chapters are:

1. Chapter I presents the problem, the need for the study, limits of the study, and general procedures.

2. Chapter II provides a survey of the pertinent literature on oral reading behaviour and method of reading instruction.

3. Chapter III describes the method employed in this study-- selection of subjects, instrumentation, collection, classification and analysis of data.

4. Chapter IV is concerned with the presentation and interpretation of the data.

5. Chapter V is concerned with the findings, conclusions and recommendations for educational practice and future research.



## Chapter II

### RELATED RESEARCH

During the past there has been increased research on children's oral reading behaviour. The studies covered such diverse variables as: (1) language--bilingualism (Hodes, 1977; Williamson and Young, 1976; Folman, 1977), speakers of Spanish (Hood, et al., 1976), (2) functionally illiterate adults (Russell, 1973), and (3) reflection and impulsivity (Waltz, 1977; Butler, 1974; Hood, 1975).

This chapter, however, will concern itself primarily with research relating to the effect of reading instruction on oral reading errors of beginning readers. The pertinent research will be discussed in the following order: (a) background, (b) whole word approach, (c) phonics approach, and (d) comparison of approaches.

#### Background

Although researchers have analyzed oral reading errors in numerous ways, it is useful to divide research in this area into two main categories (Weber, 1968). The first category consists of research in which oral reading errors were considered to be indicative of deficient reading skill and were viewed in a negative sense (for example, Monroe, 1928; Payne, 1930; Madden and Pratt, 1941).

In the second category lies the research that has attempted to analyze oral reading behaviour to gain better understanding of the processes or strategies which result in the error (for example, Goodman, 1965;

Clay, 1967; Weber, 1970). The errors are analyzed to see which part of the erroneous response is correct. It is this type of research that will be the concern of this chapter.

One of the earliest investigations concerned with the quality of the oral reading errors and the processes which contributed to those errors was conducted by Bennett (1942). In an analysis of over 34,000 errors made by retarded readers she found that letters or word parts were the two important areas; that context played a major role in word recognition and that errors were usually the same part of speech as the written word. (The latter finding was later confirmed by Y. Goodman (1967), who noted 41 percent of the errors were closely associated in meaning with the written text.)

MacKinnon (1959) analyzed the oral reading errors of grade one children who were being taught to read by a programme which emphasized sentences and had a controlled vocabulary. He discovered that the first graders attempted to read sentences as grammatical wholes rather than responding to word-by-word stimuli. Their errors were not haphazard. Often the second error would be brought about by the grammatical constraints of the first error.

MacKinnon also found that the children's errors developed from contextually constrained, to non-response, and finally to graphically constrained (as did K. Goodman, 1967; Y. Goodman, 1967; Weber, 1970; Clay, 1967). He noted also that once the children started using graphic cues, their reading became more "word by word."

Further evidence of the importance of contextual and syntactic cues is provided in Goodman's (1965) descriptive study in which he studied the

errors of 100 children in grade one, two and three. He found that young readers recognized with greater accuracy words in context than words presented in lists. Therefore, he concluded that the syntactic and semantic constraints of language were used by the children when reading.

Goodman noted that in grade one half the errors were omissions, in grade two the children tried to figure out the word and made more substitutions, and by grade three the children "showed a pronounced increase in the percent of substitutions among their list errors." (p. 641.)

Another finding of the study was that "virtually every regression . . . was for the purpose of correcting previous reading." (p. 642.) However, when reading the words on the list, the children seldom regressed.

Y. Goodman (1967) analyzed the miscues of three "slow" readers and three "average" readers as they progressed through grade one. She found that the slower readers make more Miscues Per Hundred Words (MPHW) than did the average readers, but no relationship was found between number of miscues and comprehension scores. This study was continued for four years (Goodman, 1971). In 1971 Goodman discovered that as the child's reading skill increased so did his ability to use grammatical constraints. The average readers seemed able to use all cues,--graphic, phonic, semantic and syntactic, while the slower readers produced primarily graphic responses. This latter finding is in agreement with Biemiller (1970), Clay (1968) and Weber (1970).

Goodman identified three stages which are similar to Biemiller (1970) and MacKinnon (1959). In the first stage unknown words are omitted. In the second stage the children begin to sound out the words, and nonwords may result. The errors tend to have close graphic proximity to the stimulus word. In the third stage the children employ a variety of cues.

Goodman and Burke (1969) studied the oral reading errors made by proficient readers in grade two, four and six using the Goodman Taxonomy of Reading Miscues. The errors were divided into two groups--non-transformation miscues (those which did not alter syntactic structure) and retransformation miscues (those which did alter syntactic structure). The authors found that the errors often served the same grammatical function as the stimulus word. This tendency existed even when the children changed the text to a more familiar language pattern. This tendency to retain the same grammatical function in retransformation errors increased from grade two to six. This was seen as an indication that the readers were developing increasing control of the English language.

The above-mentioned studies illustrate several important points about recent trends in this area of research. Emphasis of the research has moved from solely an analysis of word errors to an attempt to understand the strategies the children bring to the reading process.

### Whole Word Approach

A selection of recent studies discusses the effect of basal readers on beginners' oral reading behaviour.

Clay's three related articles (1967, 1968, 1969) examined the oral reading errors of beginning readers for one year. The children were being instructed in reading by a method which "stressed fluency, meaning, and 'learning as one reads'." (p. 12). Minimal attention was given to the teaching of sounds or the development of a sight vocabulary.

At the end of the first year the children were divided into quartile groups on the basis of a word recognition test. A significant difference between subgroups on number of errors was noted. The median child in

each group--high, high middle, low middle, and low, respectively made one error in 37.29, 15.20, 7.86, and 2.58 words. It was also noted that 72 percent of all substitution errors were "linguistically equivalent" (p. 22) to the written text. A grapheme/phoneme correspondence existed for 41 percent of the errors. The high group's substitutions were more graphically similar to the stimulus words than were those of the low group. (This is similar to Bennett's 1942 study.)

The high group corrected more errors than the low group. Clay concluded that the high group's low error, high self-correction rates were the result of efficient processing of cues.

Clay further analyzed the data in two articles. In one article (1969) Clay noted that grammatical competency was the main reason for self-correction behaviour. In the other article Clay (1968) noted that guesses at uncertain words seemed to be the result of the syntactic aspects of the sentence rather than by the phoneme/grapheme relationship in words.

Biemiller (1970) examined the oral reading errors of 42 grade one children from October to May. The children were using a basal reader and were observed on the average of 23 times.

Biemiller's purpose was to examine changes in the use of contextual and graphic information for word identification. He analyzed the errors in terms of semantic and graphic constraints and non-response errors and thus developed three main phases of reading acquisition.

In the first phase, Pre Non-Response, the children made predominant use of contextual information for anticipating or guessing unknown words. Their substitutions were appropriate to the sentence context but not appropriate graphically. Ninety-nine percent of the substitution and insertion responses came from sight words previously learned (as did those in

Bennett's study, 1942). Biemiller suggested that this heavy reliance on context was the result of the children avoiding the use of graphic information.

In the second phase, Non-Response, there was a predominance of non-response errors (50 percent or more of all errors). The number of contextually constrained errors decreased but there was a significant increase in graphically constrained errors. The children did not use both contextual and graphic information but tended to rely on one or the other. Ninety-four percent of the substitutions came from words previously learned. Biemiller interpreted this phase as the child becoming interested in and paying close attention to graphic information and realizing that "one specific word is associated with each graphic pattern." (p. 93.)

In the third phase, Post Non-Response, there was a drop in non-response errors to below 50 percent of all errors. The children made significantly more substitution errors that were both contextually and graphically acceptable--82 percent. The children now seemed able to use both graphic and contextual information and there was an increase in speed of word recognition. Ninety-one percent of the substitutions came from words previously learned.

Biemiller (in agreement with Weber, 1970) believed that poorer readers moved slowly from stage to stage because of difficulty in handling graphic information. Throughout the year, only the better readers progressed through the three phases. He noted that the slower readers seemed unable to develop reading strategies. It seemed as if they "started off on the wrong track." (p. 95.)

Weber (1970) studied the oral reading errors of a class of 21 grade one children (10 boys and 11 girls) in order to determine the

strategies used by beginning readers to identify words. The children had a mean age of 6.3 upon school entry and were taught to read from a basal reading series. The class was divided into high achievers and low achievers.

The errors recorded were reversals, insertions, omissions and substitutions. They were analyzed for letter-sound correspondence, grammatical acceptability, semantic appropriateness and grammatical function. Eighty percent of the total errors were substitutions while the remaining 20 percent were divided, almost equally, between omissions and insertions. About 95 percent of the errors were words the children had encountered previously. (Bennett (1942) observed similar behaviour.)

