INVESTIGATING THE EFFECT ON READING COMPREHENSION OF USING A CLASSIFICATION SCHEME IN CONJUNCTION WITH THE CLOZE PROCEDURE TO TEACH THE PROCESS OF CONTEXT CLUE UTILIZATION

GLADYS S. BARRETT

INVESTIGATING THE EFFECT ON READING COMPREHENSION OF USING A CLASSIFICATION SCHEME IN CONJUNCTION WITH THE CLOZE PROCEDURE TO TEACH THE PROCESS OF CONTEXT CLUE UTILIZATION

by

Gladys S. Barrett, B.A.(Ed.)

A Thesis Submitted to the School of Graduate Studies in Partial Fulfillment of the Requirements for the Degree of Master of Education

Department of Curriculum and Instruction
Memorial University of Newfoundland

December 1985

St. John's Newfoundland

ISBN 0-315-31007-3

ABSTRACT

This study examined the effect on reading comprehension of using a classification scheme of context clues in conjunction with the cloze procedure to teach the process of context clue utilization to a group of fourth grade students.

The classification scheme was used as a framework for making selective deletions of nouns, adjectives, verbs and adverbs in the construction of cloze reading passages which were used for instructional purposes. Subjects were required to use the context clues provided in the passages to determine semantically acceptable replacement words for those which had been deleted.

The Pretest-Posttest Control Group Design with Matching was employed in this study.

The comprehension subsection of the Gates-MacGinitie Reading Test (Canadian edition), Level D, Form 1, was administered as a pretest. Raw scores obtained were used to match students who were then randomly assigned to the experimental or control groups. The mean score was computed and used to classify subjects as "skilled" or "less skilled" readers. Form 2 of the same test was used as the posttest.

The data collected was analyzed using a two-way analysis of covariance.

ACKNOWLEDGEMENTS

To my supervisor, Dr. J. Matchim, for being there when I needed her, I offer my deepest thanks. My thanks, also, to Dr. F. Wolfe, and Dr. W. Spain for their help.

To my husband, Lew, and my children, Kristopher, Karen and John for understanding, and for loving me in spite of my sometimes long absences, I LOVE YOU.

To my parents, Mimie and Ingvauld Avery, for always caring and for your constant encouragement throughout my life, you hold a very special place in my heart.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

THE NATURE OF THE STUDY

I. Introduction

For a number of years the researcher has taught grades Kindergarten through Grade Four at various times in primary and elementary schools. She has observed the great range of reading ability which can exist in a very small class. She has listened to students read - students who come to an abrupt halt upon meeting a new word, students who can pronounce new words but have no idea of their meaning, students who can do perfect oral reading without any comprehension of what they have read, students who actually shake with fear of making an error, and students who immediately correct a classmate who made an 'error' in oral reading even if the 'error' retained meaning.

This study is an attempt to investigate a possible method for acquainting students with a process for attacking unknown words in an effort to identify meaning. It is an attempt to improve the reading comprehension of those students placed in the experimental group for this study as well as to impress upon them the fact that reading need not be an 'exact' process, but that prediction plays a very important role in it.

II. Background of the Study

The relatively new field of psycholinguistics emphasizes the importance of prediction in the reading process. Frank Smith (1975) has gone so far as to state that "reading is impossible without prediction" (p. 305). Prediction has also been referred to as hypothesis testing and guessing. Kenneth Goodman (1967) has referred to reading as a "psycholinguistic guessing game" (p. 126). His theory is that readers selectively use language cues to make tentative decisions which will be confirmed, rejected or refined through further reading. He claims that "Efficient reading does not result from precise perception and identification of all elements, but from skill in selecting the fewest, most productive cues necessary to produce guesses which are right the first time" (Smith, 1967, p. 127). Other supporters of the value of prediction in the reading process include Ryan and Semmel (1969), Gomberg (1976), Blachowicz (1977), Hart (1978), Harker (1979), Clarke and Nation (1980) and Marino (1981). Garmen (1979) actually defines reading as "a process of prediction" (p. 214).

For many decades, learning has been depicted as the mastering of a series of hierarchical skills. Many researchers claim that there has been an over-emphasis on skills instruction. Allington (1977) claims that this trend has "run amuck", and that this is particularly true of learning to read. Goodman (1973) rejects the idea of

sequential teaching of skills when he states,

> Because we have not properly respected language, we have tended to think we facilitated learning to read by breaking written language into bite-size pieces for learners. Instead, we turned it from easy-to-learn language into hard-to-learn abstractions. (p. 12)

He contends that reading should be meaning-centered, not word-centered. Hart (1978) supports this contention claiming that there must be a shift in emphasis from isolated reading skills and error free reading to reading for understanding in an effort to prevent the development of problem readers.

The educational system which had emphasized the hierarchical skills approach has certainly not emphasized the prediction which Smith (1975), Goodman (1967), and Garmen (1979) identify as being so very critical to the reading process. Emphasis has traditionally been placed on "the word"; and the precise identification of it has been expected by teachers. Hart (1978) refers to this requirement of perfection in the process of reading as the "NO ERROR syndrome". Pikulski (1976) writes of it as "the tyranny of 'the right answer'" (p. 318).

In opposition to this train of thought, that is, the requirement of precise word identification, are those who contend that the reader has no need to precisely identify every word in order to gain meaning from what he reads. These include Ryan and Semmel (1969), and Harris and Sipay

(1979). Garmen (1979) says that "Reading is not a process of identifying individual letters of individual words" (p. 214), and that teachers should emphasize the goal of "reading as understanding" (p. 215). Likewise, Goodman (1967) states that "reading is more than precise, sequential identification" (p. 126). He takes the view that "Essentially, the only objective in reading is comprehension" (p. 490). This view is supported by Stauffer (1975), and by Dechant (1982) when he writes, "The goal of all reading is the comprehension of meaning" (p. 288).

Psycholinguists are, in fact, suggesting a shift in emphasis with respect to reading instruction as Hart (1978) claimed must happen. The shift is toward reading for meaning and away from the hierarchical skills approach and exact word identification requirement.

If in any educational system there is to be an increased emphasis on comprehension with regard to reading instruction, and if comprehension is the objective of all reading, the logical questions which follow are:

(i) What is comprehension?

(ii) How can it best be taught?

Spache (1966) also identified comprehension as being the goal of reading instruction and summarized what studies completed at that time had <u>not</u> revealed about reading comprehension. He stated:

> The factor analysis studies do not yet answer the three fundamental questions of 1. exactly what thinking processes operated in comprehension, 2.

> how may the reader's facility in each of these processes be measured, and 3. how can ability in these processes be improved by instruction? (p. 61-63)

Miller (1978) echoes Spache's statement by writing "Reading comprehension is an elusive entity. It is difficult to define, measure and teach . . . . teachers must face the ominous responsibility of helping students obtain a quality which is vaguely defined" (p. 35). Comprehension remains as elusive as ever, despite the research which has been done in that particular area of the reading process. Carey (1980) says that "Perhaps the most pervasive and unsettling problem confronting the community of reading educators, researchers, and theorists is the lack of a commonly held view of the precise nature of reading comprehension" (p. 292).

Whatever the nature of reading comprehension may be, Smith (1982) believes that it is possible to link comprenension and prediction. He defines prediction as "the prior elimination of unlikely alternatives" (p. 62), claiming that it is not guessing recklessly. As an informal definition, he offers "prediction is a matter of asking specific questions" (p. 62). It is through this informal definition that Smith links prediction and comprehension. He states, "Prediction means asking questions--and comprehension means getting these questions answered" (p. 62). The assumption is that readers are constantly asking questions about the material they are about to read; if

these questions can be answered, comprehension is the result. If the reader cannot answer the questions relating to what the following material may be about, he does not comprehend. Smith (1982) contends that prediction is the basis of comprehension.

Another aspect of reading which has long been accepted as playing an important role in reading comprehension is the ability of the reader to utilize context clues. The utilization of context clues, or contextual analysis, has come to be recognized as one of the most important methods of deriving meaning from words. Spache and Spache (1977) claim that "Eventually contextual analysis becomes one of the most frequently used methods of derivation of word meanings, as phonics and structural analysis decrease in use" (pp. 403-404). Research findings of a study conducted by Askov and Kamm (1976) imply that teaching certain types of context clues does, in fact, increase ability to derive meaning. Stauffer (1975) has stated, "Context clues are the most functional aid to word recognition because comprehension or understanding is taking precidence" (p. 268). McCullough (1958) wrote of the importance of context clues in the reading comprehension process when she stated,

> Until we begin to define this area of learning and to make it a part of a continuous developmental program, until we begin to teach the techniques as well as require their use, the whole matter of comprehension must flounder. (p. 229)

A wide variety of context clues have been identified in reading materials, and various attempts have been made to classify them. The most frequently cited classification schemes include those of Artley (1943), McCullough (1945), and Ames (1966), although other schemes have been developed.

If, in fact, instruction in the reading process is to emphasize reading for meaning, or comprehension, then clearly students must be given instruction in the utilization of the various types of context clues since it has been indicated that the ability to utilize context clues has a definite impact on a reader's comprehension. Support for instruction in the use of context clues has been advocated by many, including McCullough (1958), Ames (1966), Fisher (1967), Askov and Kamm (1976), Bortnick and Lopardo (1976), Spache and Spache (1977), Smith and Robinson (1980), and others.

The above mentioned researchers have indicated that the ability to utilize context clues and prediction ability may be critical factors in the comprehension process. The question then arises, how should one teach and develop these important abilities?

A procedure which, in the opinion of the investigator, incorporates the use of both of these abilities, is the cloze procedure. This procedure has been receiving an increased amount of attention in educational literature. In fact, Cecil (1985) states that "In the last ten years, the cloze procedure has increased in popularity as a respected and useful teaching tool" (p. 95). The cloze

procedure was introduced by Taylor (1953). The cloze procedure is described by Sampson and Briggs (1983) as follows: "The procedure involves the selection of a reading passage and the systematic deletion of words. The reader is required to fill in the blanks to restore the continuity of the text" (p. 177). Initially, it was used as a measure of readability, and later became used as a test of reading comprehension. However, according to Jongsma (1980), its most effective use has been in the development of reading comprehension.

CHAPTER II

THE PROBLEM

I. Introduction to the Problem

Even though the influence of context clues and prediction on reading comprehension has been accepted, they appear to be receiving relatively little attention in classrooms (Durkin, 1983). There may very well be possible explanations for the lack of instruction in these two areas.

Smith (1975) contends that the notion of encouraging a child to predict during reading is a worry for many teachers since they view it, in essence, as condoning the making of an error. For these teachers it is equated with reckless guessing. The author says that prediction should be distinguished from reckless guessing (Smith, 1975). He writes, "The guesser is usually the child trying to achieve what the teacher is demanding by getting every word right, no matter how little relation it bears to sense." Gomberg (1976) refers to the process of prediction as "freeing children to take a chance" (p. 455). Smith (1975) is also of the opinion that children must feel free to use knowledge which they have already accumulated, and that "The child who will become a halting, inefficient reader is one who is afraid to make a mistake" (p. 310). Ashby - Davis (1984) states that

> Educated guessing, according to psycholinguists, is a cognitive process which underlies successful

> reading and listening comprehension. It involves using one's prior knowledge of reality, language structure (ranging from the word to the sentence), semantics, and rhetorical and literary conventions to make a continuous series of predictions of meaning with subsequent verification as one tries to understand verbal messages. (p. 319).

