AN ANALYSIS OF READING STRATEGIES USED BY A HIGH AND LOW PROFICIENCY GROUP OF STUDENTS LEARNING ENGLISH AS A SECOND LANGUAGE

By

RAMONA JEANNE ELLINGER

Bachelor of Arts
Southwestern State College
Weatherford, Oklahoma
1964

Master of Arts
University of Oklahoma
Norman, Oklahoma
1966

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
May, 1985

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Thesis Approved:

Bruce Southard
Thesis Advisor

Ravi Sheorey

David Yellin

Norman N. Durham
Dean of the Graduate College

PREFACE

In this study, I analyzed the reading strategies used by a high and low proficiency group of students studying English as a second language. The results of this study should offer enlightenment to teachers in choosing methods and materials to be used in teaching English to foreign students.

I wish to express my sincere gratitude to my major advisor, Dr. Bruce Southard, for his concern and invaluable guidance. I am also thankful to the other committee members, Dr. Ravi Sheorey, Dr. David Yellin, and Dr. Sherry Southard, for their advisement in the course of this work. I also owe special thanks to Carolyn Torrence and the staff of the Southwestern Oklahoma State University library for their assistance in arranging numerous interlibrary loans.

I also wish to thank the staff of the English Language Institutes at Stillwater, Oklahoma and Oklahoma City for their cooperation in administering the tests used in this study.

Above all, I am indebted to my son-in-law, Dr. Paul Nail, Professor of Psychology at SWOSU, for assisting in the statistical analysis. I am also grateful to my daughters, Jenny Nail and Mary Marks, for typing the manuscript. This project was truly a family effort.

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CHAPTER I

Introduction

Teachers of English as a Second Language, in order to effectively assist their students in attaining reading proficiency, should be aware of the various strategies used by readers. The purpose of my study is to analyze the different strategies used by both skilled and unskilled readers.

The strategies which readers apply include selecting, predicting, and confirming graphophonic, syntactic, and semantic cues (Goodman & Burke, 1972). One of the major problems in teaching English, specifically reading, to foreign students is not only determining levels of proficiency but also determining the specific strategies used by foreign students. It is difficult to determine to what extent a student's native language interferes with his comprehension of English grammar, structure, graphic symbols, and semantics. However, two tests used in this study, miscue analysis and the cloze procedure, seek to reveal the thought processes involved in the reading endeavor--to get behind the eye of the reader.

The tests used for the present study were administered to seventy-five young adults, ranging from eighteen to twenty-nine years of age. However, in an effort to show significant contrast, I analyzed only the scores of the

higher and lower thirty percent of that group. The subjects are all pre-college or college students attending Southwestern Oklahoma State University at Weatherford, or the English Language Institutes at Oklahoma City and Stillwater, Oklahoma. The students came from a wide variety of language backgrounds in Africa, South America, the Middle East and Far East. I made a statistical analysis and comparison of the results of the TOEFL, Gates-MacGinitie, and cloze tests (I offer a detailed explanation of the tests in Chapter III).

In addition, I made a reading miscue analysis (explained in Definition of Terms section) of the higher and lower thirty percent of the twenty-one subjects tested at Southwestern. I conducted the miscue analysis on an individual case study basis.

I determined the higher and lower thirty percent of subjects by using their performance scores on the TOEFL.

Definition of Terms

I used the following terms in connection with this study:

Content Words: Content words contain the ideas of the passage (nouns, verbs, adjectives, and adverbs).

Function Words: Function words connect the ideas of the passage (prepositions, relative pronouns, and conjunctions).

Standard Cloze Test: A standard cloze passage was first defined by Taylor (1953) as a selected reading

passage in which every fifth word is deleted (a detailed explanation of the cloze procedure is given in Chapter III).

Miscue: refers to deviations from the text in oral reading which reveal information about the graphophonic, syntactic, and semantic strategies employed by readers (a detailed explanation of miscue analysis is presented in Chapter III).

Expected Response (ER): A term used in reading miscue analysis to refer to words as they appear on the printed page.

Oral Response (OR): A term used to refer to the words called by the reader which deviate from the ones appearing in print.

Psycholinguistic Approach: refers to a model of reading which seeks to analyze and understand the complex mental processes involved in the comprehension of printed material. The emphasis is on the total approach to reading comprehension (a detailed explanation is offered in the review of the literature).

Purpose

The purpose of this study is to analyze the reading strategies used by a low proficiency and a high proficiency group of students studying English as a second language. A strategy is a plan made to overcome obstacles and reach a desired goal. K. Goodman (1967) describes reading strategies as the judgments or decisions made in the act of

reading in an effort to arrive at the meaning of the written text (p. 131). Psycholinguistic research has been concerned with discovering the processes of the reader's mind by investigating reading strategies (Smith, 1971; Gibson and Levine, 1975). ESL researchers and practitioners have applied some of these findings in the classroom with second language learners (Clarke and Silberstein, 1977; Eskey, 1970; Hatch, 1974). A discussion of that research is presented in the review of the literature.