Weber found that the substitutions of the better readers were more graphically similar to the text. For the total group, about two-thirds of the errors were grammatically acceptable to the whole sentence. Of those errors judged for semantic appropriateness, all of which were grammatically acceptable, 92.8 percent were found to be "consistent with the meaning of the rest of the sentence," (p. 449) and that two-thirds conformed to the preceding context. In fact, Weber found almost complete overlap between semantic and syntactic appropriateness. (This finding is supported in the study of Y. Goodman, 1967.)

Weber concluded that both high and low readers used semantic and grammatical constraints equally well in reading. She felt that perhaps there exists an inverse relationship between the beginners' use of graphic cues and syntactic cues. She states that, "Learning the optimal balance in the use of graphic information and of structural constraints may in fact be one of the main tasks for the novice reader." (p. 443.)

It should be noted that these two groups read different stories

with different quantities of errors analyzed.

### Phonics Approach

Only one recent study to date discusses the effect of the phonics approach on beginning reading strategies.

Cohen (1974-75) studied the oral reading errors of 50 grade one children (24 boys and 26 girls) in two heterogeneously grouped classes. The children were being instructed by a phonics approach. The study spanned the last eight months of grade one and it focused on changes in word recognition strategies when oral reading errors were analyzed according to type of error--word substitution, no response, sound out and self-correction. Also examined were graphic similarity of the error to the written word and grammatical acceptability within the sentence.

The errors of good and poor readers were analyzed and compared as well as the total group's errors. The three most common errors noted were word substitutions, no response and nonsense. During the first four months no response errors occurred most frequently for all groups. After January, however, the good readers' nonsense errors began to decline and by the end of the study were very low. On the other hand, the nonsense errors of the poor readers slowly increased throughout the eight months. In the self-correction category, all groups increased, although the increase was only "slight" for poor readers and "substantial" for good readers.

The substitutions of all the groups showed a steady improvement in graphic similarity to the stimulus word and by the latter half of the study the non-systematic errors had nearly disappeared. The poorer readers continued to make substitutions with similar first and/or last letters but for the better readers the substitutions were on small function words.



The grammatically acceptable substitutions increased for all groups and by the end of the study they exceeded substitutions which were not grammatically correct.

Cohen concludes that the good readers' large number of nonsense errors early in the study appeared to be related to their ability to learn to use phonics before they used semantic cues. The strategies for poor readers were less systematic.

### Comparison of Approaches

In this section several studies, each dealing with two methods of instruction, are summarized.

DeLawter (1974) examined the error patterns of 169 grade two children from a low income area. All the children had participated in a Beginning Reading Project for two and one-half years and had received reading instruction in one of two reading systems. The decoding group received reading instruction in the Miami Linguistic Readers and the Merrill Linguistic Readers--a programme with a phonic emphasis, and the meaning oriented group received instruction with the Chandler Language Experience Readers which emphasized the content of the stories.

The purpose of the study was to find out if different patterns of errors resulted from different reading approaches. She found that most of the substitutions made by the children in the decoding group were non-words--about twice as many nonwords as words--which closely resembled the words in graphophonemic similarity to the stimulus word. Sixty-four percent were considered poor attempts at decoding. The children tended to respond hastily.

DeLawter then studied the errors for syntactic and semantic

acceptability. Almost all the words were syntactically acceptable and half were semantically acceptable for both groups.

DeLawter concluded that there appears to be a relationship between error pattern and beginning reading instruction, and that the error patterns "demonstrate strategies that are predictable, given particular instructional emphases." (p. 48.) She also mentioned that after two years of instruction these patterns are still evident and this "reinforces the finding of the study." (p. 48.)

Elder (1971) analyzed the oral reading errors of 49 Scottish children and 98 American children whose mean age was 91 months.

The Scottish children were taught by a phonics method while the American children had been instructed by a sight word approach. The children were analyzed on their performance on the Gray's Standardized Oral Reading Paragraphs.

The Scottish children displayed fewer word recognition errors, including fewer word substitutions but significantly more nonword substitutions than the American children. The Scottish children were found to be "highly accurate but comparatively slower readers," while the American children were "fluent but relatively less accurate readers." (p. 220.)

The Scottish children had a significantly higher percent of omissions and repetitions than the American children.

An analysis of the word substitutions revealed that the Scottish children made significantly more substitutions that changed the meaning, while the American children seemed more attentive to meaning. The children did not differ in self-corrections.

Elder's conclusions were as follows:

1. Children who begin reading at age five rather than

age six can, on the average, be expected to gain at least an initial advantage in ability to read orally.

2. A stress on phonics in beginning reading tends to promote accurate word recognition, but slows the process of recognition.

3. A reliance on sight recognition tends to decrease accuracy, but increases rate of recognition.

4. The oral reading of children who rely on sight recognition tends to have a high frequency of word substitutions and initially a need for much assistance.

5. The oral reading of children who rely on phonics tends to have a high frequency of mispronunciations.

6. A reliance on phonics tends to divert children from the meaning of what they read. (p. 228.)

Barr (1972) analyzed the word recognition errors made by pre-reading grade one children--18 urban subjects (9 boys and 9 girls), and 24 suburban subjects (12 boys and 12 girls). The mean age was 6 years 5 months. The children were taught by two reading methods, a sight word or a phonics. As well as examining the error patterns resulting from the two instructional conditions, Barr was also interested in comparing these error patterns with those found by Biemiller (1970) to see if the changes were related to instructional method.

Barr found that children instructed by the phonics approach made substitution errors that came from words other than those taught. A high proportion of the substitutions were nonwords and the substitutions were significantly more graphically constrained. They also made a significantly higher percent of non-response errors than the sight group. Children instructed by a sight word approach made more substitutions that were the same as the words being taught at the same time. Rarely were the substitutions words the children had not learned, or words taught earlier, or non-words. Also, these children seldom made substitutions which reflected graphic cues.

Barr noted that the error patterns for sight word learning resembled

the first phase of Biemiller's study, while the error patterns for phonics learning resembled Biemiller's second phase. Barr concluded that these findings suggest that "different instructional methods influence differentially the pattern of word recognition errors. Different instruction entails different strategies for word recognition." (p. 527.)

It should be noted that the words were presented in isolation and not in context so this limits the strategies a child can use.

Barr (1974-75), in reviewing the literature, determined that findings to this point in time strongly suggested that instructional method does influence the strategies of children in translating "the printed word to language." (p. 569.) In all of this research two questions had not been addressed according to Barr; namely, (1) to what extent can results obtained for groups be confidently applied to individuals, and (2) how do strategies alter over time.

Consequently Barr undertook to study the oral reading responses of 32 grade one children in December and May to determine word recognition strategies. She also studied individual children's strategies in order to see if they were determined by the class instructional method. Half the subjects received instruction by a phonics approach and the other half with an eclectic basal approach.

Barr discovered that children who learn by a phonics approach produced substitutions which were not cognizant of the constraints of the printed word as a representation of natural language and often their errors were nonsensical. However, children instructed by a sight word method provided responses which fitted contextually although their substitutions were limited by their vocabulary.

Barr concluded that:

It appears to be possible to determine the strategies that beginning readers use for translating print to speech [and] . . . the response patterns for groups of pupils instructed by particular methods are representative of most members within the group rather than a function of the distinctive patterns of a few. (p. 577.)

Since the subjects read lists of words no analysis could be made with regard to semantic, syntactic or correction strategies.

M.S. Burke (1973) examined the oral reading errors of 3 grade one children taught by a synthetic method (emphasized phoneme-grapheme correspondence) and 3 grade one children instructed by an analytic method (basal reader sight words). Burke noted that the children learning to read by a synthetic method made more errors and many of the errors stressed the phoneme-grapheme relationship, while few were syntactically and semantically acceptable. These children had lower comprehension ratings than the children taught with the analytic approach.

The children taught by the analytic approach made slightly fewer errors that displayed the phoneme-grapheme relationship. These children, however, tended to produce more varied patterns of errors and used semantic, syntactic, and phoneme-grapheme constraints although the semantic system was still inadequate. Burke felt that the children taught by the analytic approach did not often resort to word-by-word processing because they seem to have an understanding of the interaction of the various cueing systems. The subjects of this study (like those of Y. Goodman, 1967) showed an inverse relationship between phoneme-grapheme correspondence and grammatical and semantic acceptability.

Burke concluded that the method of reading instruction can affect reading behaviour.