Many classrooms may be suffering from the "NO-ERROR syndrome" (p. 8) referred to by Hart (1978), or Pikulski's (1976) "tyranny of 'the right answer'" (p. 318), and may be producing the halting, inefficient reader to whom Smith (1975) refers.

Goodman, Burke and Barry (1980) state that "Students must have the right to make mistakes" (p. 16). The authors (1980) go on to say

> Permitting students to explore, to take risks, and to make mistakes involves a respect for their intellectual capacity and their investment in the learning process. It commits students to taking responsibility for their own decision making, for evaluating the effectiveness of the alternative paths they have explored, and for formulating, at least, tentative conclusions. Both student and teacher become focused on finding workable solutions and progressively more satisfying ones, not upon determining any final answers. (p. 17)

Just as the use of prediction skills may not be encouraged by teachers because of its equation with reckless

guessing, it also appears that a very small portion of instructional time in the classroom is being devoted to direct instruction in context clue usage. Whisler (1977) states that of all word recognition techniques taught, it is probably context clues which receive the least amount of instructional time. She cites several possible reasons for this. They include:

> 1. There is no set body of information or acquired skills which, if one possesses, can lead to the definite analysis of a word.
>
> 2. The number of possible sentences is infinite and the uses of context change with each different textual situation.
>
> 3. Possibly the major cause of this death of teaching is that teachers seem to have a meagre knowledge of how to teach students to use context, where to start, and what steps are involved. This deficiency can lead to an insecurity and subsequent avoidance of instruction in the use of context altogether. This, unfortunately, is the frequently prevailing situation in many classrooms. (p. 2)

Spache (1981) lends a kind of support to Whisler's argument. He indicates that teacher's manuals are not very specific when dealing with contextual analysis, and are very vague in their indications as to how the use of these clues might be developed.

Another explanation offered for the lack of instruction in, or promotion of the use of, context clues is offered by Spache and Spache (1977). They infer that the use of most context clues involves inferential thinking. Because of this, teachers equate contextual analysis with guesswork and do not encourage its use.

It would appear that the teaching of context clues is being avoided. This is despite the fact that the use of context would help children make what Farr and Roser (1979) called "informed guesses" (p. 170). McCullough (1945), Miller (1977), and Durkin (1978), state that it replaces blind guessing. Durkin (1978) advocates the teaching of context clues as a means of developing independent readers. Bond, Tinker and Wasson (1979) state that the lack of ability to use context well is thought to be the cause of difficulties which many children experience with reading, and that this ability can act as a check on other word recognition techniques. Smith (1963) and Stauffer (1975) say that the skill of using context clues efficiently and well is reflected in mature reading. Burns and Schell (1975) have cited the use of context for identifying the meaning of unknown words as a major skill which must be applied in all reading. Gray (1972) states that "Context clues are perhaps the single most important aid to word perception" (p. 283).

Direct teaching in the use of context clues has been suggested. Thomas and Robinson (1972) say that indications are that few children make full utilization of context

clues, and that there are those who are unaware of the existence of specific types of clues. They also say that, contrary to what our assumptions might be, brighter readers do not make better use of context clues than poorer readers. In fact, research indicates, according to Dulin (1970) and McCullough (1975), that there are few who will use context clues most advantageously without direct teaching. Spache and Spache (1977) suggest planned training is highly desirable since there is no guarantee that skill in utilizing context clues will develop spontaneously.

There has been disagreement among reading authorities regarding the most appropriate grade level for instruction in the use of context clues. Support for teaching the use of context clues from primary school through college can be found. However, despite this disagreement, it has been suggested, by Tinker and McCullough (1975), Stauffer (1975), and Spache and Spache (1977), that children can use context clues from the beginning of the learning to read process, and that instruction should continue throughout the child's school life.

Because of the known importance of context clue usage in the reading process, and because of the apparent lack of specific direction in teaching contextual analysis offered to teachers of reading, it is obviously necessary to develop a specific method, or methods, which can be employed to introduce and develop the process of utilizing the context clues available in everyday reading material.

Rankin and Overholser (1969) state that through research "we should learn more about the ability to utilize specific contextual clues as an important aspect of reading comprehension" (p. 71).

Jongsma (1971) says that, by using a classification scheme of context clues, the cloze procedure might possibly be employed to teach students specific types of context clues. The cloze procedure would, in the opinion of the researcher, also require the use of prediction, identified previously as being critical to the reading process.

II. Statement of the Problem

This study is an attempt to investigate the effect on reading comprehension of using a classification scheme of context clues in conjunction with the cloze procedure for the instruction of Grade Four students in the process of context clue utilization.

III. Rationale for the Study

Burns (1968) says that "Reading authorities have emphasized for many years the importance of developing effective use of context" (p. 80). Whisler (1977) states that context clues, as part of the reading program in schools, receives a very small amount of instructional time despite the fact that "reading authorities and linguists agree that the use of context clues is one of the more

important determinants in word recognition and meaning for both beginning, and more importantly, mature readers" (p. 1). The fact that context clues do not receive a larger amount of instructional time is not surprising if there is the lack of knowledge and information among teachers that is indicated by Spache (1981) and Whisler (1977).

The importance of efficient utilization of context clues in reading has been agreed upon by many. Spache (1981) states that context clues "play a significant role in reading" (p. 254). Heilman (1972) feels that the distinguishing factor between good and poor readers is the amount of help they can extract from the context in their attack upon unknown words. Spache and Spache (1977) claim that "contextual analysis takes the reader beyond pronunciation to meaning which . . . is more significant for his ultimate comprehension" (p. 403). Stauffer (1975) says that skill and efficiency in the utilization of context clues are of prime importance because "it is essential to understanding. Reading without understanding is not reading" (p. 275). Such a point of view posits that comprehension, or understanding, takes precedence in the reading act when context clues are utilized.

Goodman (1973), Kennedy and Weener (1973), and Au (1977) feel that since poor readers may be relying too heavily on graphic information and not effectively utilizing the context they may become word-by-word, inefficient readers. This behavior could possibly result from an insistence on correct word identification by teachers which

Goodman (1967) claims might very well act as an impediment to the use of context. Potter (1982) also comments that, "Even assuming that poor readers do make less use of the contextual information, this could be because they are less 'able' to use the context and not because they are less 'willing' to do so" (p. 16). It may be possible to improve poor readers' use of context clues through direct, systematic teaching. Dulin (1970) states that context clues are "predictable, identifiable, and teachable" (p. 445). If ability to utilize context clues is as important to the process of reading comprehension as has been indicated (Heilman, 1972; Spache and Spache, 1977; Spache, 1981; Stauffer, 1975; Whisler, 1977), then increasing ability in their use should produce a corresponding increase in reading comprehension.

The various types of context clues which have been identified have been organized into a variety of classification schemes. Mention of these can be found in many educational textbooks related to reading. This would appear to suggest that the purpose for formulating these classification schemes would be that of describing the various types of clues in an organized format which could be used by teachers for instructional purposes.

Jongsma (1971) suggests that it might be possible to use a classification scheme in conjunction with the cloze procedure to teach certain types of context clues. The cloze procedure has been recommended, and has been receiving increased attention in recent literature, as a teaching

technique which appears to be most effectively employed in improving reading comprehension. However, the results of research which has employed it have not been conclusive in their support of its effectiveness.

Jongsma (1980) says that many unanswered questions about cloze research remain, and that particular features of cloze instruction need to be examined in future research. In particular, he suggested that one of these features to be looked at is the use of selective deletions in the cloze passage. The author states that "The literature appears to indicate that . . . selective deletions which are focused on particular contextual relationships have a greater instructional effect than random deletions" (Jongsma, 1980, p. 23), and also suggests that a context clue classification scheme be used as a possible framework for developing cloze exercises which utilize these selective deletions. Such a framework would provide a clearer focus for cloze instruction than has been employed in much previous research. The cloze procedure may be an effective method for developing the ability to make use of context clues present in a reading passage, and, as a result, produce a corresponding increase in reading comprehension.

Research which incorporates previous research findings needs to be conducted to improve and substantiate the cloze procedure as a teaching technique which can be effectively employed in the development of the specific reading process of utilizing certain types of context clues for the improvement of reading comprehension. To address

this need, this study utilized a classification scheme of context clues, recommended by Smith and Robinson (1980) as the one most likely to be successfully used in the elementary grades, and combined it with that feature of cloze instruction recommended by Jongsma (1980) as being likely to result in greater instructional effect, i.e., selective deletions. To create deletions in the cloze passages used for instructional purposes in the study, it was decided to delete the word form classes of nouns, adjectives, verbs, and adverbs in certain instances with reference to the classification scheme of context clues. The deleted words were replaced by blank spaces. According to Thomas (1979),

> Lexical items (the nouns, verbs, adjectives and adverbs of traditional grammar) are often considered the 'meaning bearing' words of language; attending to these specific terms, therefore, is generally crucial to comprehending the basic information presented by the author. (p. 21)

Since increasing comprehension was the aim of this study, the most logical step in selection of items for deletion was these particular lexical items in the cloze passages.

The combination of the classification scheme along with the selective deletions of lexical items based on the scheme resulted in an instructional methodology which could be used to attempt to increase reading comprehension in a

group of fourth grade students by the process of context clue utilization.

IV. Significance of the Study

The significance of this research lies in the possibility of its

1. further establishing the cloze procedure as a method which can effectively be employed by teachers to improve reading comprehension;

2. establishing whether the use of a classification scheme of context clues combined with a cloze procedure which makes selective deletions of four word classes in an instructional methodology for context clue utilization produces differential gains in comprehension for a group of "skilled" or "less skilled" fourth grade readers as measured by the comprehension subsection of the Gates-MacGinitie Reading Test, Level D;

3. developing an instructional methodology, based on previous research, which will be a simple and effective method employable by classroom teachers to help students use context clues, an ability which may be transferable to other reading situations.

V. Hypotheses

The following hypotheses were examined in this study:

1. The use of context clues selected from a classification scheme and a cloze procedure as the basis for instruction in the process of context clue utilization will have no significant effect on reading comprehension as measured by raw scores obtained on the comprehension subtest of the Gates-MacGinitie Reading Test (Canadian edition), Level D, Form 2.

2. There will be no significant difference between the increase in post-test comprehension scores of "skilled" versus "less skilled" readers who received direct instruction in context clue utilization.

3. There will be no significant interaction effect of the two variables, treatment (Treatment A - direct instruction in the use of context clues; Treatment B - no direct instruction in the use of context clues) and reading level ("skilled" versus "less skilled"), on the posttest comprehension scores of the readers.