Goodman and Burke (1972) point out that reading is a complex process which involves a constant interaction between "(1) the reader, with his language patterns and experiences; (2) the author, with his language patterns and experiences, and (3) a written language, with a graphic/sound system, a grammatical system and a meaning system" (p. 95). A reader uses a variety of strategies in an effort to derive meaning from that complex interaction. Reading strategies are concerned with the way specific systems (graphophonic, syntactic, and semantic) function in relation to each other. In contrast, skills are isolated abilities which may or may not aid the reader in comprehension.

In determining reading ability, one of the difficulties is in distinguishing the difference between performance and competence. A reader's performance may reveal a skill for precise word-calling with very little

comprehension (competence). In an effort to avoid mistaking performance for competence, miscue researchers use material that is unfamiliar to the student and at least one level above his tested reading ability.

Analyzing reading strategies involves an effort to get inside the mind of the reader, admittedly a difficult and uncertain task. However, the cloze procedure and miscue analysis were chosen for this study because they lend themselves to the "strategy" approach in reading analysis. P. D. Allen (1976) points out that "the cloze procedure operates because reading employs sampling and guessing procedures based upon a person's experiential background and intuitive use of language structures" (p. 12). Likewise, miscue analysis provides a means to observe the reading process. Miscues are intended to reveal the strategies a reader uses when confronted with unfamiliar material. In miscue analysis, the researcher attempts to determine possible contributing factors for each miscue to illustrate the interaction of the graphophonic, syntactic, and semantic language systems.

Organization of the Study

The significance of the study, the definition of terms, the purpose, and general organization have been introduced in Chapter I.

A review of the literature related to this study is presented in Chapter II. Methods of teaching and testing reading skills of both native speakers and second-language

learners are discussed. The report reviews more than one hundred years of reading instruction in the United States. An explanation of reading methods used to teach native speakers is included because most of the methods and testing used in the ESL classroom were first used in the instruction of native speakers. The tests used in the study are also reviewed in Chapter II.

The methodology, procedures, and instruments used to gather the data are described in Chapter III.

The findings and an analysis of the data are presented in Chapter IV. Tables depicting the data are included.

A summary of the investigation, conclusions, and recommendations are discussed in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

Historical Background

Instruction in English as a Second Language has, for many years, emphasized the production skills: speaking and writing. Reading instruction has been generally neglected, perhaps because of the great diversity of opinion concerning the best method to teach the reading skills.

Almost a hundred years ago, Claude Marcel (1885), one of the first to make a definite distinction between the four languge skills, indicated that mastery of one skill does not insure mastery of another: "Reading a thousand books does not enable a person to understand a single word of the spoken language" (p. 111). Marcel urged that the first skills taught should be reading and listening, which he referred to as impression, in contast to writing and speaking--expression.

Twenty years after Marcel, the psychologist Edmund Burke Huey (1908) denounced phonetic theories of reading instruction by maintaining that words represent things, not sounds and that the reader brings to the printed page his past knowledge and experience which increase his understanding of the reading matter. Huey was one of the first to elaborate on the contextual view of reading, illustrating through his experiments that words do not

exist in isolation in the reader's mind, but are dependent on the relationship with other words in the passage.

Huey's views were ahead of his time, however. Most of the early texts used in reading classes ignored the psycholinguistic view. The first ESL (English as a Second Language) texts, based on late nineteenth-century readers for native speakers, were similar to the one by William Chancellor (1904). The author maintained that "talking the language precedes writing it" (p. iii). However, no strategy for teaching phonics was developed in these early books. In addition, those texts published between 1900 and 1920 show no regard for structural complexity and other syntactic problems. For instance, Sarah O'Brien's text (1909), stressed that the main method in reading instruction is vocabulary building.

During these early years of the twentieth century, reading instruction for native speakers was dominated by the whole-word approach, first introduced by Horace Mann (1938). By 1935, according to Walcutt (1974), many schools were introducing up to 350 words "before they turned their attention (usually not until the second or third grade) to the letters" (p. 37). However, after 1950, schools slowly moved back to an earlier introduction of the alphabet.

The whole-word approach, however, was a late comer in ESL instruction. But now it is used often with second-language readers who cannot distinguish certain sound differences in English (Hatch, 1978).

While native-language reading instruction was concentrated on the whole-word approach, ESL instruction was introducing oral language. Frederick Houghton (1911) wrote the first ESL text that offered oral drills related to reading instruction. Nevertheless, like the other textbook editors of the period, he rarely used a syntactic or grammatical pattern as the basis for a lesson. Rather, he stressed the importance of the oral mastery of English, maintaining that learning to speak is more important than learning to read.

Two linguists, Edward Sapir and Leonard Bloomfield, conducted extensive research in the sound patterns of language. Sapir (1925) based his theories on the phoneme. As a result, language analysis and teaching shifted its focus from the written form to speech. The grammar-translation method, which had dominated foreign-language teaching since its inception, was largely replaced by the direct method. A rather similar theory in language teaching had actually been used in Europe since before the turn of the century. Francois Gouin (1880) stressed the importance of speech, especially natural speech in the home environment. Gouin maintained that the ear, not the eye, is the most important tool of language.