Norton (1976) investigated the effect of two reading approaches on the reading strategies of 40 grade one and grade three pupils of high and low ability. They found that those children instructed by a synthetic phonics emphasis developed higher phonic, graphic and syntactic strategies, more nonwords, but produced comparatively few self-corrections. On the other hand, those children taught by an analytic-eclectic approach produced more miscues semantically acceptable, more miscues that did not change meaning, and significantly more self-corrections than the phonics emphasis group. No significant differences were found for grammatical function of miscues or for their syntactic acceptability. The comparative differences held at both grade levels.

The authors concluded that the method of reading instruction developed in the first grade seems to result in long range oral reading behaviours as evidenced by the errors of the grade three children.

However, the grade one and grade three children were different samples.

Norton and Hubert (1977) examined the oral reading errors of 60 grade one children in two comparable districts in Texas. Within each of the two instructional groups--eclectic basal and phonics emphasis--were three ability groups--High, Average, and Low. The purpose of the study was to determine how children taught by these two different approaches compared in oral reading strategies.

Norton found that children instructed by the phonics approach produced significantly more miscues with a high graphic or phonic proximity and more miscues that were nonwords. The children achieved higher word recognition grade scores than comprehension grade scores and significantly higher instructional word recognition levels. The children instructed by

the eclectic basal approach produced significantly more miscues that were syntactically acceptable, that were semantically acceptable, that caused no change in meaning, and that were self-corrected. The children achieved higher comprehension grade scores than word recognition grade scores and significantly higher instructional comprehension grade levels. There was no significant difference for grammatical function.

Norton concluded that the method of instruction does produce different oral reading strategies and that all ability groups within each approach "demonstrated very similar oral reading profiles." (p. 23.)

E. Burke (1976-77) studied the decoding strategies used by 216 seven, eight and nine year old children in terms of graphic, syntactic, and semantic cues. Age, sex, school-type, and school emphasis on reading were the variables considered.

Burke's study revealed that the quality of children's miscues improved with age, although not uniformly. In the graphic category the quality of miscues only slightly increased with age whereas in the semantic category the increase was continuous. For the syntactic category a large increase occurred at the 8 year level followed by a slight decrease at the age of 9. These differences in pattern for these three categories were significant at the one percent level. No other effect was found to be significant although differences were evident. Burke stated that "no firm conclusions as to the relative merits of the different approaches to the teaching of reading can be inferred." (p. 41.)

Ewoldt (1976) studied the oral reading errors of 73 grade three children in the seventh month of grade three. The subjects were in two groups--Follow Through and Non Follow Through. The Follow Through group

had participated in a programme since grade one that emphasized the language experience approach, while the Non Follow Through group had not. However, during grade three only 8 of the Follow Through Group used any language experience. Basal readers were used by all 37 Non Follow Through subjects.

The main purpose of the study was to "identify differences between the two groups of readers which may be the result of the types of instruction received. . . ." (p. 3.) Twenty-five miscues were analyzed for each child.

She found that both groups of children employed effective use of strategies. The mean scores were similar for syntactic and semantic acceptability and meaning change, graphic similarity, sound similarity and grammatical function. She felt that the Non Follow Through readers appeared to be less efficient readers as evidenced by their correction strategies --they "wasted too much time on unsuccessful attempts at corrections." (pp. 90-91.)

Ewoldt concluded that: "Differences in favor of the Follow Through readers may be attributable more to differences in the program in prior years than to the third grade program." (p. 92.)

Dank (1976) analyzed and compared the oral reading errors and comprehension of 20 selected grade two children. The children received instruction with the McGraw Hill Programmed Reader which emphasized the grapheme-phoneme approach or with the Ginn 360, a language experience series.

Dank found that the children taught by the approach that emphasized the letter sound relationships produced fewer omissions, more nonwords and more miscues with high graphic and sound proximity. Those children taught



by the language experience approach of the Ginn 360 programme produced more semantically acceptable errors. Their understanding of what they had read, reflected in their retelling of the story, was superior to the Programmed Reading Group.

She concluded that the children in both groups made errors that reflected the reading instruction they had received.

### SUMMARY

The present chapter has summarized some of the research pertaining to oral reading behaviour of beginning readers. These studies seem to suggest that differences in reading behaviour may be influenced by the method of reading instruction. Children taught by a whole word approach tended to use strategies related to the word and they seldom made nonword responses. Many of their substitutions were from words taught at that particular time. These children made satisfactory use of syntactic constraints and their substitutions often were related to the meaning of the sentence.

Children taught by a phonics approach, however, produced substitutions that often distorted the meaning of the sentence. They produced many nonwords and their substitutions were usually graphically similar to the stimulus word. These children also made satisfactory use of syntactic constraints.

These studies seemed to indicate that children who experience little trouble learning to read quickly learn to use all cue systems, while the children having trouble learning to read tend to rely heavily on one cue system and neglect the others.

To date most of the research in this area has been conducted with children being taught to read by a phonics or a basal reader sight

vocabulary approach. There appears to be no research evaluating the effect of a teacher developed language experience programme using the child's natural language and self-selected sight vocabulary on the oral reading behaviour of beginning readers.

## Chapter III

### DEVELOPMENT AND ADMINISTRATION OF THE INSTRUMENTS

The purpose of this chapter is to describe (1) the selection of subjects, (2) the selection of subgroups, (3) the reading instruction provided, (4) the instruments used, (5) the collection of data, (6) the classification of data, (7) scoring of the data, and (8) the analysis of data.

#### Selection of Subjects

The subjects for the study were 56 grade one children attending four public schools in Richmond, B. C. Each school contained the same socio-economic levels, ranging from lower to upper middle class. Two of these schools taught beginning reading by a phonics approach; two taught beginning reading by a language experience approach.

The individual children within the schools were randomly selected. Twenty-eight children (13 boys and 15 girls) were selected from the total population of grade one children using a phonics approach in the two schools, and 28 children (12 boys and 16 girls) were selected from the total population of grade one children using a language experience approach in the other two schools. The following children were excluded from the population before the random selection occurred--children with obvious auditory and visual defects, children who had transferred in during the school year, children who could read before they entered grade one, and

children who were non-readers. At the time of testing, chronological age of the children receiving instruction through phonics ranged from 6.5 years to 7.4 years, with a mean age of 6.513. Chronological age of the children receiving instruction through language experience ranged from 6.5 years to 7.4 years, with a mean age of 6.618.

### Selection of Subgroups

Substitution errors were used as the criterion for the selection of achievement groups. Three achievement groups--high, middle and low--were separated out of the language experience treatment group, and three achievement groups--high middle and low--were separated out of the phonics treatment group.

### Reading Instruction Provided

The 28 children being instructed by the phonics approach received heavy emphasis on decoding but minimal sight word development. Some supplementary reading took place in books other than the phonetically controlled readers.

The 28 children being instructed by the language experience approach began reading with sight words they had chosen. They were exposed to many commercial books as well as numerous and varied reading series. Instruction in phonics and in structural analysis formed a part of the reading programme.

For convenience, throughout the rest of this paper the two groups will be referred to according to the initial teaching emphasis--phonics and language experience.

## Instruments Used

### 1. Spache Diagnostic Reading Scales

Six selections were chosen from this measure: 1A, 1C, 2A, 2C, 3A and 3C. The readability of the selections was grade 1.6, 1.8, 2.3, 2.8, 3.3 and 3.8 respectively. The two selections at the grade three level were necessary to provide difficult enough material so all subjects would produce at least 5 errors. The use of this instrument provided content validity.

### 2. The Wide Range Achievement Test (WRAT)

The reading section was administered. It is a pronunciation test of words presented in isolation. This test provided criterion related validity. The correlation between the Wide Range Achievement Test and other achievement tests was as follows:

WRAT reading (1946) vs. New Stanford Paragraph Reading +.81

WRAT reading (1946) vs. New Stanford Word Reading +.84

(Jastak, 1965, p. 15.)

## Collection of Data

The information was collected during the last two weeks of May, 1978. The procedure was the same for each subject. First each subject read the words from the Wide Range Achievement Test. Then they read the six selections from the Spache Diagnostic Reading Scales and answered the comprehension questions. The children were tested individually in a separate room. Prior to the testing the examiner told the child: "Try to read this aloud to me as well as you can. I'm not going to tell you any words, because I want to see how well you read it by yourself. If you meet some words you don't know, just try them and go on. I'll ask you some questions

about the story when you finish." (Spache, 1972, p. 16.) If the child hesitated for more than 10 seconds, he was told to continue reading.

The examiner recorded the errors on a transcript of each selection. The examiner recorded deviations from the written text in pencil above the typed word of her copy of the selections. Following the reading of each selection, the child responded to the questions asked by the examiner. All performances were recorded onto tape for later analysis and verification of errors, comprehension, repetition and self-correction. The reading of each selection was timed using a stop watch.