VI. Definition of Terms

For the purposes of this study, certain terms are defined as follows:

Context - the words, phrases and/or sentences that precede and/or follow an unknown (deleted word in a reading passage.

Context clue - any word, phrase and/or sentence in a reading passage which makes it possible to predict, or bring meaning to, an unknown (deleted) word.

Cloze procedure - a method of systematically deleting words from a reading passage and replacing them with blanks of consistent length which are to be filled in by students using the language and reading skills they possess.

Exact replacement - a precise identification of a word deleted from a cloze reading passage.

Acceptable synonym replacement - a synonym offered as a replacement for a deleted word in a cloze reading passage that is semantically acceptable in the context of the sentence and the whole passage.

Acceptable semantic replacement - any word or phrase offered as a replacement for a deleted word in a cloze reading passage which makes sense in the context of the sentence and the reading passage as a whole.

Classification scheme - an organization and description of certain types of context clues which will be used as a framework for the purpose of direct, systematic instruction in the process of context clue utilization.

VII. Limitations of the Study

The following are recognized as possible limitations of this particular study:

1. Only Grade Four students will be involved in the study. Results may not be generalizable to other grades and age groups.

2. The subjects will not be randomly selected. Therefore, results may not be generalizable to other groups.

3. Because the pretest mean score was used to define "skilled" and "less skilled" readers, a regression effect may affect posttest scores within the groups.

4. The time of year during which the study will be conducted, June 1 to June 20, the last day of which is one day prior to the beginning of summer vacation, may have an adverse effect on student interest, attention and effort.

5. Because the study will be conducted during the lunch hour, student interest, attention and effort may be adversely affected.

CHAPTER III

REVIEW OF THE LITERATURE

This review focuses on three specific areas of literature which are relevant to the present study. They include: (a) context clues and their role in the reading process and program; (b) the cloze procedure as a teaching technique to be used for instruction in the process of context clue utilization, and in the improvement of reading comprehension, and (c) suggested procedures for the use of cloze in the classroom.

I. Context Clues: The Reading Process and Program

According to Aulls (1970-71), it was McCullough (1943) and Artley (1942) who originated an emphasis on the use of context as an aid to determining the meaning of an unfamiliar or unknown word. McCullough (1958) has stated "An obvious purpose for being interested in contextual aids in reading is to determine the meaning of a word whose sense, for one reason or another, presents a problem" (p. 225). She refers to words which are, in form, totally foreign to us, words whose meaning eludes us, and words which are familiar but are being used in the context of less well known meanings. The author claims that the use of context is the only means available to the beginning reader

for word identification, and for the reader who has acquired the ability to analyze a word, the use of context serves as a check to see if the word problem solved makes sense (McCullough, 1958). Since McCullough and Artley brought the use of context to the forefront with respect to the reading process, many reading authorities have indicated its importance, particularly in the derivation of the meaning of unknown words, and in reading comprehension. Bond, Tinker and Wasson (1979) claim that "the use of context clues makes the selection of the correct meaning of the word possible" (p. 233). Spache and Spache (1977) state that "Eventually, contextual analysis becomes one of the most frequently used methods of derivation of word meaning as phonics and structural analysis decrease in use" (pp. 403-404). Rankin and Overholser (1969) identify "the ability to utilize specific contextual clues as an important aspect of reading comprehension" (p. 71).

The apparent importance of context clues in the reader's search for meaning has led to research which has attempted to identify and classify the various types of clues found in the context of a variety of reading passages.

The most frequently cited classification schemes appear to be those of Artley (1943), McCullough (1945), and Ames (1966).

Artley (1943) includes ten categories of context clues in his classification scheme. They include:

1. Typographical aids
2. Structural aids

3. Substitute words
4. Word elements
5. Figures of speech
6. Pictorial representations
7. Inference
8. Direct explanation
9. Background of experience
10. Subjective clues

Artley recognizes that there is a considerable amount of overlapping among the various categories.

McCullough (1945), in an investigation using groups of college freshmen, identified eight types of clues. They include:

1. Definition
2. Experience
3. Comparison or contrast
4. Synonym
5. Familiar expression or language experience
6. Summary
7. Reflection of mood or situation

McCullough (1945) states that these are "the clues most commonly found in adult literature and children's books" (p. 3).

Ames (1966), in his investigation of context clues, utilized the verbal responses of twelve graduate students to identify and classify fourteen types of contextual aids which include:

1. Clues derived from language experience or familiar expressions
2. Clues utilizing modifying phrases or clauses
3. Clues utilizing definition or description
4. Clues provided through words connected or in series
5. Comparison or contrast clues
6. Synonym clues
7. Clues provided by the tone, setting, and mood of a selection
8. Referral clues
9. Association clues
10. Clues derived from the main idea and supporting details pattern of paragraph organization
11. Clues provided through the question-and-answer pattern of paragraph organization
12. Preposition clues
13. Clues utilizing non-restrictive clauses or appositive phrases
14. Clues derived from cause and effect pattern of paragraph and sentence organization

Ames (1966), like Artley (1943), also recognizes the problem of overlapping among the various categories in his classification scheme, and states, "that some categories may be more useful than others" (p. 81).

Rankin and Overholser (1969), in a review of research, conducted relative to the various types of context clues, identified thirty-six types of clues which had been mentioned in previous studies. The authors state, "It is evident . . . that there are considerable differences among authorities regarding the types of contextual clues which

are to be found in the literature" (Rankin and Overholser, 1969, p. 52). There appears to be some degree of consensus regarding seven of the categories of clues named. These include the following types: definition, synonym, mood or tone, past experience, inference, direct explanation, and comparison or contrast.

The overlap which is evident in the various categories of context clues, the number of context clues which exist, and the designation of their type appear to the researcher to be relatively unimportant. Support for this point of view can be found in Whisler (1977) and Durkin (1978). Whisler (1977) states, "Whether a clue is designated as one type or another, or a combination of types, is debatable and also unimportant" (p. 6). Her contention is that what is important is that some sort of listing or classification scheme be used as a framework for instruction which acquaints students with the 'process' of searching for clues in their attempt to derive meaning from printed material.

Smith and Robinson (1980) suggest that "for purposes of utilization in the elementary and middle grades, a combination of the ideas of Artley (1943) and McCullough (1945) appear to still provide the most viable means of making use of context revelation" (p. 140). The scheme suggested by the authors include the following context clues types:

1. Experience clue
2. Definition clue

(i) Direct explanation

(ii) Statements in apposition

3. Synonym clue

4. Comparison or contrast clue

5. Mood or tone clue

All of these types of clues, excepting 2, (ii) Statements in apposition, appear to be agreed upon by those reading authorities referred to. Statements in apposition could simply be referred to as 'Definition clue' in some classification schemes. The authors also suggest that the students' use of these clues should be developed "through conscious practice with materials that are being read for ideas--not for their context-clue types" (Smith and Robinson, 1980, p. 140).

The critical nature of developing this ability is indicated in statements of various reading authorities who attest to the importance of efficient utilization of context clue types in the reading process. Whisler (1977) states that "the use of context clues is one of the more important determinants in word recognition and meaning for both beginning, and more importantly, mature readers" (p. 1). Durkin (1976) claims that instruction in the use of context will lead to the development of independent readers who will know how to solve reading problems which they meet. Harris and Sipay (1979) claim that the use of context can offer assistance to children in "recognizing unfamiliar words, determining the meaning of unknown words, and deciding which meaning of a polysemantic word is most appropriate" (p.

300). Stauffer (1975) stresses the importance of skill and efficiency in using context clues in mature reading. He says that "such skill and efficiency are essential to understanding. Reading without understanding is not reading" (p. 275). Bond, Tinker and Wasson (1979), and Burns (1968) claim that a child who does not use context clues will experience reading difficulty. Burns and Schell (1975) state that "The use of context clues . . . must be applied in all reading" (p. 95).

To quote Kennedy (1974):

> What does a child do when he comes to a word he doesn't know? If the emphasis has been on decoding each word sequentially, he often stops and feels he cannot continue reading until the word is decoded or someone tells him what it is. The whole meaning of what he is reading may be lost as he struggles with the one word. If he could continue to read the entire sentence, he probably would be able to comprehend the 'overall' meaning; in fact, doing so would in many cases help him to know the word which was giving him trouble. This suggests the desirability of helping children learn how to use all available cues in meaning. (p. 82)

Not only do statements in the educational literature stress the importance of context clue usage in the reading process, but also indicate a need for direct, systematic instruction. The need for this type of instruction has been

indicated over the years by various reading authorities including Artley (1943), McCullough (1945), Ames (1966), Emans and Fisher (1967), Dulin (1970), Thomas and Robinson (1972), Bortnick and Lopardo (1973), Lee (1978), Harris and Sipay (1979), and Bush and Huebner (1979).

Thomas and Robinson (1972) claim that a very strong case can be made for giving students all the help possible in developing the ability to use context clues. They say that there are few children who utilize context fully or are even aware that various types of context clues exist. Tinker and McCullough (1975) indicate that without training in the use of context throughout the grades, few children will be able to extract full value from it. Spache and Spache (1977) consider that planned training in the use of context is essential since they believe that it may not develop spontaneously; additionally, Dechant (1981) suggests that the students' use of context clues needs to be constantly refined. Particularly relevent to this research study are research findings cited by Harris and Sipay (1979) which indicate that it is difficult for many fourth-grade children to use context to extract word meaning, and suggest the need for most children to receive systematic instruction in the use of context clues.

In addition to the arguments for direct instruction, another argument frequently offered is that good and poor readers differ in their use of context clues. Steiner, Wiener and Cromer (1971) support this view. Kennedy and Weener (1973) state that "Research evidence has indicated

. . . that poor readers do not effectively use contextual clues to aid them in reading . . . comprehension" (p. 527). Kennedy (1974) indicates that there is a great amount of variability among children with regard to their use of context clues. Dulin (1970) proposes that even bright children do not utilize context clues fully without help even though they are very skillful at using other word attack skills. Heilman (1972) goes so far as to suggest that "the one ability that sets the good readers apart from poor readers is the degree to which the context helps the reader get at unknown words" (p. 360).

Rankin and Overholser (1969), in a study investigating the use of context clues by intermediate grade children, concluded that "Reading ability is substantially predictive of the ability to utilize each of the thirteen clues [identified in Ames (1965) Classification Schema of Contextual Aids]" (p. 71). These results lead us to the question, will instruction in the process of utilizing specific context clues lead to an improvement in reading ability in terms of reading comprehension? The authors suggest that more needs to be learned about instructional techniques which can be employed in "teaching the ability to utilize specific contextual clues as an important aspect of reading comprehension" (Rankin and Overholser, 1969, p. 71).