Gouin's theories were implemented by Henry Goldberger (1918). The primary thrust was emphasis on the oral approach. One of the leading proponents of Goldberger's method was Harold Palmer (1928), who adapted the oral

method specifically to ESL instruction. Palmer, with his emphasis on oral repetition and choral drills, developed a teaching program which resembled what came to be known as the audio-lingual method.

Nearly two decades later, Charles Fries, following Sapir's principles, rather than Gouin's, developed an ESL program which emphasized mastery of the sound system. Fries (1945) stated emphatically that "even if one wishes to learn the foreign language solely for reading, the most economical and most effective way of beginning is the oral approach" (p. 7). I use "approach" to refer to "theory," consistent with the definition given by Edward Anthony (1963).

While the audio-lingual approach to foreign language instruction (including ESL) was being touted in universities throughout the nation, another important linguist, Leonard Bloomfield, in an article called "Linguistics and Reading" (1942), proposed a reading approach, with native-speaking children in mind, which was designed to replace the popular whole-word system used for beginning readers. However, the text used to implement his ideas was not published until twenty years later. The vocabulary of his text was limited to words and nonsense syllables which consistently illustrate a letter-sound correspondence. Bloomfield was opposed to the phonics approach because he believed that it confused speech with writing. He believed that children should be taught visual

discrimination so they could associate letter and word shapes with familiar sounds. Bloomfield believed that one of the major problems for a beginning reader is to understand the English spelling system and not the meanings of words. Therefore, he justified the use of nonsense syllables in his reading text. He maintained that since children already know the language when they start school, learning to read means breaking the grapheme code. Bloomfield's theories influenced a number of educators and linguists, most notably Charles Fries (1963).

However, Bloomfield's text has been attacked on several points: Because the material is limited to words with phoneme-grapheme regularities, the content is often repetitious and boring. In addition, Carl Lefevre (1964) claims that reading instruction should emphasize meaningful units of thought -- the phrase, clause, and sentence. He says that Bloomfield's concentration on letters and words produces not readers but word-callers.

While the dispute raged over reading approaches (primarily designed for young native speakers), the entire problem of teaching reading in the ESL classroom was largely ignored in favor of the spoken language. Written language was considered "at best a pale reflection of the spoken" (Stubbs, 1980, p. 24). Bloomfield (1942) proclaimed that the art of writing is not part of language. Norris (1970) points out that the "down-grading of the written language in adult ESL classes can be accounted for

on practical as well as theoretical grounds. The typical student enrolling in an intensive ESL course has an immediate need for spoken language skills" (p. 19). However, Norris points out that, in the long run, reading skills may be more important than oral fluency, especially for college students. Nevertheless, the consequences resulting from the denigration of reading may be that students become "fluent illiterates" (Stack, 1964, p. 71).

Of course, another contributing factor in the neglect of reading is the uncertainty of approach. Experiments and surveys conducted by L. S. Gray (1956), as well as D. H. Russell and H. F. Fea (1963) indicate that no single approach to reading instruction has proven to be more effective than any other.

Models of Reading

The models of reading strategies that have been theorized, tested, and applied include the information processing, the developmental, and the psycholinguistic models. Each in a different way, the models reveal how the reader approaches and processes the printed page. Ideally, the reading models can provide insight in the teaching of reading.

The most familiar of the information processing models of reading is the one devised by J. Mackworth (1972) who describes a single fixation pause of 250 msec which provides a "sensory visual trace" and processing of the input. Recognizing the input and matching it to a memory

of the word creates a mental picture which lasts for a second or more. Simultaneously, a match of the word is made with the articulatory and acoustic system and ultimately meaning is given to the word (although Mackworth indicates that in the adult the articulatory and acoustic feature may disappear). From the image the word is coded and stored in short-term memory before new information erases it (p. 720).

Mackworth's model has been criticized as being very general wothout specific application for further research.

On the other hand, the Rubenstein model (1971) is limited to a description of visual word recognition and does not attempt to theorize about the entire process of reading. Rubenstein's theory is concerned with four processes. (1) Quantization--the process of dividing the visual image into segments of letters and phonemes. (2) Marking--distinguishes among words with identical subsets of lexical items such as words containing some of the same combinations of letters (e.g. stab, stew, stir). (3) Comparison--comparing letter and phoneme segments with the marked entries and repeating the procedure. (4) Selection--if more than one marked entry is still being considered, these entries would have to be compared with another "quantized output" (p. 646). Experiments conducted by Rubenstein reveal some interesting observations about the quantization process. It was learned that detecting and dismissing a non word requires more time than

recognizing a real one (p. 654).

Another information processing model is set forth by Gough (1972). He calls his theory "one second of reading." He follows the reader's process from "the beginning of an eye fixation to the emergence of a spoken word in literally split-second intervals" (Gibson & Levine, p. 445). Letters are identified individually in Gough's model. He proposes that symbols are transposed into a string of phonemes related to a system of phonological rules. The reader then decodes these abstractions in order to perceive the lexical item or word.