### Classification and Coding of Data

The data for this study was classified according to the following categories: types of errors, repetitions, self-corrections, comprehension, fluency, and substitution components.

#### 1. Types of errors

- a) No response or don't know. The child hesitates before a word and is unable to read it or else says, "I don't know," before proceeding with reading. This was indicated by a NR or DK above the text and crossing out the written word in the text.

DK

Example: At ~~n~~ight she is very tired.

- b) Insertions. The child adds a word. This was indicated by a caret ( ^ ) and the recording of the inserted word.

Example: quickly  
Mary saw the car and ran ^ the rest of the way.

- c) Omissions. The child leaves out a word in a sentence.

This was indicated by drawing a line through the omitted word.

Example: Bob stopped to watch ~~the~~ other animals.

- d) Substitutions. The child says a different word from the one in the sentence. This includes nonwords as well as words. This was indicated by crossing out the word in the text and recording the substitution above the original word.

Example:        played  
word    He ~~put~~ the dog up the hill.

                              ared  
nonword    Mary was ~~afraid~~ but she was glad she wasn't hurt.

- e) Sounding out. The child unsuccessfully attempts to sound out the word. This was indicated by recording the letters sounded, followed by dashes.

caa---

Example: The keeper didn't enter the cage.

2. Repetitions. The child repeats a word or words. This was indicated by underlining the repetitions with a wavy line. Each group of words repeated together counted as one repetition.

Example: The keeper was feeding the wolf from a pail of food.

3. Self-corrections. The child corrects the error without assistance. This was indicated by recording the first response and then drawing a circle around the correction.

Example: When

(On) the way out of the park Bob stopped to watch  
the other animals.

4. Comprehension. To check comprehension each child answered orally the comprehension questions following each selection on the Spache Diagnostic Scales. Each student began reading at the grade 1.6 level and read through to the grade 3.8 level. Each question was worth one-half to one mark determined by the directions in the manual.

5. Fluency. To check fluency each selection the child read was timed. This was recorded in seconds. The child thus received six scores, one for each selection, which were then totalled.

6. Substitution Components. Each child's substitution responses were further analyzed according to the following categories:

- a) Words/Nonwords. In this category it was determined whether or not the substitution error was a word or a nonword. Nonwords are nonsense words composed of a series of sounds. Some examples are:

text: cages  
response: cagers (nonword)

text: feeding  
response: fenting (nonword)

text: strong  
response: storing (word)

- b) Graphic similarity for words. In this category it was determined whether the first letter of the substituted word was the same as the text. This was the same procedure Biemiller (1970) used when he noted "whether the first letter of the response matched the first letter of the stimulus word." (p. 80) An example is:

text: sound  
response: song



- c) Graphic similarity for nonwords. In this category it was determined whether the first letter of the nonsense word was the same as the text. An example is:

text: skunk  
response: skunt

- d) Sound similarity for words. In this category it was noted whether the substituted words were similar in sound to the text. The sounds of the words were considered and not necessarily the letters. For a word to be considered similar in sounds, two sounds in the word error had to be the same as in the text word. Also the sounds had to be in the same position in both words. Digraphs (sh, th, wh, ch) and consonant blends (such as gr, sl, cl) were considered as one sound. Some examples are:

text: walked  
response: worked

text: greet  
response: green

text: roar  
response: road

- e) Sound similarity for nonwords. In this category it was noted whether the nonsense words were similar in sound to the text word, using the same criteria noted in (d) above.

Some examples as:

text: week  
response: wenk

text: cages  
response: cags

- f) Contextual appropriateness. This category analyzed the child's ability to use syntactic and semantic constraints. A sentence can be grammatically and semantically correct but not have the same meaning as the written text. In this category, as did Biemiller, the substitutions were considered contextually appropriate if they were "grammatically and semantically acceptable up to and including the error." (p. 82.) Later errors were judged using the previous errors in the context of the sentence.

Some examples are:

text: At night she is very tired.  
response: At night she was very tired.

text: One day Bob took. . .  
response: One day Bob looked. . .

The following example is not contextually appropriate up to and including the error:

text: Then they rode down the hill.  
response: Then they rude down the hill.

- g) No meaning change. This category analyzed the error in terms of whether or not it altered the meaning of the text. Some examples of errors that resulted in little or no change are:

text: Then she slowly comes home.  
response: Then she slowly came home.

text: But the dog did not like to ride down.  
response: But the dog did not like the ride down.

text: He was a little frightened.  
response: He was a little afraid.

The following example resulted in meaning loss:

text: He pulls it slowly up the hill.  
response: He pulls it softly up the hill.

### Scoring of the Data

After testing the examiner listened to the tape recordings twice and checked her written record of the oral reading behaviour of each child on each selection. Then the data of ten randomly chosen subjects were analyzed by another scorer. The percent of agreement between the two scorers ranged from 96.05 to 100 percent. This was higher than the results reported by Weber (1970) who found agreement of over 90 percent. Having two judges double score 10 percent of the papers was found to provide adequate interjudge reliability (Weber, 1970; Norton, 1976; Hood, 1975-76).

### Data Analysis

In examining the effect of the alternative instructional treatments (i.e., phonic and language experience) on beginners' oral reading performance the data was examined or treated as follows.

After the reading behaviour was recorded and coded for each child, a computer card, one for each child, was key punched. The data was then run through as SPSS (Statistical Package for the Social Sciences), performed on IBM 360/67 computer using the applicable sub routines of SPSS.

The probability level of less than or equal to .05 was accepted as being indicative of a significant difference and will be reported in Chapter four for substantive discussion and interpretation. Statistical significance will be reported using a 2 tailed test of significance.

The analysis was related to the two problems.

1. Group difference and oral reading behaviour. A frequency distribution was performed and mean scores were calculated for types of oral reading errors, repetitions, self-corrections, fluency and comprehension.

The statistical procedures employed in examining the question of treatment group differences on reading behaviour of subjects was the t-test. The particular t-test used was the t-test of significant difference for independent samples (Glass and Stanley, 1970).

2. Effect of treatment on substitution components.

- a) A frequency distribution was performed and mean percentages were calculated for words/nonwords, graphic similarity of words, graphic similarity of nonwords, sound similarity of words, sound similarity of nonwords, no meaning change and contextual appropriateness.

To determine the effects of instruction on substitution components a t-test of significant difference for independent samples was employed.

- b) Similarly, the effects of treatment on substitution errors between achievement subgroups were examined using the t-test for independent samples.

### SUMMARY

This present chapter has presented information pertaining to selection of subjects; teaching methods; instrumentation; and the collection, classification, coding, scoring and analysis of data.

## Chapter IV

### PRESENTATION AND INTERPRETATION OF DATA

This chapter presents the results of the analysis of the data and interpretation of these results. The presentation will be in two sections. The first section will present the data on the effect of two methods of reading instruction on these types of reading behaviour--oral reading errors, self-corrections, repetitions, fluency and comprehension. The second section will present the data on the effects of the two methods of instruction on some aspects of substitution errors (words/nonwords, graphic similarity of words, graphic similarity of nonwords, sound similarity of words, sound similarity of nonwords, no meaning change, and contextual appropriateness) on the two treatment groups and between substitution achievement subgroups.

#### Part 1: Oral Reading Behaviour

##### 1. Types of oral reading errors.

The total number of errors made by the children instructed through the language experience approach and the phonics approach were tabulated. The children instructed through the language experience approach made 1007 errors, which was one error per 13.46 running words. The children instructed through the phonics approach made 1607 errors, which was one error per 8.43 running words. This finding supports earlier research by Burke (1973) who found that the phoneme-grapheme group made more errors than a basal reader sight vocabulary group.