Since direct instruction in the use of context clues is most definitely indicated in the literature as facilitative of comprehension, what then is the most recommended method of teaching these specific clues? Many

researchers and reading authorities (Au, 1977; Bell, 1977; Bortnick and Lopardo, 1973; Bullock, 1975; Ellington, 1981; Lee, 1978; Richardson, 1980; Sampson et al., 1982) are recommending the cloze procedure. Bortnick and Lopardo (1976) (cited in Weaver, 1979) indicate that the use of the "cloze procedure requires a processing of language identical to what takes place in the actual reading process" (p. 634). This type of processing involved in the completion of cloze exercises should be an important consideration in any reading instruction, rather than using procedures which actually divorce instruction from that which takes place in the everyday reading process.

II. The Cloze Procedure: A Teaching Technique

History

The cloze procedure was, according to Buros (1978) invented by H. Ebbinghaus, in 1897, as a testing procedure. It has been used for various purposes, and a variety of terminology has been used in reference to it. It appears to have come into prominence when it was first termed the "cloze procedure" by Wilson Taylor, in 1953, and was used as a measure of readability. Taylor (1953) says that the term "cloze" comes from "closure", a term used in Gestalt psychology to refer to "the human tendency to complete a familiar, but not-quite-finished, pattern-to 'see' a broken circle as a whole one, for example, by mentally filling in the gaps" (p. 415). The cloze procedure is a technique

whereby "gaps" are created in a reading passage by systematically deleting words, or parts of words, in some predetermined way. The deletions usually made are deletions of every n^{th} word, the deletion of every fifth, eighth or tenth word being most common, or deletions of certain types of words, although other deletion systems have been used. The deleted words are replaced by blanks of uniform length. The reader of the passage must attempt to complete the blank spaces with either the exact word deleted or a synonym for it.

Since its introduction by Taylor, it has also been used as a test of reading comprehension. In the past decade or so, it has been receiving increased amounts of attention, and has been suggested as a teaching technique which can possibly be used for a variety of instructional purposes. These include the teaching of context clues (Beil, 1977; Lee, 1978; Marino, 1981; Richardson, 1980), and the improvement of reading comprehension (Jongsma, 1980; McGee, 1981; Pessah, 1975; Schneyer, 1965; Tierney, Readence and Dishner, 1980).

Purposes of 'Cloze'

According to Richardson (1980), cloze passages help students realize the value of clues provided by their language structure, and help them identify the necessity for continual use of context clues in their reading. It forces the students to pay attention to clues which are contained in the whole passage, as well as in specific sentences.

Tierney, Readence and Dishner (1980) say that "the technique forces students to use the context of a passage or sentence to suggest replacements for deleted words" (p. 19). Grant (1979) endorses this idea when she writes that the cloze procedure "is one way of focusing learners' attention on context" (p. 699).

Schneyer (1965) contends that completion of cloze exercises should result in increased comprehension because the skills used by the reader to fill in the blanks with appropriate words are the same skills which are involved in reading comprehension.

Thomas (1978) makes three observations related to the use of various versions of the cloze procedure. They are:

> 1. Depending on the specific exercise, closure tasks involving written materials force readers to rely upon at least two (often all three) of the information sources identified as a result of psycholinguistic research. [These include the graphophonic, syntactic and semantic cues identified by Goodman, 1972].
>
> 2. Performing closure requires focusing attention during reading on the author's representation of ideas. This has a tendency to make the reading experience what it should be -- an active, on-going, meaning-getting process.

3. Use of CLOZE often facilitates understanding the relationships between language features which cue meaning in oral/aural contexts and their counterparts in written contexts. (p 4)

The various statements appear to indicate that completion of cloze exercises forces the reader to utilize clues provided in a reading passage in the extraction of meaning from that passage. Thus, improving the ability to utilize context clues will, or should, result in an increase in reading comprehension as well.

Cloze Related Research

Jongsma (1971), in a review of the literature pertaining to the use of cloze as an instructional device, stated that only a small amount of research had been conducted which specifically utilized the cloze procedure as a teaching technique. The author identifies Roossinck (1962) as being "one of the first investigators to use cloze as a teaching technique" (Jongsma, 1971, p. 6) but contends that it was Martin's study of 1968 that marked "the first real attempt to employ the cloze procedure in an actual teaching situation" (p. 14). He says that studies completed previous to 1971, which included Roossinck (1962), Bloomer (1962), Briedman (1964), Schneyer (1965), Blumenfield and Miller (1966), Bloomer, et al (1966), Heitzman and Bloomer (1967), Martin (1968), Guice (1969), and Kingston and Weaver (1970), were plagued by a number of weaknesses which he identified as follows: 1. No real teaching, 2. Lack of

focus, 3. Weak experimental designs, 4. Measurement problems, and 5. Omissions in reporting studies.

Jongsma (1971) concluded that the research did not indicate that cloze was effective as a teaching device. He went on to suggest that future research should deal with the problems identified.

Since 1971, a great number and variety of articles have appeared which praise the cloze procedure as a teaching technique, and the amount of research has continued to grow. In a more recent review of the literature, Jongsma (1980) summarized thirty-six studies which have employed the cloze procedure in this manner. The researcher has chosen to discuss only those studies relevant to this study and has classified them into two categories: those which produced significant results, and those which did not. Those which produced significant increases in reading comprehension or in general reading ability include Guscott (1971), Culhane (1972), Kennedy and Weener (1973), Pessah (1975), Askov and Kamm (1976), Gunn and Elkins (1976), Bernath (1977), Sinatra (1977), Martinez (1978), and Sampson (1979). Insignificant results were indicated in studies conducted by Rynders (1971), Faubion (1971), Ellington (1972), Rhodes (1972), Cox (1974), Paradis and Bayne (1975), Grant (1976), Johns (1977), and Yellin (1978). All of these studies are summarized in Jongsma (1980), except that of Askov and Kamm (1976).

Two additional studies not summarized in Jongsma (1980), but which are relevant to the present research include those of Askov and Kamm (1976) and Tarasoff (1978?). Significant results were found in the study conducted by Askov and Kamm (1976) to determine whether teaching children to use a classification system of context clues would help them to use these clues, and improve their reading comprehension. Tarasoff (1978?), in a study which compared two deletion systems, lexical vs. structural, utilized the cloze procedure in an effort to increase comprehension through the teaching of idea and presentation types of context clues. The lexical deletion system involved noun/verb deletions, whereas, in the structural system connectives were deleted. He found no significant difference between the experimental and control group, but offers possible suggestions for improvement of the procedure used in the study which could possibly yield different results.

It would appear from reviewing the literature that cloze can be an effective, as well as ineffective, teaching technique. The question is why such a discrepancy occurs in the research findings.

Some possible explanations of why significant differences were found in some research studies, but not in others, can be gleaned from Jongsma's (1980) review of the literature. They include:

1. In some studies, the focus of the control group was not on the improvement of reading.

2. The cloze procedure appears to have been most effective in the development of comprehension, rather than for other purposes.

3. No particular type of material has been found to be most effective in cloze instruction, but materials have been used which were too difficult for the subjects involved in the study.

4. Discussion at the end of the completion of cloze exercise may be more effective if it is teacher-led, rather than student-led.

5. Cloze instruction appears to be more effective when it is carefully sequenced than when no attention is given to any type of sequencing.

6. Cloze exercises which utilize selective deletions appear to be more effective than those which use a random deletion process.

7. Student boredom has been observed by some researchers possibly because of the lack of variety, overruse of the approach, and dull, routine, mechanical instruction.

Jongsma (1980) drew eleven conclusions based upon his analysis of the literature related to the cloze procedure as a teaching technique. They are:

1. The cloze procedure can be an effective teaching technique. However, it is no more nor no less effective than many other widely used instructional methods.

2. The cloze procedure is most effective in devehowever reading comprehension, or at least some of the skills involved in the comprehension process. It is least effective in improving word knowledge or vocabulary.

3. There is no evidence that cloze instruction is more effective for any particular type of material . . .

4. Cloze instruction is no more effective for one age or grade level than another. There is also no evidence that cloze instruction is better suited to students reading either below, above, or on grade level.

5. . . . cloze instruction is likely to be more effective when discussion is focused on clues which signal responses and on the appropriateness of responses.

6. There is no evidence that one type of grouping arrangement is more effective than another . . .

7. Cloze materials which are carefully sequenced as to difficulty, length, or purpose are more effective than undifferentiated exercises.

8. The quality of a cloze instruction program is more important than its length . . .

9. Selective deletion systems aimed at particular contextual relationships are more effective than semi-random deletion systems.

> 10. . . . some form of semantically acceptable scoring should probably be encouraged for instructional purposes.
>
> 11. There is no evidence that students have more favourable attitudes toward cloze instruction than they do toward other forms of instruction. (pp. 20-21)

Jongsma (1980) goes on to recommend areas for future research. One of these areas is the making of selective deletions in the cloze reading passage. He argues:

> The literature appears to indicate that cloze instruction is more effective at improving reading comprehension than other aspects of reading proficiency. Furthermore, selective deletions which are focused on particular contextual relationships have a greater instructional effect than random deletions. (p. 23)

He further suggests that a context clue classification scheme be utilized as a framework for making such deletions in passages to be utilized for instructional purposes. The present study will be based upon this approach. A classification scheme which includes five types of context clues will be used to make selective deletions of nouns, verbs, adjectives and adverbs from various reading passages. The cloze reading passages thus produced will be used for instructional purposes with a group of fourth grade students.

Suggested Procedures for Cloze Instruction

Various procedures for instructional application of the cloze procedure have been incorporated into research studies previously completed. Many others have been suggested. Instructional procedures have been offered by Bortnick and Lopardo (1976), Pikulski (1976), Thomas (1978), Richardson (1980), Quattrini (1981), and others.

The most well-presented and inclusive of these, in the opinion of the researcher, is that of Thomas (1978). He included three phases in the suggested procedure. These include:

1. Presentation and Preparation

This is a readiness period for the development of motivation and background of the readers, as well as for clarifying for them the purposes of instruction. It is a time when the teacher should model for the students by thinking aloud the process to be used in completing a cloze exercise. The author says that the reading materials used should be at the instructional, or preferably, independent reading level of the students.

2. Preview and Completion

Before beginning the exercise, teachers must make clear to students what is to follow and how they must go about dealing with it. The author recommends that the reader do three readings of the passage. The first reading is for the purpose of mentally filling in the blanks; the second, to write replacement words for all blanks, even if some must be guessed, and the third is to check the sense of

the replacement word in the context of the sentence in which it is written as well as in the reading passage as a whole. For completion and checking of the exercises, students may work individually or in various grouping arrangements.

3. Follow-Up

Thomas (1978) considers this the most critical step in the procedure. This "phase should include: sharing of choices, discussion of alternatives and possible variations, and explanations of why each specific word or word element was selected" (p. 12). He says that it may be difficult for the students to verbalize their logic, but the purpose of this is "to encourage students to examine and express their thought processes" (p. 12).

This procedure will be incorporated into the instructional phase of this study.

CHAPTER IV

METHODOLOGY

This chapter contains a discussion of the research design employed in the study, a description of the subjects, the instrumentation and materials which were utilized, the procedure followed in conducting the research, and the statistical procedure applied to the data which were collected.