Developmental models for reading include a variety of theories. Holmes Substrata-Factor theory is based on the assumption that the mental process of reading is made up of an organized system of subsystems. However, according to Holmes, the "same information with different associations may be deposited in many cells in many different areas of the cortex" (p. 27).

The substrata-factor theory of reading seeks to explain the mental structure involved in reading. Holmes theorizes that the mental structure is composed of at least three hierarchical levels, each containing information stored in cells, acquired from various aspects of reading and reasoning instruction. These cell systems can then be mobilized to meet the demands of the reader and the reading task (Holmes, 1965, p. 21).

Spache's description (1962) of a model describing the

reading process is vague. He refers to model components as the recognition of a sentence as a complete thought and the comprehension of the main idea as an extension of the topic sentence. However, Spache admits that with all the reading research, no one yet knows exactly what mental processes are used in comprehension, how they can be measured or how the processes can be improved through instruction (Singer & Ruddell, eds., p. 463).

Ruddell's and Singer's models are similar in many ways. Singer categorizes four systems for reading: word recognition, word meaning, morphemic analysis, and reasoning. The first two systems are similar to Ruddell's phonemic, graphemic, morphemic, and syntactic systems. Singer's model, however, is missing the structural and semantic markers found in Ruddell's model. In addition, Ruddell's model is the only one based on the interaction of all four aspects of communication: speaking, listening, reading, and writing (Singer & Ruddell, eds., p. 648).

The major problem with reading models is that they are only theories, often difficult to understand and even more difficult to apply practically in the classroom. In addition, reading instruction is complicated by two very different types of reading. For instance, oral reading skill (word calling) can be accomplished successfully with virtually no regard to meaning. On the other hand, one can read silently with good comprehension and yet have little knowledge of the sound system of that particular language.

(Note those academicians who possess only a reading knowledge of a language for research purposes). This phenomenon of reading comprehension has sparked the interest of scholars who, during the past fifteen years, have approached the analysis of the reading skill through psycholinguistics.

Kenneth Goodman's (1970) psycholinguistic theory of reading stresses comprehension as the only real goal in reading. To achieve that goal, three decoding systems are used: the graphophonic, syntactic, and semantic. The graphophonic includes perception and comprehension of letters, words, and punctuation marks. Syntactic cues include sentence structure, pattern markers, and function words. The semantic system includes information drawn from the written words. The psycholinguistic model includes the selection from written material the key cues which reveal the most information (e.g. initial consonants are the most useful letters), the prediction and tentative choice based on minimal clues and finally the confirmation or rejection of the choice or "guess." Goodman (1967) maintains that reading involves only "partial use of available minimal language cues selected from perceptual input on the basis of the reader's expectations" (p. 127).

Kenneth Goodman (1967) challenged the phonic and word approaches by illustrating that reading does not follow a precise sequence of letter and word identification: "Reading is a psycholinguistic guessing game. . . .

Efficient reading does not result from precise perception of all elements, but from skill in selecting the fewest, most productive cues necessary to produce guesses which are right the first time" (p. 108).

Likewise, Frank Smith (1971) attacked the phonic approach by demonstrating that "reading is less a matter of extracting sound from print than of bringing meaning to print" (p. 2). Furthermore, Smith indicated that readers do not depend on individual words for meaning: "Often, if you ask a person to repeat a sentence, you will get back the right meaning but not exactly the same words. . . . We do not in fact attend to words; we attend to meanings" (p. 53). Both Smith and Goodman maintain that efficient reading involves sampling units of information (phrases and clauses) in order to achieve comprehension.

Additionally, David Eskey (1973) points out that the written language has many more complex and embedded structures than spoken English. Therefore, he says there is "no need to work laboriously through an oral introduction to a kind of English the like of which was never heard anywhere in the English-speaking world" (p. 170).

Another traditional assumption challenged by psycholinguistic theory is that the identification of individual letters is a prerequisite to word identification. Numerous experiments have shown that letters can be substituted, transposed, and omitted without

being noticed by proficient readers (Holmes, 1971). Tests have shown that, when reading aloud, both adults and children will sometimes change word order yet retain meaning. Likewise, readers will often overlook the omission or duplication of letters and even words that do not interfere with their search for information (Julian Dakin, 1968). The recognition of individual letters and words seems to have little to do with reading comprehension. For instance, in the study of eye movements in reading, the fixations do not usually fall on the function words, but rather on the content words (p. 104). Because short-term memory is easily overloaded, psycholinguistic theory holds that the less information needed from print the more efficient the reading process will be.

Following the psycholinguistic theory, Eleanor Gibson and Harry Levine (1975) offer an outline of strategies for the reader:

1. The mature reader exhibits flexibility of attentional strategies in reading for different types of information.
2. Strategies shift with characteristics of a text such as difficulty of concepts and style.
3. They shift with feedback. . . as the reader progresses.
4. They shift with newness or oldness of information.
5. They shift with the reader's personal interests (p. 471).