The oral reading errors were categorized according to type, and the numbers for each category were tabulated for the two instructional groups. The mean score and the standard deviation were calculated for each group. The t-test for independent samples was applied to determine the differences between groups. The data are presented in Table 1.

a) No Response/Don't Know. For the children instructed through the phonics approach, the average number of errors in this category was 1.25, or 2.18 percent of the total errors. For the group instructed through a language experience approach, the average number of errors was 1.39, or 3.87 percent of the total errors. There was no significant difference between the two groups. The findings do not support the findings of other studies. Barr (1972) found that children instructed by a phonics method made a significantly greater number of non-response errors than children instructed by a sight recognition method. Cohen (1974-75) found that non-response errors made by children taught by a phonics method were 29 percent of the total errors, far exceeding the percentage found in this study.

b) Insertions. The children instructed through the phonics approach had an average of 1.82 insertions, or 3.17 percent of the total errors. The children instructed through the language approach had an average of 1.96 insertions, or 5.46 percent of the total errors. There was no significant difference between the two groups.

c) Omissions. For the children instructed through the phonics approach the average number of errors in this category was 1.61, or 2.80 percent of the total errors. For the group instructed through a language experience approach the average number of errors in this category was 1.11

Table 1

Means, Standard Deviation and t-value for  
Reading Behaviours for Phonics and  
Language Experience  
Beginning Readers

| Reading Behaviour<br>Category | <u>Phonics</u> |                       | <u>Language Experience</u> |                       | t-value |
|-------------------------------|----------------|-----------------------|----------------------------|-----------------------|---------|
|                               | Mean           | Standard<br>Deviation | Mean                       | Standard<br>Deviation |         |
| A. Type of Error              |                |                       |                            |                       |         |
| 1. No Response/<br>Don't Know | 1.25           | 2.012                 | 1.39                       | 3.370                 | - 0.19  |
| 2. Insertions                 | 1.82           | 1.611                 | 1.96                       | 2.099                 | - 0.29  |
| 3. Omissions                  | 1.61           | 3.083                 | 1.11                       | 1.343                 | .79     |
| 4. Substitutions              | 50.25          | 37.920                | 31.25                      | 34.171                | 1.97 *  |
| 5. Sounding Out               | 2.46           | 3.707                 | .25                        | .701                  | 3.11 ** |
| B. Repetition                 | 3.46           | 2.603                 | 4.00                       | 2.815                 | - 0.74  |
| C. Self-Corrections           | 10.00          | 7.727                 | 7.43                       | 5.928                 | 1.40    |
| D. Fluency                    | 113.60         | 50.394                | 91.99                      | 62.339                | 1.43    |
| E. Comprehension              | 29.64          | 5.864                 | 32.43                      | 5.371                 | - 1.85  |

\*Significant at the .05 level.

\*\*Significant at the .01 level.

or 3.08 percent of the total errors. There was no significant difference between the two groups. Two related studies, Dank (1976) and Elder (1971) report conflicting results. Dank found that children taught by a phonics method made fewer omissions than the language experience Ginn 360 group, while Elder (1971) found that the phonics group produced significantly more omissions than the basal reader sight vocabulary group.

d) Substitutions. The children instructed through the phonics approach made a total of 1407 substitutions, with an average of 50.25 substitutions, while the children instructed through the language experience approach made a total of 875 substitutions, with an average of 31.25 substitutions. The children instructed by the phonics approach produced a significantly greater number of substitutions than did children instructed by the language experience approach.

The percentage of total errors that were substitutions is similar, with the children instructed through the phonics approach producing 87.55 percent and the children instructed through the language experience approach producing 86.89 percent. The findings of this study are higher than those noted by Barr (1972) who found that the phonics group produced 71.34 percent substitutions and the sight word group produced 76.21 percent substitutions, and higher than the 79.9 percent that Weber (1970) found with her grade one children using a sight word approach. The present findings also differ from those of Elder (1971) who noted that the phonics group produced 38 percent substitutions while the sight word group produced 48 percent substitutions.

e) Sounding Out. The children instructed through the phonics approach had an average of 2.46 sounding out errors, or 4.29 percent of



the total errors. The children instructed through the language experience approach had an average of .25 sounding out errors, or .70 percent of the total errors. The difference was significant. These findings support those of Elder (1971) who found that the children taught by a phonics method produced a significantly higher percentage of errors in this category (25%) than the children taught by a sight recognition method (8%), although the proportions for both groups in his study were greater than those in the present study.

## 2. Repetitions.

Repetitions were not considered errors for as Clay (1967) commented, a "repetition may be a form of hesitation--a filled pause--or an act of confirmation rather than an error." (pp. 101-102.)

The children instructed through the phonics approach had a mean number of 3.46 repetitions, whereas the children instructed through the language experience approach had a mean of 4.00 repetitions. There was no significant difference between the groups. These findings do not concur with Elder (1971) who found that the group taught by a phonics approach made a significantly greater number of repetitions.

## 3. Self-Corrections.

For the children instructed through the phonics approach the average number of self-corrections was 10.00. For the children instructed through the language experience approach the average number of self-corrections was 7.43. There was no significant difference between the groups.

The children instructed through the phonics approach self-corrected 14.84 percent\*\* of the errors or one in every 57.85 words. The group

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\*\* percentage obtained by 
$$\frac{\text{number of self-corrections}}{\text{number of errors} + \text{number of self-corrections}} \times 100 =$$

instructed through the language experience approach self-corrected 20.66 percent of the errors or one in every 42.98 words. These percentages are lower than those of Clay (1967) and Norton and Hubert (1977). In the study by Clay (1967) the children learning to read by a meaning emphasis corrected 26 percent of their errors. In the study by Norton and Hubert (1977) the eclectic readers corrected approximately 50 percent of their errors which was significantly more than the phonics group self-corrected.

#### 4. Fluency.

The children instructed through the phonics approach took an average of 113.60 seconds to read a selection, whereas the group instructed by the language experience approach took an average of 91.99 seconds to read a selection. There was no significant difference between the two groups. Elder (1971) found that the Scottish children instructed by a phonic approach were slower readers than the American children instructed by a sight recognition approach. DeLawter (1974) also noted that the phonics group "frequently took longer attempting to figure out unknown words" (p. 46) than did the meaning emphasis group.

#### 5. Comprehension.

The group taught through the phonics approach achieved a mean score of 29.64 in comprehension while the children taught through the language experience approach achieved a mean score of 32.43 in this area. There was no significant difference between the two groups. Dank (1976), Norton and Hubert (1977), and Burke (1973) noted that children taught by a phonics approach produced lower comprehension scores than children taught by a sight recognition approach.

## Part 2: Substitution Components

The substitution errors were further examined and categorized for words/nonwords, graphic similarity of words, graphic similarity of nonwords, sound similarity of words, sound similarity of nonwords, no meaning change, and contextual appropriateness. The number of substitutions for each component category were tabulated for the two instructional groups. The mean percentage score, the standard deviation were calculated for each group. The t-test for independent samples was applied to determine the differences between groups. The data are presented in Table 2.

### Trends Between Groups

#### 1. Nonwords.

For children learning to read through the phonic approach, 24.90 percent of their substitutions were nonwords. For children learning to read through a language experience approach 15.45 percent of their substitutions were nonwords. The difference was significant.

This finding supports earlier research by Elder (1971), Dank (1976), Norton and Hubert (1977), Norton (1976), Cohen (1974-75), and DeLawter (1974). The percentages of nonwords in DeLawter's study were considerably higher--65 percent for children being instructed by a phonics approach and 46 percent for children being instructed by a whole word approach, than in the present study. On the other hand, Bennett (1942) reported that none of the 34,394 errors analyzed in her study were nonsense words.

#### 2. Graphic similarity of word substitutions.

The children being instructed through the phonics approach had an average of 65.29 percent graphically similar word substitutions. The group being instructed through the language experience approach had an

Table 2

Comparison of means, standard deviation and t-values for  
 Substitution Components for the Phonics Group  
 and the Language Experience Group

| Substitution<br>Component         | <u>Phonics</u> |                       | <u>Language Experience</u> |                       | t-value  |
|-----------------------------------|----------------|-----------------------|----------------------------|-----------------------|----------|
|                                   | Means          | Standard<br>Deviation | Means                      | Standard<br>Deviation |          |
| Nonwords                          | .2490          | .148                  | .1545                      | .115                  | 2.67 **  |
| Graphic Similarity<br>of words    | .6529          | .186                  | .6366                      | .231                  | .29      |
| Graphic Similarity<br>of nonwords | .9317          | .109                  | .9529                      | .109                  | -0.73    |
| Sound Similarity<br>of words      | .6963          | .139                  | .6023                      | .211                  | 1.97     |
| Sound Similarity<br>of nonwords   | .9687          | .053                  | .9623                      | .111                  | .27      |
| No Meaning Change                 | .2414          | .113                  | .4966                      | .282                  | -4.45 ** |
| Contextual<br>Appropriateness     | .6508          | .156                  | .7492                      | .248                  | -1.78    |

\*\*Significant at the .01 level.

average of 63.66 percent graphically similar word substitutions. There was no significant difference between the two groups.

Earlier research (Barr, 1972, 1975; DeLawter, 1974; Dank, 1976; Norton and Hubert, 1977; Norton, 1976) found that children instructed by a phonics approach produced more graphically similar substitutions than did children instructed by a whole word approach.