I. Research Design

The Pretest-Posttest Control Group Design with Matching, as described in Borg and Gall (1979), was employed in this study. The design can be represented in the following manner:

$$\begin{array}{cccc} O_1 & M & X & O_2 \\ O_3 & M & & O_4 \end{array}$$

The pretest is indicated by O_1 for the experimental group, and by O_3 for the control group. The posttest is indicated by O_2 for the experimental group, and by O_4 for the control group. The comprehension subsection of the Gates-MacGinitie Reading Test (Canadian edition), Level D, was employed as the pretest and posttest. Form 1 of this test was used as the pretest and Form 2 as the posttest. Both pretest and posttest were administered to all subjects simultaneously; the pretest being administered prior to the instructional

phase of the study, and the posttest following the completion of the instructional phase.

The M included in the representation of the research design refers to a matching procedure commonly known as randomized blocking. Borg and Gall (1979) describe matching as a process whereby students are placed

> . . . in rank order on the basis of their scores on the matching variable. After subjects have been placed in rank order, the first two subjects are selected (regardless of the difference in their scores on the matching variables) and by random means . . . one subject is assigned to the experimental group and the other to the control group . . . This procedure is continued until all subjects have been assigned. (pp. 547-548)

The advantage of this procedure is identified as being that "it produces randomized groups and no cases are lost because of inability to match" (p. 548).

The treatment received, instruction in the use of context clues, is represented by X. The absence of X indicates that the control group did not receive this treatment.

II. Description of Subjects

The students involved in this study were students from an intact Grade Four classroom in an integrated elementary school within the Bonavista-Trinity-Placentia

Integrated School District. The group of students involved comprise various religious affiliations including United Church, Anglican, Salvation Army, Pentecostal, and Roman Catholic. The whole class, consisting of twenty-seven students, twelve boys and fifteen girls, ranging in age from nine to twelve years, were initially administered the pretest. One of these students was randomly eliminated to create even numbers. The students were then classified as "skilled" or "less skilled" readers based upon the pretest mean score. Those students who received a raw score of 23 or above were classified as "skilled" readers, while those who received a raw score of anything less than 23 were classified as "less skilled". A raw score of 23 corresponded with a percentile rank of 46 for a fourth grade student in the spring norms. The students' classroom teacher was asked to classify each student, using only her opinion of the students based on daily classroom performance, as "skilled" or "less skilled" readers. The teacher's judgment of each student was then compared with pretest scores. Because of a discrepancy between teacher judgment and pretest scores, two other students were eliminated from the study. This left a total of twenty-four subjects who were assigned through randomized blocking to either the experimental or control group. As a result of illness, one student could not complete the post-test. Consequently, three others were randomly eliminated to create even numbers in each cell of the research design. The final sample consisted of 20 students; 10 being in the

experimental group (consisting of 5 "skilled" and 5 "less skilled" readers), and 10 in the control group (also having 5 "skilled" and 5 "less skilled" readers).

III. Instruments and Materials

Twelve cloze exercises were prepared for use in the instructional phase of the study. The reading passages were selected from the Science Research Associates (SRA), Mark II Reading Laboratory 2a. This kit is usually used with fourth graders, or nine-year-olds. It consists of ten graded levels of high interest materials with the simplest materials being appropriate for students having a reading age of seven years, and the most complex suitable for students with a reading age of approximately twelve years. The kit was not familiar to the students involved in the study.

The passages chosen for use in the instructional phase of the study were chosen on the basis of content which the researcher felt would most likely be familiar to the students. Also, the reading passages selected were in reading-grade range of 2.0 - 3.5 so that materials would more likely be within the independent/instructional reading levels of the subjects.

The passages, which were approximately 300 to 500 words in length, were kept whole to provide a complete context for the reader, and also to eliminate any

frustration which might result if a portion of the story, particularly the ending, were omitted.

The cloze reading passages with selective deletions made were typed and were duplicated by means of photocopying. Deletions from the passages were based on the classification system outlined by Smith and Robinson (1980) which combined the classification schemes of Artley (1943) and McCullough (1945). The classification scheme contains five types of clues which are, Smith and Robinson (1980) say, those most viably used in the elementary grades. A listing of each type of clue in the scheme and a definition for each type of clue as given by McCullough (1945) is included below:

1. Experience Clue - Here the unknown word is predictable from what the child or adult knows of such situations through book or life experience.

2. Definition Clue - In this case the unknown word is defined elsewhere in the passage. [According to Smith and Robinson (1980) "the most frequent means are through direct explanation and statements in apposition" (p. 141).]

3. Synonym Clue - This type of clue is a known synonym for the unknown word. The structure of the sentence is such that, where we would expect the synonym to be repeated, the author gives us the unknown word.

4. Comparison or Contrast Clue - The unknown here is likened to, or contrasted with, something known.

5. Mood or Tone Clue - Here the context has provided a situation or established a mood or tone, and the unknown word reflects that kind of situation or that kind of mood. (pp. 2-3)

In constructing the cloze passages, an attempt was made to equally represent, overall, all five of the context clue types included in the classification scheme employed. In some instances, it was necessary to slightly alter the reading passages selected from the SRA Mark II Reading Laboratory so that each clue would be as equally represented as possible. This resulted in the following numbers of clues being used for instructional purposes:

Experience Clues	26
Definition Clues	24
Synonym Clues	22
Comparison or Contrast Clues	24
Mood or Tone Clues	24

Deletions were made so that a particular context clue could have been used to determine a semantically acceptable response for the deleted word. The deleted words were replaced in the reading passages by blanks of uniform length of fifteen typewritten spaces. This type of cloze blank was chosen since it is only through the use of the context of the sentence or the context of the passage as a whole that the reader could produce a semantically

acceptable word to fill the cloze blank. The first and last sentence of the passage were left intact. Ten deletions per passage were made. This particular number of deletions was chosen to allow sufficient time for reading and completion of the exercises, checking of replacement words, and discussion of the logic involved in determining particular replacement words.

The comprehension subsection of the Gates-MacGinitie Reading Test (Canadian edition), Level D, Forms 1, was used to evaluate initial comprehension ability, with Form 2 being used to determine gains made in comprehension by the experimental and control groups at the end of the instructional phase. Form 1 was used as a pretest, and Form 2 as the posttest.

This test was chosen because all items comprising the test have been determined by a group of Canadian educators as being appropriate to Canadian education, and because it is widely used as an indicator of reading comprehension ability. According to the Teacher's Manual (Canadian edition, MacGinitie et al, 1978), a group of 46,000 students selected from the ten provinces of Canada and the Yukon were tested for the development of Canadian norms. Between 3,000 and 4,000 students represented each grade level. The test items are international in content, and were selected so that they would fall within the experiential background of most students. The items have also been screened by minority group consultants to eliminate any items which may have been biased or offensive.

The authors (MacGinitie et al, 1978) state that the Kuder-Richardson Formula 20 reliability coefficients for the comprehension subsection of Level D of the test ranges from 0.85 - 0.92.

IV. Procedure

The guidelines for administration of the Gates-MacGinitie Reading Test (Canadian edition), Level D, Form 1, were strictly followed. Group testing of the intact fourth grade class was conducted by the researcher in their classroom. The appropriate portion of the sample page of the test, i.e., the comprehension section, was completed with the students to make clear to them what they were to do. Any clarification of instructions which proved necessary was done before the administration of the actual test. The students were advised that they would have 35 minutes only to complete the test. They were asked to check their answers if they had completed the test before this time period had elapsed, and then to engage in some quiet activity until all test booklets had been collected. At the end of the 35 minute time period, the students were asked to close the test booklets which were then collected and scored by the researcher.

On the basis of the raw scores (See Table 1) obtained on the pretest when compared to the mean score computed, in combination with the judgment of the students'

Table 1

Pretest Raw Scores

Student Number	Raw Score	Student Number	Raw Score
1	31	15	17
2	14	16	21
3	27	17	34
4	16	18	19
5	33	19	14
6	24	20	23
7	17	21	20
8	20	22	25
9*	16	23	24
10	27	24	30
11	19	25	17
12	18	26	30
13	21	27	34
14	21		

* Student #9 was randomly eliminated to create even numbers.

classroom teacher, twenty-four students were designated as "skilled" or "less skilled" and were assigned by randomized blocking to the experimental or control group.

Instructional Phase

The instructional phase of the study was divided into four subdivisions according to the type of deletion made (e.g., noun, verb, adjective, or adverb) in the cloze reading passage which was to be used for instruction. Each of the four subdivisions consisted of three instructional sessions. Each of these instructional sessions was conducted in a thirty-five minute period per day over a time period of twelve consecutive school days.

A room in the school was assigned by the school principal for conducting the instructional sessions. All instruction relative to this phase of the study was carried out by the researcher in this particular room.

The procedure followed in each of the instructional sessions consisted of the three-step process outlined by Thomas (1978). The three steps are:

1. Presentation and Preparation
2. Preview and Completion, and
3. Follow-up

Thomas (1978) states that "No systematic procedures have been established empirically for using the CLOZE in an instructional setting" (p. 11). These steps are based on his experience with the types of exercises which incorporate the use of cloze. Of the suggested procedures perused by

the researcher, this was the one which appeared to be most inclusive of those ideas which the researcher wished to include in each instructional session.

The first section of instruction used three cloze passages with selective deletions based upon the classification scheme to be utilized throughout this study, and, in addition, were of the noun form class. Instruction spanned a three day period with one cloze passage being completed each day.

The three-steps of the instructional procedure were carried out in the following manner:

Step 1: Presentation and Preparation

Before beginning work on the actual cloze passages, the subjects were acquainted with the procedure which they were to use, and a short selection in which the researcher guided the students in their oral responses was used to familiarize them with the process which they would be expected to use. The instructional purpose for the activity was clarified. Students were orally presented with a statement to provide some background for the passage to be completed and, also, to provide some motivation for its completion.

Step 2: Preview and Completion

The first cloze passage was completed during this phase of the procedure. It was completed as a total group effort through a 'thinking-aloud' process which was teacher-led. This was done to exemplify the process to be used, and to familiarize the students with the form class of the words

for which they would be searching. Emphasis was placed on the fact that a variety of answers are acceptable in completing cloze blanks, but that each acceptable answer must make sense in the sentence, and in the passage as a whole. Brown (1980) found that "if the best overall cloze scoring method for productive skills with all criteria considered equal is desirable, the AC cloze [The AC method usually counts any contextually acceptable answer as correct (p. 311)] is probably best" (p. 316). They were reminded that the length of the blank spaces were uniform regardless of the length of the word that was being replaced. In other words, the length of the blank gave no clue as to the length of the word being deleted. The subjects were informed that there were clues in the story itself which could be used to help them to discover a suitable replacement word for the word which had been deleted.