Although Gibson and Levine offer good advice to the reader, they fail to provide specific practical suggestions for accomplishing the goals that the reader is asked to pursue. Nevertheless, the theory offers exciting possibilities for suggesting new approaches for ESL reading instruction. For one thing, most second-language learners already know how to read in their native language. Also, most ESL students are adults with much prior knowledge and many life experiences which they can bring to the printed page in order to facilitate the "guessing game" (Goodman's term for prediction and confirmation of meaning). As Smith (1973) says, "only a small part of the information necessary for reading comes from the printed page" (p. 10).

Although the psycholinguistic theory does not imply a method of reading instruction, nevertheless, it forms the basis for the development of methods, many of which have been explored and tested in the ESL classroom during the past ten years.

Reading Instruction in the ESL Classroom

Virginia French Allen (1973) offers an excellent overview indicating the changes in ESL reading instruction during the past four decades. Since World War II, second language reading material has been designed to ease the way for the non-native learners. This goal was accomplished by simplifying the syntax, limiting the vocabulary, and controlling the grammar. However, because of the huge influx of international students into American, British,

and Canadian universities, it quickly became apparent that in order to compete with native English-speaking students, the non-native must develop reading skills enabling him to comprehend material written in complex forms. Only recently has it been recognized that reading is a special skill and not simply transcribed speech. David Eskey (1973) indicates that ESL students who learn only conversational English never see the kinds of sentence patterns and constructions that are commonly used in written discourse.

Ronald Mackay, (1979) makes a direct application of the psycholinguistic theory to the ESL students. He advises the teacher to emphasize comprehension strategies which concentrate on syntax and context: "Too much emphasis on concrete process strategies such as letter-sound correspondences can leave the student with a poor priority of strategies" (p. 11).

Lois Wilson (1973) has developed a technique for teaching meaning through syntax. She readily points out that students learn complex structures for reading recognition only and that they are not expected to use them in their own writing. For instance, the passive voice construction, the postponed subject after "there," and the relative clauses should be taught early. In a computer study of engineering textbooks, Jean McConochie (1969) discovered extensive use of the three aforementioned forms. Wilson suggests that in learning the passive voice

construction, students must first recognize "who did what" (p. 260) in the active voice so they can understand that the passive voice construction does not ordinarily reveal that information. Wilson also points out that in teaching the expletive "there" with a postponed subject, the instructor should show that the word "there" has no meaning in itself and is quite different from the adverb "there." Finally, in teaching recognition of relative clause patterns, the instructor should help students to comprehend a relative clause as "a sentence within a sentence" (p. 261). Additionally, studies have shown a high correlation between reading comprehension and the ability to recognize underlying and embedded sentence structures (Simons, 1970).

Like Wilson, David Eskey (1973) points out the importance of teaching syntactical structures as a part of the reading program for intermediate and advanced ESL students. However, Eskey's approach is more eclectic than Wilson's. Eskey stresses that the student must learn to "decode the syntactical and lexical signals of English and develop the ability to follow a given line of argument" (p. 174). Eskey observes that the intermediate and advanced readers depend less on word cues and much more on semantic and syntactic expectations. In a later article, Eskey (1980) emphasizes that good comprehension involves reading by structures not by words. Therefore, he maintains that teaching structures is the major task for instructors of advanced-level students.

MacNamara (1967) conducted an interesting experiment to determine the effect of syntactical knowledge on reading speed. He devised two passages, one with random word order and the other with a close approximation to English syntax. MacNamara also made up similar passages in the second language. His experiments showed that students read quickly the passage based on English syntax and read slowly the passage with random order. Furthermore, he demonstrated that students showed no difference in reading speed for the two versions of the second language since the syntax was unfamiliar.

Studies show that ESL students are often unable to identify the subject in complex sentences, particularly when the sentence is introduced by an adverbial expression or some other non-subject form. In order to determine the validity of teaching sentence-level expectancy in college textbooks, an analysis was conducted of one thousand sentence structures taken from fifty undergraduate textbooks representing major areas of study at the University of Texas at Austin. Results of the analysis show "that expectancy for normal patterns can be applied to even the most complex sentences" (Pierce, 1973, p. 274).

In a variation of the same theme, Ted Plaister (1968) offers a method of teaching students to rewrite text material in phrases in order to illustrate syntactical patterns that reveal which words are grouped together. Ruth Berman (1975) has devised a technique to aid reading

comprehension which she calls "structural paraphrase." Complex structures are rephrased in forms more familiar to the student, who is then asked to compare the two forms in order to observe the same meaning in the different constructions. The troublesome forms the author recommends for paraphrase include nominalization, reduced relative clauses, pronominal reference, and negatives. Berman explains that the purpose of the exercise is to show students that forms found in their reading can be rephrased and identified with familiar conversational-type sentences.

Joanne Devine's study (1981) demonstrates the close relationship between syntactic competence and reading comprehension. She tested adults learning to read English as a second language and children learning to read English as their native language. She divided each group into two classes: high proficiency and low proficiency learners. Using Goodman and Burke's Reading Miscue Inventory (1972), Devine discovered that the high group reader's miscues (mistakes) were more semantically and syntactically acceptable than those of the low group. This finding held true in both the second-language learners as well as the native-lanaguage group. Devine's study corroborates the earlier experiment conducted by Kenneth Goodman (1969) with native English-speakers. The results of his study showed that the greater the reading skill, the greater the likelihood of producing miscues which preserve the sense and structure, though they may have no graphic or phonemic

similarity to the material. Devine finds the same pattern with ESL students.