### 3. Graphic similarity for nonword substitutions.

The nonsense words that were substituted for text words were also analyzed for graphic similarity. For the children taught by the phonics approach the mean percentage was 93.17 percent and for the children taught by the language experience approach the mean percentage was 95.29 percent. There was no significant difference between groups.

### 4. Sound similarity of word substitutions.

For children taught by the phonics approach the mean percentage of words in this category was 69.63 percent. For the group taught by the language experience approach the mean percentage of words in this category was 60.23 percent. There was no significant difference between the two groups. Previous research (DeLawter, 1974; Dank, 1976; Norton and Hubert, 1977; and Norton, 1976) reported that children taught by a phonic approach produced a higher percentage of word substitutions that were similar in sound to the stimulus word.

### 5. Sound similarity of nonword substitutions.

The nonwords produced by both the children taught by the phonics approach and the children taught by the language experience approach were closely related in sounds to the stimulus word. The mean percentage for the children taught by the phonics approach was 96.87 percent and for

children taught by the language experience approach 96.23 percent. There was no significant difference.

6. No meaning change.

For children instructed by the phonics approach the mean percentage of substitutions that did not change the meaning of the sentence was 24.24 percent. For children instructed by the language experience approach the mean percentage of substitutions that did not change the meaning of the sentence was 49.66 percent. The difference between the groups was significant.

This finding supports earlier research by Elder (1971), Burke (1973), Norton and Hubert (1976), and DeLawter (1974) which noted that children instructed by a phonics approach produced more substitutions that changed the meaning of the sentence than did children being instructed by a sight recognition approach.

7. Contextual appropriateness.

For children taught by a phonics approach 65.08 percent of their substitutions were contextually appropriate. For the children taught by the language experience approach 74.92 percent of their substitutions were contextually appropriate with the preceding part of the sentence. The difference between the groups was not significant.

The mean percentages in the present study are somewhat lower than the 91 percent of the substitutions that Weber (1970) noted were grammatically appropriate to the preceding context but higher than the 58 percent produced by the meaning emphasis group in Clay's (1967) research.

Trends Between Subgroups. The subjects in each treatment group were divided into three groups: high, middle and low, based on the number of

substitution errors they had produced. The mean percentage score and the standard deviation were calculated for each subgroup--high, middle, and low subgroups for children taught by a phonics approach, and high, middle, and low subgroups for children taught by a language experience approach. The t-test for independent samples was applied to determine the differences between subgroups. The data are presented in Table 3 for nonwords, Table 4 for graphic similarity of words and of nonwords, Table 5 for sound similarity of words and of nonwords, and Table 6 for no meaning change and for contextual appropriateness.

The subgroups will be referred to in the following manner:

The children instructed through the phonics approach will be referred to as the high phonics subgroup, the middle phonics subgroup and the low phonics subgroup.

The children instructed through the language experience approach will be referred to as the high LE subgroup, the middle LE subgroup and the low LE subgroup.

The phonics achievement subgroups (high, middle, low) produced significantly more substitutions than the comparable high, middle, and low language experience subgroups.

1. Nonwords.

The high phonics subgroup produced a mean percentage of 20.73 percent nonwords. The high LE subgroup produced a mean percentage of 6.22 percent nonwords. This difference was significant.

For the middle phonics subgroup the mean percentage of nonwords was 29.86 percent. For the middle LE subgroup the mean percentage of nonwords was 18.95 percent. There was no significant difference between the groups.

Table 3

Comparison of Means, Standard Deviation and t-value for  
Nonwords for High, Middle, and Low Achieving  
Phonics and Language Experience  
Beginning Readers

| Group          | Mean  | Standard<br>Deviation | t-value |   |
|----------------|-------|-----------------------|---------|---|
| high phonics   | .2073 | .147                  | 2.47    | * |
| high LE        | .0622 | .097                  |         |   |
| middle phonics | .2986 | .182                  | 1.63    |   |
| middle LE      | .1895 | .108                  |         |   |
| low phonics    | .2356 | .099                  | .63     |   |
| low LE         | .2079 | .086                  |         |   |

\*Significant at the .05 level.



The low phonics subgroup produced 23.56 percent nonwords and the low LE subgroup produced 20.79 percent nonwords. There was no significant difference between these two groups.

In each achievement subgroup--high, middle, and low--the children receiving instruction by a phonics method produced more nonword substitutions than children receiving instruction by a language experience method.

1. Graphic similarity of word substitutions.

For the high phonics subgroup the mean percentage of graphically similar words was 49.66 percent. For the high LE subgroup the mean percentage of graphically similar words was 47.41 percent. There was no significant difference between the subgroups.

The middle phonics subgroup produced a mean percentage of 70.97 percent for this aspect of substitutions. The middle LE subgroup produced a mean percentage of 68.21 percent for this aspect of substitutions. There was no significant difference between the two subgroups.

The mean percentage for the low phonics group was 74.62 percent and 74.85 percent for the low LE group. The low LE subgroup had the highest percentage of graphically similar words while the high LE subgroup had the lowest percentage of graphically similar words. The high subgroups of both treatment groups produced a lower percentage of graphically similar words than did the middle and low subgroups. Cohen (1974-75) also noted that the poorer readers at the end of the school year still produced many substitutions graphically similar to the stimulus word, while the better readers' substitutions were on small function words.

The findings of this study do not agree with those of Weber (1970), Bennett (1942), and Clay (1967), who noted that the high group made more

Table 4

Comparison of Means, Standard Deviation, t-value for  
 Graphic Similarity of Substitution Errors,  
 Words and Nonwords, for High, Middle,  
 and Low Achieving Phonics and  
 Language Experience  
 Beginning Readers

| Group          | <u>Words</u> |                       |         | <u>Nonwords</u> |                       |         |
|----------------|--------------|-----------------------|---------|-----------------|-----------------------|---------|
|                | Mean         | Standard<br>Deviation | t-value | Mean            | Standard<br>Deviation | t-value |
| high phonics   | .4966        | .203                  | .20     | .9444           | .167                  | -1.00   |
| high LE        | .4741        | .269                  |         | 1.000           | .0                    |         |
| middle phonics | .7097        | .114                  | .37     | .9296           | .086                  | .45     |
| middle LE      | .6821        | .204                  |         | .9048           | .154                  |         |
| low phonics    | .7462        | .141                  | -0.04   | .9213           | .061                  | -1.07   |
| low LE         | .7485        | .120                  |         | .9593           | .088                  |         |

graphically similar substitutions than did the low group.

3. Graphic similarity of nonword substitutions.

The mean percentages of graphically similar nonwords produced by the three phonics subgroups and the three language experience subgroups were all above 90 percent. There were no significant differences between subgroups of comparable achievement.

4. Sound similarity of word substitutions.

For the high phonics subgroup the mean percentage of word substitutions in this category was 70.07 percent. For the high LE subgroup the mean percentage of word substitutions in this category was 47.41 percent. This difference was not significant. A comparison of Table 4 and Table 5 shows that the high LE subgroup produced the same mean percentage of word substitutions similar in sound as graphically similar. The high phonics subgroup, by contrast, had a higher mean percentage of words similar in sound than words graphically similar.

The mean percentage for the middle phonics subgroup was 71.08 percent, and the mean percentage for the middle LE subgroup was 69.37 percent. There was no significant difference between the two subgroups.

The low phonics subgroup had a mean percentage of 67.60 percent for this category while the low LE subgroup had a mean percentage of 62.90 percent. There was no significant difference between the two subgroups.

The mean percentages in this study are higher than those mentioned in the study by Norton and Hubert (1977), in which they noted that the high phonic group produced 66.0 percent, the high eclectic produced 40.4 percent, the low phonic produced 55.2 percent, and the low eclectic produced 32.8 percent.

Table 5

Comparison of Means, Standard Deviation and t-value for  
Sound Similarity of Substitution Errors, Words  
and Nonwords, for High, Middle and Low  
Achieving Phonics and  
Language Experience  
Beginning Readers

| Group          | <u>Words</u> |                       |         | <u>Nonwords</u> |                       |         |
|----------------|--------------|-----------------------|---------|-----------------|-----------------------|---------|
|                | Mean         | Standard<br>Deviation | t-value | Mean            | Standard<br>Deviation | t-value |
| high phonics   | .7007        | .208                  | 2.00    | 1.000           | 0.0                   | 0.0     |
| high LE        | .4741        | .269                  |         | 1.000           | 0.0                   |         |
| middle phonics | .7108        | .118                  | .25     | .9588           | .056                  | -.21    |
| middle LE      | .6937        | .182                  |         | .9667           | .105                  |         |
| low phonics    | .6760        | .070                  | 1.11    | .9484           | .064                  | .50     |
| low LE         | .6290        | .107                  |         | .9198           | .159                  |         |

### 5. Sound similarity of nonword substitutions.

The phonics subgroups and the language experience subgroups all attained mean percentages above 90 percent. The high phonics subgroup and the high LE subgroup produced mean percentages of 100 percent.