The students were instructed to do three readings of the passage. A chart was prominently displayed for future reference noting the purpose for each of the three readings. The first reading was done to mentally fill in the blanks in the cloze reading passage. The subjects were instructed not to write responses in any of the blanks during this reading. According to Thomas (1978), "This preview reading serves to establish an appropriate mind-set for completing the activity" (p. 11). During the second reading, the students were asked to write replacement words in the blanks. Since this was a group effort, students were asked to suggest words orally before writing them into the passage. Any of

the orally suggested words could be chosen to complete the blank, or any other word which the student felt was appropriate could be used. They were instructed to fill all of the blanks, and to do so in all future passages they would complete, even it it became necessary to guess some of the responses. The students were then asked to proceed with a third reading of the passage, the purpose of which was to check whether the replacement words they had chosen made sense in the sentence in which it appeared, and in the whole passage.

The completion of the exercise was followed by the next step of this instructional procedure, which was the follow-up.

Step 3: Follow-up

A discussion, which was teacher-led, followed the completion of each exercise. Thomas (1978) says that this is "perhaps the most critical step in teaching with CLOZE exercises" (p. 12). The purpose of the discussion following the completion of the first exercise was to exemplify the variety of alternative responses possible, and to encourage the process of examining and verbalizing the logic involved in choosing a particular word to replace a word deleted from the cloze passage. Valmont (1983) claims that "Discussing alternative answers is the key to teaching with cloze" (p. 174). McCullough (1945) as cited in Thomas and Robinson (1977), supports this discussion procedure. She comments:

> As the students talk over their answers, they are alerted to clues they missed. They become aware that there are clues of various types and conclude that context . . . frequently gives some suggestion of meaning. Those who answer correctly are asked to share ways they arrive at their answers. How-to-do-it suggestions from one student to another are sometimes more helpful than suggestions from the teacher. (p. 25)

The discussion ended the first instructional session.

The second instructional session followed the same pattern as the first. Again, ten nouns were selectively deleted from the cloze reading passage to be used. The three step procedure for instruction was again utilized. (Step 1) - After a brief clarification by the researcher of the instructional purpose of the exercise, a quick review of the procedure to be used, and the presentation of a short background/motivational statement for the reading passage, (Step 2) - The second cloze passage was completed by the students themselves, in <u>small groups</u> of four, with no help from the researcher. Three readings of the passage were required, as in the first session, with the chart stating the purpose for each reading being displayed in full view at all times. (Step 3) - Completion of the exercise was again followed by a teacher-led discussion. During the discussion, the students were required to examine and to orally express the logic involved in the selection of a

particular response, and, as a group, to defend their choice of replacement word.

The third passage in this section of instruction, which also employed the selective deletion of ten words of the noun form class, followed, as well, the three step procedure for instruction with one variation. The cloze passage was completed individually by each subject functioning independently, both in the selection of responses to fill the cloze blanks and in their defenses of their chosen responses during discussion time.

It might be noted here that there was not always sufficient time during a 35-minute instructional period to discuss and defend all of the alternative responses supplied. Particular emphasis during the discussion was placed on those cloze blanks which were, for the students, the most difficult to complete as noted by the researchers observation of student responses. This allowed the researcher to provide guidance in the process of context clue utilization in any cloze blanks which presented particular difficulty.

Each of the succeeding sections of instruction employed the same procedure for each of the cloze passages completed during the instructional phase of the study. Selective deletions were made to force utilization of the context clue types in the study's classification scheme, and the deletions proceeded following Quealy's (1969) listing of 'easiest to hardest word forms to replace in cloze exercises', which are: nouns, adjectives, verbs, and

adverbs. Table 2 shows the sequencing of the various sections of instruction given during the conduction of the study.

The names of specific types of context clues were not taught nor, in fact, were they ever mentioned. This was done to avoid the possibility of the subjects becoming too involved in memorizing technical jargon, rather than directing their attention to the process involved. Valmont (1983) claims that, unfortunately, many teaching activities developed in the last few decades "centered on teaching students mainly to identify context clues, rather than on helping students understand how context clues help one generate meaning and apply it to what one is presently reading" (p. 158). The aim of this study was to help children acquire this latter understanding.

It must be noted that during the instructional phase of the study the control group received no instruction in the use of context clues. Instruction was confined to their regular Nelson Language Development Program basal reader.

Posttesting Procedure

Posttesting procedures were conducted in precisely the same manner as pretesting procedures with the comprehension subsection of Gates-MacGinitie Reading Test (Canadian edition), Level D, Form 2, being used as the testing instrument. Again, both the experimental and

Table 2

Sequence of Instruction for Cloze Passages

Section Number	Passage Number	Method of Completion	Context Clues Utilized****	Word Form Deleted	Approx. Reading Level
	1	Total Group*	Exp. 4, Def. 3, Syn. 1, C.C. 2, M.T. 0	Noun	2.0
1	2	Small Group**	Exp. 3, Def. 4, Syn. 2, C.C. 1, M.T. 0	Noun	2.5
	3	Individually***	Exp. 1, Def. 2, Syn. 3, C.C. 2, M.T. 2	Noun	3.0
	4	Total Group	Exp. 1, Def. 1, Syn. 2, C.C. 2, M.T. 4	Adj.	2.0
2	5	Small Group	Exp. 2, Def. 1, Syn. 2, C.C. 3, M.T. 2	Adj.	2.5
	6	Individually	Exp. 3, Def. 2, Syn. 0, C.C. 1, M.T. 4	Adj.	3.0
	7	Total Group	Exp. 2, Def. 3, Syn. 3, C.C. 2, M.T. 0	Verb	2.5
3	8	Small Group	Exp. 3, Def. 2, Syn. 1, C.C. 2, M.T. 2	Verb	3.0
	9	Individually	Exp. 2, Def. 2, Syn. 4, C.C. 3, M.T. 0	Verb	3.5
	10	Total Group	Exp. 3, Def. 2, Syn. 1, C.C. 1, M.T. 3	Adv.	2.0
4	11	Small Group	Exp. 0, Def. 3, Syn. 1, C.C. 3, M.T. 3	Adv.	3.0
	12	Individually	Exp. 2, Def. 0, Syn. 2, C.C. 2, M.T. 4	Adv.	3.5

* Total Group - All twelve subjects - Teacher led
** Small Group - Four students functioning independently
*** Individually - One student completes own exercise independently
**** Context clue abbreviations - Exp./Experience clue, Def./Definition clue, Syn./Synonym clue, C.C./Comparison or Contrast clue, M.T./Mood or Tone clue

control group were administered the test as a total group by the researcher in their Grade Four classroom. Table 3 shows the raw scores obtained through this posttesting procedure.

Table 3

Posttest Raw Scores

Student Number	Raw Score	Student Number	Raw Score
1	36	15	15
2	14	16	17
3	25	17	31
4	17	18	16
5	29	19	15
6	19	20	31
7	15	21**	-
8	23	22**	-
9	15	23	27
10	33	24	32
11	23	25	19
12	22	26	-
13**	-	27	32
14	21		

* Student #26 was absent during administration of the posttest.

** Student # 13 , student # 21 , and student # 22 were randomly eliminated to create even numbers.

CHAPTER V

RESULTS OF THE STUDY

I. Introduction

In this chapter the findings arising from the results of the statistical procedure used to test the hypotheses which were examined in this study are stated. Each of the hypothesis will be discussed with reference to the obtained results.

A two-way analysis of covariance was used to analyze the data collected. The statistics computed are presented in Table 4. The .05 level of significance was used as the point of acceptance or rejection of each hypothesis tested.

The following are the hypotheses which were examined in this study:

1. The use of context clues selected from a classification scheme and a cloze procedure as a basis for instruction in the process of context clue utilization will have no significant effect on reading comprehension as measured by raw scores obtained on the comprehension subtest of the Gates-MacGinitie Reading Test (Canadian edition), Level D, Form 2.

2. There will be no significant difference between the increase in post-test comprehension scores of "skilled" versus "less skilled" readers who receive direct instruction in context clue utilization.

3. There will be no significant interaction effect of the two variables, treatment (Treatment A - direct instruction in the use of context clues; Treatment B - no direct instruction in the use of context clues) and reading level ("skilled" versus "less skilled"), on the post-test comprehension scores of the readers.

II. Analysis of the Data

Hypothesis One: The use of context clues selected from a classification scheme and a cloze procedure as a basis for instruction in the process of context clue utilization will have no significant effect on reading comprehension as measured by raw scores obtained on the comprehension subtest of the Gates-MacGinitie Reading Test (Canadian edition), Level D, Form 2.

Findings: A two-way analysis of covariance was applied to the raw scores obtained on the comprehension subsection of the Gates-MacGinitie Reading Test in the testing of this hypothesis. The significance of F was found to be 0.733 (See Table 4). The comprehension scores of those receiving instruction in the process of context clue utilization were not significantly better than those who did not receive this instruction. Therefore, the null hypothesis was accepted.

Hypothesis Two: There will be no significant difference between the increase in post-test comprehension scores of "skilled" versus "less skilled" readers who received direct instruction in context clue utilization.

Findings: In the computation of the analysis of covariance to test this hypothesis, an insignificant result was found. The significance of F was computed as 0.115 (See Table 4). Acceptance of Hypothesis Two was indicated at the .05 level of significance.

Hypothesis Three: There will be no significant interaction effect of the two variables, treatment (Treatment A - direct instruction in the use of context clues; Treatment B - no direct instruction in the use of context clues) and reading level ("skilled" versus "less skilled") on the post-test comprehension scores of the readers.

Findings: An insignificant result was found upon application of the analysis of covariance to test this hypothesis. The significance of F was 0.217. This suggests that the treatment and reading level are independent of each other. Therefore, null Hypothesis Three may be accepted.

Table 4

Analysis of Covariance for Comprehension Scores on the Gates-MacGinitie Reading Tests (Canadian edition) (N=20)

Source of Variation	Sum of Squares	DF	Mean Square	F	Significance of F
Covariate					
Pretest scores on comprehension subtest of the Gates-MacGinitie Reading Test	783.856	1	783.856	60.05050	0.000
Main Effects	37.456	2	18.728	1.434730	0.269
Treatment	1.582	1	1.582	0.1211628	0.733
Reading Level	36.579	1	36.579	2.802290	0.115
Two-Way Interactions					
Treatment x Reading Level	21.689	1	21.689	1.661555	0.217
Explained	843.001	4	210.750	16.14538	0.000
Residual	195.799	15	13.053		
Total	1038.800	19	54.674		

III. Summary

The data collected were analyzed through application of the analysis of covariance technique. The .05 level of significance was chosen as the level at which the hypotheses tested would be accepted or rejected.

The results of the statistical analysis when applied to the data collected indicate the following:

1. There is no significant increase in reading comprehension when a classification scheme of context clues is used in conjunction with the cloze procedure to teach the process of context clue utilization with selected grade four students.

2. There is no significant difference between the increase in comprehension scores of "skilled" versus "less skilled" readers who received direct and systematic instruction in the process of context clue utilization.

3. There is no significant combined effect of treatment with reading level on the posttest comprehension scores of the subjects.