Stephen Gaies (1979) uses syntactic gradation levels as a means of determining the readability of ESL texts. In the study, twenty ESL readers were analyzed according to complexity of syntax. Classification of proficiency level stated by the author or editor of each text (Beginning, Intermediate, Advanced) was also noted in Gaies' comparative study. From each text, the first 100 words chosen from random pages were divided into T-units. A T-unit is defined as "one main clause plus any subordinate clause or nonclausal structure attached to or embedded in it" (p. 45). Results of the analysis indicate that no empirical measurement is used to classify ESL texts. Some of the texts labeled "intermediate" contained more complex structures than certain "advanced" texts. Admittedly, Gaies' study is limited and it would appear that further research is needed in determining readability and classification of ESL texts.

In another study related to syntactic expectancy in reading, Mary Eleanor Pierce (1973) advances the necessity of teaching redundancy recognition in reading for ideas. Going beyond the sentence level, she points out paragraph patterns that are predictably repeated. For example, a paragraph usually has a topic sentence accompanied by other sentences which offer information to support the topic. Also, each topical paragraph develops the theme of the

total essay. Other redundancy clues illustrate that if a topic sentence supports the idea expressed in a previous topic sentence, the new paragraph expands or repeats the same idea.

Shiela Been (1975), like Pierce, recommends redundancy recognition as a means of improving reading speed and comprehension at the intermediate and advanced levels. The reading instructor offers cues to help students realize redundancies. Been suggests using different sizes of print, large print for key words and small print for redundant ideas that can be glossed over. Been admits, however, that such a method has not been tested over a long-term period to determine whether the approach can actually improve reading speed and comprehension.

Syntactical expectancy and redundancy patterns both operate from the sentence and paragraph levels. However, to become a proficient reader, the ESL student must be able to grasp the meaning of complete compositions and textbook units. Donna Carr (1967) is one of the first ESL specialists to publicly recognize the unfortunate fact that many students who can grasp the meaning of sentences and isolated paragraphs often miss the point of the total essay. Such students "appear to lack the ability to relate the ideas expressed and frequently pick out small insignificant facts as the main theme" (p. 30). Carr points out that although paragraph patterns are not as obvious as sentence patterns, they must be taught. She

suggests that after an essay has been analyzed by finding the central idea and the developing details, the analysis should be reinforced by asking the student to write an essay using the same expository pattern as that of the reading passage. Carr's recommendation runs counter to earlier theories (Fries, 1945) which proclaimed that writing should be introduced only after reading has been mastered.

The importance of teaching organizational patterns unique to the English language becomes apparent with the realization that other languages and other cultures have organizational patterns quite different from those in the English language. In a provocative essay, Robert Kaplan (1966) points out that cultural thought patterns vary greatly. Narrative discourse, for instance, is the only distinctive method used in some languages.

Although discourse analysis has been traditionally an important element in the writing class, it has been largely neglected, until recently, in the reading class. Thirteen years after Donna Carr first urged ESL instructors to teach reading and writing skills as one component, Fraida Dubin and Elite Olshtain (1980) have developed a detailed prescription for curing reading deficiencies through a study of writing principles and practices. They point out differences in emphasis between rhetoric handbooks which are concerned with methods of producing (writing) a good text and discourse analysis which is concerned with

comprehending (reading) a completed text. Dubin and Olshtain suggest that just as the writer uses a plan in producing the message, so the reader can use a parallel plan to interpret it. For instance, the writer adjusts his plan to suit the particular rhetorical method he is using (narration, exposition, description). Likewise, readers "should be guided to discover for themselves the author's plan and point of view" (p. 358). Cooper and Petrosky (1976), indicate fairly definite strategies for the reader to follow. Employing psycholinguistic theories set forth by Goodman (1969) and Smith (1971), the authors point out that the reader risks errors in order to predict meaning. The reader must concentrate on identifying meaning rather than letters or words. Cooper and Petrosky urge the reader to guess unfamiliar words from context and to read "as though he expects the text to make sense" (p. 186). He should push ahead, confident that the material will become meaningful. As the reader begins to realize that only certain words will fit in certain structures, the possibilities will be reduced. Furthermore, Cooper and Petrosky urge the reader to fill short-term memory with large units such as phrases and clauses, not words and letters. They also warn the reader to maintain enough speed to overcome the limitations of short-term memory. Finally, they suggest that the reader be alert to the rhetorical model of the material (narrative, expository, fiction, non-fiction) and to adjust his reading style to