The middle phonics subgroup produced an average of 95.88 percent nonword substitutions with sound similarity, and the middle LE subgroup produced an average of 96.67 percent.

For the low phonics subgroup the mean percentage was 94.84 percent, and for the low LE subgroup the mean percentage was 91.98 percent. There was no significant difference between comparable subgroups.

### 6. No meaning change.

For the high phonics subgroup 34.69 percent of their substitutions did not change the meaning of the sentence. For the high LE subgroup 79.42 percent of the substitutions did not change the meaning of the sentence. This difference was significant.

The mean percentage of substitutions that did not change the meaning of the sentence was 20.82 percent for the high phonics group and 45.19 percent for the high LE subgroup. This difference was significant.

For the low phonics subgroup 17.29 percent of their substitutions did not change the meaning of the sentence. For the low LE subgroup 24.87 percent did not change the meaning of the sentence. This difference was significant.

For both the phonics subgroups and the language experience subgroups the mean percentages decreased as the achievement level of the subgroups decreased. Norton and Hubert (1977) also noted this decrease in mean percentages with the decrease in ability level of the subgroups.

Table 6

Comparison of Means, Standard Deviation and t-value for  
No Meaning Change and Contextually Appropriateness  
of Substitution Errors for High, Middle, and  
Low Achieving Phonics and  
Language Experience  
Beginning Readers

| Group          | <u>No Meaning Change</u> |                       |          | <u>Contextually Appropriate</u> |                       |         |
|----------------|--------------------------|-----------------------|----------|---------------------------------|-----------------------|---------|
|                | Mean                     | Standard<br>Deviation | t-value  | Mean                            | Standard<br>Deviation | t-value |
| high phonics   | .3469                    | .119                  | -5.69 ** | .8018                           | .146                  | -0.36   |
| high LE        | .7942                    | .204                  |          | .8444                           | .328                  |         |
| middle phonics | .2082                    | .084                  | -3.50 ** | .6305                           | .111                  | -2.59 * |
| middle LE      | .4519                    | .203                  |          | .8034                           | .180                  |         |
| low phonics    | .1729                    | .042                  | -2.27 *  | .5225                           | .051                  | -1.37   |
| low LE         | .2487                    | .091                  |          | .5937                           | .147                  |         |

\* Significant at the .05 level.

\*\* Significant at the .01 level.

### 7. Contextual appropriateness.

For the high phonics subgroup 80.18 percent of the substitutions were contextually appropriate, and for the high LE subgroup 84.44 percent of the substitutions were contextually appropriate. There was no significant difference between the two subgroups.

For the middle phonics subgroup 63.05 percent of the substitutions were contextually appropriate; for the middle LE subgroup 80.34 percent of the substitutions were contextually appropriate. There was a significant difference between the two subgroups.

The low phonics subgroup had a mean percentage of 52.25 percent contextually appropriate substitutions, and the low LE subgroup had a mean percentage of 59.37 percent contextually appropriate substitutions. There was no significant difference between these two subgroups. In this study the number of contextually appropriate errors diminished as the achievement level of the subgroups diminished, unlike the study by Weber (1970), which found "negligible" difference between the high and low groups in this category.

### SUMMARY

The present chapter has presented and interpreted the data collected. The oral reading behaviours were coded and subjected to statistical analysis to determine what similarities and differences existed between children taught by a phonics approach and children taught by a language experience approach. Behaviours examined were types of oral reading errors, repetitions, self-corrections, comprehension, and fluency. The substitution errors were further analyzed for nonwords, graphic similarity of

words, graphic similarity of nonwords, sound similarity of words, sound similarity of nonwords, no meaning change and contextual appropriateness.

The major findings are summarized below.

1. There was no significant difference between groups in the error categories, no response/don't know, insertions, omissions.
2. The children taught by the phonics approach made a significantly greater number of substitutions and sounding out type errors.
3. There were no significant differences between groups for repetitions, self-corrections, fluency and comprehension.
4. In the analysis of substitution components there were no significant differences between groups for graphic similarity of words, graphic similarity of nonwords, sound similarity of words, sound similarity of nonwords, and contextual appropriateness.
5. In the analysis of substitution components the children taught by the phonics approach produced significantly more nonwords than did the children taught by the language experience approach.
6. In the analysis of substitution components the children taught by the language experience approach produced significantly more substitutions that did not change the meaning of the sentence than did the children taught by the phonics approach.
7. There were no significant differences in mean percentages between the high, middle, and low phonics subgroups and the comparable language experience subgroups for graphic similarity of words, graphic similarity of nonwords, sound similarity of words and sound similarity of nonwords.
8. There was no significant difference between the middle phonics subgroup and the middle LE subgroup, and between the low phonics subgroup and the low LE subgroup in the mean percentage of nonword substitutions,



but the high phonics subgroup produced significantly more nonwords than the high LE subgroup.

9. The high, middle and low language experience subgroups produced a significantly greater number of substitutions that did not change the meaning of the sentence than the high, middle and low phonics subgroups.

10. There was no significant difference between the high phonics subgroup and the high LE subgroup, and between the low phonics subgroup and the low LE subgroup in the mean percentage of contextually appropriate errors. The middle LE subgroup produced significantly more contextually appropriate substitutions than the middle phonics subgroup.

## Chapter V

### SUMMARY, FINDINGS, CONCLUSIONS, AND EDUCATIONAL IMPLICATIONS

Several investigations in the area of oral reading behaviour have been conducted. These studies have noted the effect of a phonics emphasis and/or a basal reader sight word emphasis on the oral reading behaviour of children. Prior to the present study no study could be found which examined and compared the oral reading behaviour of children being taught to read by a language experience emphasis--a teacher developed program using the child's natural language and self-selected sight vocabulary--with the oral reading behaviour of children being taught to read by a phonics emphasis. The present study adds evidence concerning the effect of a language experience emphasis on the oral reading behaviour of beginning readers and the effect of a phonics emphasis on the oral reading behaviour of beginning readers.

#### SUMMARY

The purpose of this study was to determine the extent to which children instructed in initial reading by a language experience approach differed in their oral reading behaviours from children who had been instructed in initial reading by a phonics approach. The study sought answers to the following questions:

1. What is the effect of alternative instruction on the following aspects of reading behaviour--oral reading errors, self-corrections,

repetitions, comprehension and fluency?

2. What is the effect of alternative instruction on the following aspects of substitution errors--words/nonwords, graphic similarity of words, graphic similarity of nonwords, sound similarity of words, sound similarity of nonwords, contextual appropriateness, and no meaning change?

- a) What are the effects of treatment on these seven components for the group taught by the phonics emphasis and the group taught by the language experience emphasis?
- b) What are the effects of treatment on these seven components for achievement groups--high, middle, and low phonics subgroups and high, middle, and low language experience subgroups?

#### Administration of Instruments

The children were administered individually the Spache Diagnostic Reading Scales--tests 1A, 1C, 2A, 2C, 3A, 3C during the last two weeks of May, 1978.

#### Treatment of the Data

The results of each child's oral reading of the Spache Diagnostic Reading Scales was recorded and coded and a computer card, one for each child, was key punched. The data was then run through an SPSS (Statistical Package for the Social Sciences), performed on IBM 360/67 computer using the applicable sub-routines of SPSS. Mean scores were computed for oral reading errors, repetitions, self-corrections, fluency and comprehension. Mean percentages were computed for substitution components. The t-test for independent samples was subsequently applied to determine differences, significant at the 5 percent level of confidence, between groups and between subgroups.

## FINDINGS

Briefly, the questions raised at the beginning of this investigation were answered in the following manner based on the data presented in Chapter four.

### Part 1: Reading Behaviour

#### 1. Errors.

Children taught by a phonics emphasis made substantially more errors (1607) than children taught by a language experience emphasis (1007). They produced a significantly higher mean for number of substitution errors and number of sounding out errors than did the children taught by a language experience approach.

As many studies have reported, substitution errors comprised the largest percentage of errors produced for the group taught to read by the language experience approach, and for the group taught to read by the phonics approach.

#### 2. Repetitions.

No significant difference was found in this category between the group taught by the phonics approach and the group taught by the language experience approach.

#### 3. Self-corrections.

No significant difference was found in this category between the group taught by the phonics approach and the group taught by the language experience approach. The children taught by the phonics approach self-corrected 14.84 percent of the errors produced while the group taught by the language experience approach corrected 20.66 percent of the errors produced.