CHAPTER VI

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

In this chapter, the purpose for this study will be summarized, conclusions drawn from the analysis of the data collected will be stated, implications related to the findings of the study will be discussed, and recommendations for future research will be made.

I. Summary

This study has been directed at devising an instructional methodology, which combines a context clue classification scheme with the cloze procedure, to teach the process of context clue utilization. The effect of this instructional methodology upon the reading comprehension abilities of a group of fourth grade students was investigated. This study also sought to determine if the effect would be different for "skilled" or "less skilled" readers.

The comprehension subsection of the Gates-MacGinitie Reading Test (Canadian edition), Level D, was selected as the measure of reading comprehension ability. Form 1 of this test was administered as a pretest to twenty-seven students who comprised an intact Grade Four classroom from a rural

Newfoundland elementary school under the jurisdiction of the Bonavista-Trinity-Placentia Integrated School Board. The pretest mean score was used to designate the students reading ability level as "skilled" or "less skilled". One student was randomly deleted from this group to create even numbers for an experimental and control group. Two other students were eliminated because of a discrepancy between teacher judgment and pretest findings of the reading comprehension ability level of these students. The remaining twenty-four students were submitted to randomized blocking, and were assigned to the experimental (treatment) or control (no treatment) group. One student was ill at the time of the administration of the posttest. As a result, three others were randomly eliminated to create even numbers in each cell of the research design. The final sample consisted of 20 students; 10 being in the experimental group (consisting of 5 "skilled" and 5 "less skilled" readers), and 10 in the control group (also having 5 "skilled" and 5 "less skilled" readers).

Treatment for the experimental group consisted of instruction in the process of context clue utilization through completion of twelve cloze exercises which used selective deletions of nouns, adjectives, verbs and adverbs from selected reading passages. The deletions were based upon a context clue classification scheme. As well, the experimental group also received regular instruction in their basal reader series, the Nelson Language Development

Program. Instruction in the process of context clue utilization for completion of the cloze passages was provided by the researcher, whereas, basal reader instruction was provided by the regular classroom teacher. The control group received instruction from their classroom teacher in their basal reader series only. They received no instruction relative to context clue utilization as presented in this study.

Instruction was divided into four phases, consisting of three instructional sessions in each phase. One phase was devoted to the replacement of deleted nouns in a cloze passage, one to deleted adjectives, one to deleted verbs, and one to deleted adverbs. The first instructional session in each phase was whole group - teacher led completion of the cloze reading passage; the second, small group - student completion, and the third was individual completion of the cloze passage. Each session of instruction was concluded with a teacher-led discussion which centered on verbalization of the logic used in selection of the various replacement words, and consideration of whether the replacement words chosen were or were not appropriate, i.e. semantically acceptable.

Each instructional session was conducted during the school's lunch hour so as not to interfere with the regular school programs. One instructional session per day was conducted for twelve consecutive school days. Form 2 of the Gates-MacGinitie Reading Test (Canadian edition), Level D, was administered as the posttest to the grade four class who

participated in the study. It was administered to the class as a whole, as was the pretest, in their classroom.

The following hypotheses were considered for testing in this study:

1. The use of context clues selected from a classification scheme and a cloze procedure as a basis for instruction in the process of context clue utilization will have no significant effect on reading comprehension as measured by raw scores obtained on the comprehension subtest of the Gates-MacGinitie Reading Test (Canadian edition), Level D, Form 2.

2. There will be no significant difference between the increase in post-test comprehension scores of "skilled" versus "less skilled" readers who received direct instruction in context clue utilization.

3. There will be no significant interaction effect of the two variables, treatment (Treatment A - direct instruction in the use of context clues; Treatment B - no direct instruction in the use of context clues) and reading level ("skilled" versus "less skilled") on the post-test comprehension scores of the readers.

The statistical technique applied to the data collected was the analysis of covariance. The level of significance used was the .05 level.

II. Summary of Findings

Hypothesis One

The two-way analysis of covariance, significant at the .05 level, determined that there was no significant effect on reading comprehension of using a classification scheme of context clues in conjunction with the cloze procedure to teach the process of context clue utilization. The significance of F being 0.733, the null hypothesis was accepted.

Hypothesis Two

Statistical analysis revealed that there was no significant difference between the increase in comprehension scores of "skilled" and "less skilled" readers who received instruction in context clue utilization. The significance of F calculated as 0.115 indicates that the null hypothesis should be accepted.

Hypothesis Three

An investigation of the interaction effects of treatment with reading level produced insigificant findings. The significance of F was calculated as 0.217 and calls for acceptance of this hypothesis at the .05 level of significance.

III. Conclusions

The data collected in the implementation of this study led to the following conclusions:

1. The combined use of a classification scheme of context clues and a cloze procedure as a teaching technique for instruction in the process of context clue utilization does not appear to be an effective procedure for the development of reading comprehension for a selected group of grade four students.

2. The procedure employed in this study does not appear to have differential effects on reading comprehension with varying levels of reading ability (i.e., "skilled" or "less skilled") as defined for the purposes of this study.

IV. General Conclusions and Implications

The psycholinguistic perspective of reading places a great deal of emphasis on the process of reading for meaning. This study reflects an attempt to devise a procedure which would emphasize this reading for meaning through instruction in the process of context clue utilization.

Despite the fact that the study produced insignificant findings, the researcher argues that the procedure employed may be a valuable one, and suggests that there may have been several factors which contributed to the insignificant results of the present study.

One of these factors may have been the time of year at which the research was conducted. The time period during which the instructional phase of the study was carried out included the day of June 20, which was one day prior to the commencement of summer vacation for the students of the school in which the research was conducted. The feeling of excitement in the air in anticipation of forthcoming freedom from school activities and the enjoyment of summer days may have required an extra effort on behalf of the subjects involved in the study in order to produce the concentration necessary for the required activities.

Also, the instructional sessions were conducted during the lunchtime period to avoid interference with the school's regular program. This may also have adversely affected the results of the study since the subjects had to forfeit many of their lunchtime activities in order to participate in the study. It is quite possible that their thoughts may have been with friends playing in the schoolyard, riding bicycle, enjoying an hour of T.V. time at home, or some other equally pleasurable activity. The researcher observed a boredom, a restlessness, a shorter attention span, an apparent skipping of steps in the procedure (e.g. doing one or two readings of the passage instead of the three required), and a "How much longer before we're finished?" attitude on the part of some students. These were observed primarily in students who, on the basis of observation of, and discussion with the

subjects, would possibly be classified as operating at a lower intellectual level. Cecil (1985) cites the skipping of the first step in the procedure, as mentioned above, as one of two major concerns relative to the cloze procedure. She writes:

> The first concern relates to the 'impulsive child' of whom there appear to be at least a few in every elementary classroom. This type of child seems reluctant to complete the first step in the execution of the cloze; that is, (s)he tends not to read all the way through the cloze passage first before filling in the deletions, thus missing much important information which might have been gleaned from an initial overview. (p. 96)

It may also be possible that the behavior observed in the subjects may be attributed to completing too many of the same type of exercises per week, even though an attempt was made to alleviate boredom by varying the grouping arrangement for completion of the exercises, as well as varying the type of content in the passages themselves. However, one exercise per day for twelve consecutive school days may be too repetitive and, hence, boring for students at this age and grade level.

As well, the level of some of the reading passages used may have been too simple for some of the subjects, while being too difficult for others. The reading level of the passages ranged from 2.0 to 3.5, whereas the reading

comprehension levels of the subjects as determined by their pretest scores ranged from 2.8 to 3.7. Thus, while a certain passage may have been at the independent reading level for some students involved in the study, it could have been at the frustration reading level for others involved. This may account for the lack of concentration and effort on behalf of some of the students.

Another problem which may have made a contribution to the findings being insignificant comes from that portion of the study which dealt with the replacement of words deleted from the adverbial position. Three of the twelve cloze reading passages were devoted to replacements of this type. Observation of the researcher indicates that the subjects found these words exceptionally hard to replace. Though the subjects were instructed to complete all blanks even if they had to guess, they did not do so in the exercises which required adverbial replacements. They left many blanks unfilled in both group and individually completed exercises. Discussion with the subjects indicated that they simply could not produce words that were acceptable to them for filling the blanks left in the reading passages. Such was not the case with the replacement of nouns, adjectives and verbs. Indications are that the replacement of words omitted in the adverbial position was too difficult a task for these subjects which possibly caused many of the subjects to operate at the frustrational level during completion of this portion of the study. This was observed in subjects classified as

"skilled" as well as "less skilled" readers. This functioning at frustration level, particularly when it occurred at the end of the instructional period immediately prior to completion of the posttest, may have caused a lack of confidence in the process on the part of the subjects, and, hence, they may not have utilized the process in the completion of the posttest.

Thus, while the instructional methodology designed and implemented in this study produced insignificant findings, this does not necessarily indicate that the procedure itself is at fault, but that many other factors could have contributed to these results. Varying these factors in future research, while retaining the basic format of the procedure, could result in entirely different findings.

V. Recommendations

The following recommendations are being suggested as a result of the findings of this study as well as observation of and discussion with the subjects involved.

1. It is recommended that the procedure implemented in this study be replicated in future studies with Grade Four and other grade levels. However, in an attempt to make the procedure more effective, the following changes are indicated:

(i) The procedure should be integrated with the regular classroom reading program over a much longer time

period, possibly a school year, rather than using it separately, as a panacea, in an attempt to improve reading comprehension. If students are being primed by reading instruction to be precise word identifiers and are being discouraged from predicting, guessing or risk taking in their quest for meaning, it is apparently going to take more than a few school days, even weeks, to make a permanent change in their way of perceiving reading as the communication of meaning from author to reader. The subjects need to be given sufficient time to become so comfortable with the procedure that they integrate it into their everyday reading activities.

(ii) Written exercises of the type employed in this study should be kept at perhaps a maximum of two per week. However, oral use of the procedure, or chalkboard work which integrated the procedure with regular classroom instruction could be used as time permits or the appropriate occasion for its use arises. This should help, in some measure, to relieve the boredom which may result from routine daily completion of these exercises.

(iii) Cloze passages which require the replacement of words deleted in the adverbial position should not be utilized at this grade level. Subjects in this study found them exceedingly difficult to complete, resulting in many of the blanks in these passages remaining unfilled. This appeared to be very frustrating for some of the subjects.

(iv) Passages used for instruction should be designed to accommodate students in that they should, in as

far as possible, individually correspond to the independent/instructional level of the students using them.

2. It is recommended that the procedure used in this study be replicated, incorporating the above changes, with "skilled" and "less skilled" readers of high, average, and low intelligence levels to ascertain the effect which level of intelligence would have on the effect of treatment.

Bibliography

Allington, Richard L. (1977). If they don't read much, how they ever gonna get good? Journal of Reading, 21, 57-61.

Ames, Wilbur S. (1966). The development of a classification scheme of contextual aids. Reading Research Quarterly, 2, 57-82.

Artley, A. Sterl (1943). Teaching word meaning through context. Elementary English, 20, 68-74.