suit his own purpose, depending on whether he is looking for a general view or for specific information. Cohen, Glasman, et al. (1979) also are concerned with discourse analysis; however, their study concentrates on reading for special purposes. Their research, conducted at the Hebrew University of Jerusalem, investigated the methods used in reading English textbooks from various subject areas. Responses from student informants were analyzed in an effort to uncover particular problems for the non-native reader. The studies involved texts and students from four major disciplines: genetics, biology, political science, and history. The results revealed three major problems evident in all the areas: heavy noun phrase subjects and objects, syntactic markers of cohesion, and non-technical vocabulary in technical texts. For instance, most of the informants indicated difficulty in comprehending groups of words functioning as one grammatical unit (noun phrase). In addition, all four studies showed that students were missing the significance of transitional words used as cohesion markers. One student said that she had never known "the meaning of 'thus,' and had simply thought it marked off sentences" (p. 448). The third problem revealed in the studies was quite surprising. Students had more difficulty with the non-technical vocabulary than with the technical words. Only nine of the thirty-two technical words investigated caused problems for the students'; however, forty-five out of fifty-three non-technical words

caused difficulty. Students had particular problems recognizing synonyms. In the political science study, the students "did not perceive that 'balloting' was used interchangeably for 'voting', and that 'assertions' were 'statements'" (p. 561).

Cohen, Glasman et al., concluded that the results of their research might be less helpful to curriculum planners and teachers than to students. Hopefully, an awareness of their deficiencies would help students solve their reading problems. "The best the teacher can hope to do is alert the reader to strategies that will help him derive meaning despite the shifting functions of specific forms" (p. 563).

Flick and Anderson (1980) also conducted a study in reading comprehension of scientific texts. However, they concentrated on determining student comprehension of implied definitions in the text. In the experiment, both ESL and American students were tested with regard to both implicit and explicit textual statements. The hypothesis of the researchers was that the native English speakers would be better able to understand implicit material than the non-native would. However, contrary to that assumption, the study revealed no significant difference in scores between the American students and the advanced ESL students. The conclusion is that implicit definitions pose a problem for both native and non-native students. The authors suggest that ESL texts, which seldom contain implied statements, should be revised "to give students

additional practice in discerning implicit relationships in English" (p. 351).

Unlike other researchers and instructors who suggest specific classroom teaching methods, Clarke and Silberstein (1977) recommend individualized reading activities which encourage independence, especially among advanced ESL students. The authors point out that the role of the teacher is that of a facilitator who intervenes only when his "linguistic expertise" is required to avoid communication breakdown (p. 138). The authors point out that since students do not learn at equal rates, individualized reading instruction is needed. Clarke and Silberstein also recommend giving students comprehension questions on the material before they begin reading, on the premise that they will be motivated to read in order to confirm their guesses (p. 141). On the other hand, it would appear that knowing the questions in advance, students would be tempted to simply scan the material looking for the answers without really reading the text.

Ronald Mackay (1979) synthesizes the sentence, paragraph, and discourse analyses in a very lucid explanation of what he calls the information-gathering skills. Mackay warns that what we call teaching methods are often simply behavioral goals: "As teachers and course planners we require additional information, namely, a clear specification of the language items we have to teach our students in order to develop each of these skills" (p. 80).

Mackay offers a number of examples to illustrate the linguistic knowledge that a reader should have. He says that the instructor must identify those features that hinder comprehension as well as the ones that facilitate it. He points out that problems with vocabulary are not solved by simply learning unknown words but rather learning synonymous relationships that provide cohesion in the text. In addition to lexical relationships, Mackay also stresses that ESL students must understand syntactic relationships, especially reference words and phrases used to refer to something previously mentioned, in other words, in the text.

The review of the literature included in this chapter provides background information and research discoveries relevant to the teaching of reading to students of English as a second language. Psycholinguistic theories of the reading process have paved the way for the development of new and exciting approaches to the teaching of reading at the sentence, paragraph, and composition levels.

Review of the Tests Used in this Study

The TOEFL (Test of English as a Foreign Language) examination was selected as the best available criterion for determining levels of language ability. It is administered by Educational Testing Service and is widely used by American universities as an admission test for foreign students. Its purpose is to assess the English

language skills of non-native speakers. TOEFL is generally used only for students at the eleventh grade level or above because it is considered too difficult for younger students. The current test, in general use since 1979, consists of three separate sections in multiple-choice format. Section One (Listening Comprehension) measures skill in understanding English spoken in the United States. The test includes vocabulary and structures most often used in spoken English as well as recordings of sound and intonation patterns that are usually difficult for non-native speakers. The three parts in the listening comprehension section address different types of problems. In the first part, the examinee must choose a printed paraphrased statement which is closest to the recorded statement in meaning. The second part is made up of a series of brief dialogues each followed by a question. The examinee must choose the best response to the question. The third part consists of several brief presentations such as news broadcasts, announcements, or short lectures, each followed by several spoken questions. Once more, the examinee must choose the correct printed response from the four options.

Section Two (Structure and Written Expression) measures competence of important syntactical and grammatical features in standard written English. The subject matter of the test sentences is general so that no special advantage is gained by persons familiar with a

particular field of study or with a specific national or linguistic group. The first part of the section tests basic grammar principles and the second part requires the examinee to identify unacceptable words and phrases.