#### 4. Fluency.

No significant difference was found in this category between the children taught by the phonics approach and the children taught by the language experience approach.

#### 5. Comprehension.

The children taught by the phonics approach produced lower mean comprehension scores than the children taught by the language experience approach. The difference was not significant.

### Part 2: Substitution Components

#### 1. Between treatment groups.

Of the seven substitution components analyzed significant differences were noted for two components. The children taught through the phonics approach made a significantly higher mean percentage of nonword substitutions than the children taught through the language experience approach. The children taught through the language experience approach produced a significantly higher mean percentage of substitutions which did not change the meaning of the sentence.

There was no significant difference between children taught by the phonics approach and children taught by the language experience approach for graphic similarity of words, graphic similarity of nonwords, sound similarity of nonwords, and contextually appropriate substitutions.

The children taught through a phonics method made a higher mean score of word substitutions similar in sound to the stimulus word than did the group taught through the language experience approach. The difference approached significance.

## 2. Between achievement subgroups.

The high, middle and low phonics subgroups produced significantly more substitutions than did the high, middle and low language experience subgroups.

The high phonics subgroup made a significantly higher mean percentage of nonword substitutions than did the high LE subgroup. The middle and the low phonics subgroups made higher mean percentages of nonword substitution than did the middle and low LE subgroups but the differences were not significant.

There were no significant differences between the high, middle and low achieving phonics subgroups and the high, middle and low language experience subgroups on the mean percentage of graphically similar words produced. The low phonics subgroup and the low LE subgroup had the highest scores for graphic similarity with the two high subgroups producing the lowest mean percentages of graphically similar words.

There was no significant difference between the high, middle and low phonics subgroups and the high, middle and low LE subgroups in mean percentages of graphically similar nonwords produced and nonwords similar in sound to the stimulus word.

There was no significant difference between the high, middle and low phonics subgroups and the high, middle and low LE subgroups in mean percentage of words produced that were similar in sound to the stimulus word. The high, middle and low phonics subgroups produced higher mean percentages of words similar in sound than did the comparable language experience subgroups and the difference between the high phonics subgroup and the high LE subgroup approached significance.

The high, middle and low language experience subgroups produced

significantly higher mean percentages of substitutions that did not change the meaning of the sentence than did the high, middle and low phonics subgroups.

The middle LE subgroup made a significantly higher mean percentage of contextually appropriate substitutions than did the middle phonics subgroup. There were no significant differences between the high phonics subgroup and the high LE subgroup, or between the low phonics subgroup and the low LE subgroup.

### CONCLUSIONS

The results of the present investigation seem to warrant the following conclusions:

1. Among children taught by either a phonics approach or a language experience approach, substitution of a word different from the expected word was the most frequent error.
2. The phonics approach produces readers who make more errors than the readers taught by the language experience approach. This trend was consistent when the high, middle and low phonics subgroups were compared with the high, middle and low language experience subgroups.
3. The phonics approach produces readers who make many nonwords and many substitutions which alter the meaning of the sentence while the language experience approach, with its emphasis on meaning, develops readers who produce few nonwords and many meaningful substitutions that do not distort the meaning of the sentence. It would appear that an approach which emphasizes the sound symbol relationship, as does the phonics approach, produces readers who fail to pay attention to what the author is

saying. This trend was consistent when the high, middle and low phonics subgroups were compared with the high, middle, and low language experience subgroups.

4. The phonics approach and the language experience approach produces readers capable in the use of graphic and sound elements, although the phonics approach produces readers who make more use of the sound elements than readers taught by the language experience approach. This trend was consistent for the phonics and language experience subgroups as well; the exception being the high language experience subgroup. The failure of the high achieving readers taught by the language experience approach to use graphic and phonic elements is indicative of the third stage in reading development mentioned by Biemiller (1970), MacKinnon (1959), and Goodman (1971), in which the reader pays less attention to the grapho-phonemic elements and more to the syntactic and semantic elements.

5. Although both the phonics and the language experience approaches produce readers aware of syntactic and semantic constraints, the language experience group used these constraints more effectively. This trend was consistent within the phonics and language experience achievement groups. The average achieving language experience readers seem more cognizant of syntactic and semantic constraints than those taught by the phonics approach.

#### RECOMMENDATIONS

1. Oral reading analysis may be beneficial to the classroom teacher. It is recommended that such analysis be used as a diagnostic tool by the classroom teacher in order to discover the strengths and weaknesses of each child. Weber (1968) states:



. . . the study of reading errors can provide significant clues to the nature of the reading process and, in this way, can contribute to a substantive rationale for both basic and remedial instruction in reading. (p. 98.)

Goodman (1974) also notes that:

Miscues are not simply errors. They show more about the learner's strengths than about his weaknesses. In reading they are the best possible indications of how efficiently and effectively the reader is using the reading process. (p. 64.)

2. It is recommended that the classroom teacher use the results of the oral reading analysis to plan an individualized programme for the child that will strengthen the reading strategies the child uses effectively, and will teach him strategies he is deficient in. Yetta Goodman (1974) states that, "Strategy lessons help readers focus on aspects of written language they are not processing effectively." (p. 36.)

3. Classroom teachers should be cognizant of the fact that,

. . . it is most likely that at least as many children are suffering from difficulties caused by overusing particular learning strategies in reading as are suffering from a lack of such strategies. (Goodman, 1965, p. 643.)

4. Teachers should ensure that children are taught to read for meaning. It is recommended that teachers using a heavy phonics emphasis program such as the Language Patterns Program, add to and strengthen the program by ensuring that children are made aware that the major purpose of reading is to understand what the author is saying.

5. It is recommended that all children who fail to read for meaning should receive instruction in doing so. Stauffer (1970) states:

It is possible to direct the reading-thinking process in such a way that children will be encouraged to think when reading--to speculate, to search, to evaluate, and to use. . (p. 348.)

The children should be taught to pause and to think about what they have

read. They can restate in their own words what they have read. Allow the children to dictate and write their own stories in order that the language and content will be their own and will be familiar to them. It is important to let children read about experiences they are familiar with for as Pikulski (1976) states:

. . . the reader processes visual information on the basis of what he or she already "knows" which refers both to what is known about the structure of language and what is known in terms of background of information. (p. 376.)

The teacher must also provide children with the necessary experiences to enable them to understand the content of the material to be read.

Children can be taught to read past the difficult word to see if they can figure out the meaning of the word in relation to the rest of the sentence.

6. It is recommended that teachers allow children to make mistakes, for as Frank Smith (1971) states:

. . . fluent reading and learning to read fluently, require a willingness to 'make mistakes.' And the extent to which a child is prepared to risk mistakes is directly related to the tolerance of the teacher in accepting them. (p. 230.)

7. It is recommended that teachers allow the children to figure out the word, if possible, without prompting. If an error is made, the teacher should encourage the child to regress and attempt to correct the error, for as Recht (1976) states:

The reader who is encouraged to regress and attempt to make sense of an inconsistency encountered during oral reading learns from the process. (p. 638.)

8. It is recommended that a child who is unsuccessful using one reading approach which emphasizes a particular strategy should be helped to identify new strategies in the hope he will experience success at reading.

9. Teachers must be cautioned not to judge a child's reading ability strictly on the number of oral reading errors he makes because, as Yetta Goodman (1974) comments:

The grammatical structure, style of writing or concept load of any particular part of a story all are involved in the complex reasons which cause readers to produce miscues and which cause miscue numbers to vary from one part of the story to another. (p. 67.)

Rather, look closely at oral reading errors in order to see whether they distort the meaning of the story. Also,

It is not enough to say that the reader sometimes substituted a for the. It must be seen that such behavior can only result from the linguistic competence of the reader which makes it possible for him to produce a determiner, where one is needed. It must also be seen that something more than word recognition or letter perception is involved. (Goodman, 1969, p. 13.)

#### SUGGESTIONS FOR FURTHER RESEARCH

1. A replication of the present study using grade one children in other geographical areas of Canada would add to the present findings, and to the applicability of the findings to a wider population.
2. It is recommended that a replication of the present study could be carried out longitudinally so as to determine whether strategies taught in beginning reading are still evident in subsequent grades.
3. It is suggested that a longitudinal study be conducted in order to examine children taught by a phonics approach and a language experience approach throughout their first year in school, to note developmental trends.
4. Further research is needed to determine how children expand their initial reading strategy and adopt different reading strategies. Is it developmental?
5. It is recommended that an indepth study of the self-correction

strategies of children learning to read by a method emphasizing language experience be compared with children learning to read by a method emphasizing phonics. When is a child more prone to correct an error?

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