Ashby - Davis, C. (1984). Levels of certitude for educated guessing in strict cloze passages. Journal of Reading, 27, 318-323.

Askov, E. N., and Kamm, K. (1976). Context clues: Should we teach children to use a classification system in reading? Journal of Educational Research, 69, 341-344.

Au, Kathryn Hu-Pei (1977). Analyzing oral reading errors to improve instruction. Reading Teacher, 31, 46-49.

Aulls, Mark W. (1970-71). Context in reading: How it may be depicted. Journal of Reading Behavior, 3, 61-73.

Beil, Drake (1977). The emperor's new cloze. Journal of Reading, 20, 601-604.

Blachowicz, C. L. Z. (1977). Cloze activities for primary readers. Reading Teacher, 31, 300-302.

Bond, Guy L., Tinker, Miles A., and Wasson, Barbara B. (1979). Reading difficulties: Their diagnosis and correction (4th ed.). NJ: Prentice-Hall, Inc.

Borg, W. R., and Gall, M. D. (1979). Educational research: An introduction (3rd ed.). New York: Longman, Inc.

Bortnick, R., and Lopardo G. S. (1973). An instructional application of the cloze procedure. Journal of Reading, 16, 296-300.

Bortnick, R., and Lopardo G. S. (1976). The cloze procedure. A multipurpose classroom tool. Reading Improvement, 13, 113-117.

Brown, J. D. (1980). Relative merits of four methods for scoring cloze tests. Modern Language Journal, 64, 311-317.

Bullock, Sir Alan (1975). A Language for life (Report of the Committee of Inquiry appointed by the Secretary of State for Education and Science under the chairmanship of Sir Alan Bullock F.B.A.). London: Her Majesty's Stationery Office.

Burns, Paul C. (1968). Vocabulary growth through the use of context in elementary grades. In J. Allen Figure 1 (Ed.), Forging Ahead in Reading (pp. 79-85). Newark, Delaware: International Reading Association.

Burns, Paul C., and Schell, Leo M. (1975). Instructional strategies for teaching usage of contextual clues. Reading World, 15, 89-96.

Buros, Oscar K. (1978). The Eighth Mental Measurements Yearbook (Vol. 2). New Jersey: The Gryphon Press.

Bush, C. L. and Huebner, M. H. (1979). Strategies for reading in the elementary school (2nd ed.). New York: MacMillan Publishing Co., Inc..

Carey, R. F. (1980). Toward a more cognitive definition of reading comprehension. Reading Horizons, 20, 292-297.

Cecil, N. L. (1985). Instructional cloze: Confronting some common concerns. Reading Horizons, 25, 95-97.

Clarke, D. F., and Nation, I. S. P. (1980). Guessing the meanings of words from context: Strategy and techniques. System, 8, 211-220.

Dechant, E. (1981). Diagnosis and remediation of reading disabilities. New Jersey: Prentice-Hall, Inc..

Dechant, E. (1982). Improving the teaching of reading (3rd ed.). New Jersey: Prentice-Hall, Inc..

Dulin, Kenneth (1970). Using context clues in word recognition and comprehension. Reading Teacher, 23, 440-446.

Durkin, Delores (1976). Strategies for identifying words: A workbook for those preparing to teach. Boston, Mass: Allyn and Bacon, Inc..

Durkin, Delores (1976). Teaching them to read (3rd ed.). Boston, Mass: Allyn and Bacon, Inc..

Durkin, Delores. What classroom observations reveal about reading comprehension instruction. In L. M. Gentile, M. L. Kamil and J. S. Blanchard, Reading Research Revisited. Ohio: Charles E. Merrill Publishing Company.

Ellington, B. J. (1981). The cloze procedure. Journal of Research and Development in Education, 14, 94-96.

Emans, R., and Fisher, G. M. (1967). Teaching the use of context clues. Elementary English, 44, 243-246.

Farr, R., and Roser, N. (1979). Teaching a child to read. New York: Harcourt Brace Jovanovich, Inc..

Garmen, D. (1977). Comprehension before word identification. Reading World, 16, 279-287.

Gomberg, A. W. (1976). Freeing children to take a chance. Reading Teacher, 29, 455-457.

Goodman, K. S. (1967). Reading: A psycholinguistic guessing game. Journal of the Reading Specialist, 6, 126-135.

Goodman, K. S. (1973). Miscues: Windows on the reading process. In Miscue Analysis: Applications to Reading Instruction. (ERIC Document Reproduction Service No. ED 080 973)

Goodman, K. S. (1976). Behind the eye: What happens in reading. In H. Singer, and R. Ruddell (Eds.), Theoretical Models and Processes of Reading (2nd ed.). Newark, Delaware: International Reading Association.

Goodman, Y., Burke, C., and Barry, S. (1980) Reading strategies: Focus on comprehension. New York: Holt, Rinehart and Winston.

Grant, Patricia L. (1979). The cloze procedure as an instructional device. Journal of Reading, 22, 699-705.

Gray, W. S. (1972). What is involved in word perception. In A. Milnik and J. Merritt (Eds.), The Reading Curriculum. London, The Open University.

Harker, W. J. (1979). Implications from linguistics for secondary reading. Reading Horizons, 19, 217-221.

Harris, A. J., and Sipay, E. R. (1979). How to teach reading: A competency based program. New York: Longman, Inc..

Hart, M. M. (1978). Preventing the proliferation of problem readers. (ERIC Document Reproduction Service No. ED 172 150)

Heilman, A. (1972). Principles and practices of teaching reading (3rd ed.). Ohio: Charles E. Merrill Publishing Company.

Jongsma, E. A. (1971). The cloze procedure as a teaching technique. (ERIC Document Reproduction Service No. ED 055 253)

Jongsma, E. A. (1980). Cloze instruction: A second look. Newark, Delaware: International Reading Association.

Kennedy, D. (1974). The cloze procedure: Use it to develop comprehension skills. Instructor, 84, 82-86.

Kennedy, D. K. and Weener, P. (1973). Visual and auditory training with the cloze procedure to improve reading and listening comprehension. Reading Research Quarterly, 8, 524-541.

Lee, J. W. (1978). Increasing comprehension through the use of context clue categories. Journal of Reading, 22, 259-262.

MacGinitie, W. H., et al. (1979). Gates-MacGinitie Reading Test (Canadian edition, Level D, Forms 1 and 2). Ontario: Thomas Nelson and Sons (Canada).

MacGinitie, W. H., et al (1980). Teacher's Manual, Gates-MacGinitie Reading Tests (Canadian edition. Ontario: Nelson Canada Limited).

Marino, J. L. (1981). Cloze passages: Guidelines for selection. Journal of Reading, 24, 479-483.

McCullough, C. M. (1945). The recognition of context clues in reading. Elementary English Review, 22, 1-5, 38.

McCullough, C. M. (1958). Context aids in reading. Reading Teacher, 11, 225-238.

McGee, L. M. (1981). Effects of the cloze procedure on good and poor readers' comprehension. Journal of Reading Behavior, 13.

Miller, John W. (1978). Teaching language cues to reading comprehension. In S. Jund (Ed.), Focus on Comprehension. (ERIC Document Reproduction Service No. ED 151 762)

Miller, W. H. (1977). The first R: Elementary reading today (2nd ed.). New York: Holt, Rinehart and Winston.

Pessah, N. (1975). The effect of various teaching techniques, involving the cloze procedure, upon the reading achievement of community college students. (ERIC Document Reproduction Service No. ED 110 945)

Pikulski, J. (1976). Using the cloze technique. Language Arts, 53, 317-318.

Potter, F. (1982). The use of linguistic context: Do good and poor readers use different strategies? British Journal of Educational Psychology, 52, 16-23.

Rankin, E. F., and Overholser, B. M. (1969). Reaction of intermediate grade children to contextual clues. Journal of Reading Behavior, 1, 50-73.

Ryan, E. B., and Semmel, M. I. (1969). Reading as a constructive language process. Reading Research Quarterly, 5, 59-83.

Sampson, M. R., Valmont, W. J., and Allen, R. V. (1982). The effects of instructional cloze on the comprehension, vocabulary, and divergent production of third-grade students. Reading Research Quarterly, 17, 389-399.

Sampson, M. R., and Briggs, L. D. (1983). A new technique for cloze scoring: A semantically consistent method. Clearing House, 57, 177-179.

Schneyer, J. W. (1965). Use of the cloze procedure for improving reading comprehension. Reading Teacher, 19, 174-179.

Smith, Frank (1975). The role of prediction in reading. Elementary English, 52, 305-311.

Smith, Frank (1982). Understanding reading (3rd ed.). New York: CBS College Publishing.

Smith, Nila B. (1963). Reading instruction for today's children. New Jersey: Prentice-Hall, Inc.

Smith, N. B., and Robinson, H. A. (1980). Reading instruction for today's children (2nd ed.). New Jersey: Prentice-Hall, Inc.

Spache, G. D. (1966). Toward better reading. Illinois: Gerrard Publishing Company.

Spache, G. D. (1981). Diagnosing and correcting reading disabilities (2nd ed.). Boston, Mass: Allyn and Bacon, Inc..

Spache, G. D., and Spache E. (1977). Reading in the elementary school (4th ed.). Boston, Mass: Allyn and Bacon, Inc..

Stauffer, R. G. (1975). Directing the reading-thinking process. New York: Harper and Row, Publishers.

Steiner, R., Wiener, M., and Cromer, W. (1971). Comprehension training and identification for good and poor readers. Journal of Educational Psychology, 62, 506-513.

Tarasoff, Jack (1978?). A comparison for two deletion systems utilizing the cloze procedure for the development and understanding of selected context cues as aids to increasing comprehension and word recognition skills. (ERIBC Report No. 78:47). British Columbia: Educational Research Institute of British Columbia.

Taylor, W. L. (1953). The cloze procedure: A new tool. Journalism Quarterly, 30, 415-433.

Thomas, E. L., and Robinson, H. A. (1972). Improving reading in every class: A sourcebook for teachers. Boston, Mass: Allyn and Bacon, Inc..

Thomas, K. (1978). Instructional applications of the cloze technique. Reading World, 18, 1-12.

Thomas, K. J. (1979). Modified CLOZE: The intralocking guide. Reading World, 19, 12-18.

Tierney, R. J., Readence, J. E., and Dishner, E. K. (1980). Reading strategies and practices: A guide for improving instruction. Boston, Mass: Allyn and Bacon, Inc..

Tinker, M. A., and McCullough, C. M. (1975). Teaching Elementary Reading. New Jersey: Prentice-Hall, Inc..

Valmont, W. J. (1983). Instructional cloze procedures: Rationale, framework and examples. Reading Horizons, 23, 156-162.

Valmont, W. J. (1983). Cloze deletion patterns: How deletions are made makes a big difference. Reading Teacher, 37, 172-175.

Weaver, G. C. (1979). Using the cloze procedure as a teaching device. Reading Teacher, 32, 632-636.

Whisler, N. G. (1977). Teaching students to use context clues in reading. (ERIC Document Reproduction Service No. ED 155 591)