Section Three (Reading Comprehension and Vocabulary) measures the ability to understand a variety of reading materials. In the vocabulary part, the examinee is asked to choose synonymous words and phrases that best fit the meaning of the underlined words. In the reading comprehension section the examinee is questioned on the main and secondary ideas as well as the inferences contained in a variety of brief passages.

All test items are reviewed by ESL specialists for cultural bias and content appropriateness. In addition, statistical analyses provide monitoring for the reliability of the entire test.

Measurement specialists agree that the best measurement for the TOEFL is in the critical score range of about 450 to 550. The mean scores for the three sections of the test range between 54 percent and 69 percent. The standard error of measurement, the degree of probable error inherent in the test score due to the imperfect reliability of the test, for Section One is about 2.2 points; for Section Two, about 2.9 points; for Section Three, about 2.5 points; and for the total score, about 14.6 points.

The intercorrelations among the scores on the three sections are quite strong, supporting the commonly held

belief that proficiency in one language area usually indicates proficiency in the others.

The validity of the TOEFL has been established in a number of ways. It has been statistically compared with a variety of other tests such as the placement tests for foreign students at the University of California, Berkeley, the Michigan test, and the Georgetown University Test at the American Language Institute. In addition, correlations have been made between TOEFL scores and university ratings. The section on writing ability and English structure correlated highest. In addition, a close relationship has been shown in comparing TOEFL scores with writing samples, cloze tests, oral interviews, and sentence-combining exercises. Overall, studies have shown that the items tested represent features of English that are necessary in the performance of university-level work.

Another test used was the Gates-MacGinitie Reading Test, designed for native speakers. However, it seems worthwhile to observe the extent to which scores on the TOEFL, a standardized test for foreign students, compare with the Gates. Since the TOEFL measures all four language skills, a close correlation between the two tests might strengthen the assumption of the interdependence among the skills: reading, writing, speaking, and listening. However, for the purpose of this study, the two tests are primarily used as criteria for establishing levels of expertise with which to measure performance on the

non-standardized instruments used (the cloze and the miscue analysis).

Standardization for the Gates-MacGinitie Reading Tests (2nd Edition) was done in October, 1976 and May, 1977 at each grade level. With the exception of the eleventh and twelfth grade groups, the samples all included approximately five thousand students.

The test samples were based on the 1970 U.S. Census School District Data Tapes. The sampling plan stratified school districts according to geographic location, enrollment size, family income, and years of school completed by the adult population. The sample was also chosen to include representative proportions of black and Hispanic people.

Norms were developed from cumulative frequency distributions of raw scores at each grade level, separately for Vocabulary, Comprehension, and Total. Cumulative percentages were converted directly to Normal Curve Equivalents (NCE) which are normalized standard scores with a mean of 50 and a standard deviation of 21.06 (p. 8). Gates-MacGinitie Tests are comprised of Vocabulary and Comprehension subtests. The Comprehension score is generally considered to be the more important of the two because it seeks to measure the achievement of the ultimate goal in reading--understanding the printed page. Vocabulary is actually a part of comprehension, but it is the part that can be most usefully distinguished. For

instance, students whose vocabulary scores are much lower than their comprehension scores often use reading strategies quite well. They use their knowledge of familiar sentence patterns, logical progression of the content, and knowledge of the subject to guess at the identity of words they have difficulty decoding or to guess at the meanings of words they do not know.

One criticism of the Gates-MacGinitie is voiced by Carolyn Burke (1978) who points out that the major weakness of the test is that it considers reading processes in isolation: "The set of skills and strategies that make for success in taking this test may have no direct relationship to those called into use by a successful reader" (p. 1081). William Powell (1972) compares the Gates-MacGinitie favorably with other reading tests of that type. However, he indicates that it offers no information about specific reading subskills.

Another instrument used in this study is the cloze passage, a technique by which words are deleted from a reading passage by some systematic process. In most cases, the form used is an every nth word deletion or the deletion of every word of a particular type. Deleted words are replaced by a blank, usually of standard length, and forms are scored on the basis of the number of correct exact word or synonym replacements.

First developed in the early 1950's by two experimental psychologists, Charles Osgood, University of

Illinois and Melvin Marks, Department of the Army, the cloze procedure was first used to determine readability (Taylor, 1953). However, it is a tool that is used in many ways to measure effectiveness of communication. Taylor indicates "the method is straightforward, the data are easily quantifiable; the findings seem to stand up" (1953, p. 415).

The procedure involves a unit of measurement called "cloze," pronounced like the verb, "close" derived from "clozure." It is a term referred to in Gestalt psychology as the human tendency to complete a familiar but unfinished pattern by closing the gaps. If a pattern is familiar, it can be recognized, although much of it is missing. When this phenomenon is applied to language, it requires knowledge of word meanings, forms, and sentence structure.

Taylor defines a cloze unit as an accurate reproduction of "a part deleted from a message by decoding from the context that remains, what the missing part should be" (1953, p. 416).

The cloze procedure involves interrupting messages by deleting parts and then asking readers to reconstruct and complete the language pattern. The cloze procedure is not just another sentence completion test although it may appear to be on the surface. One difference is that the sentence-completion test measures specific and independent pieces of information. The cloze procedure, on the other hand, deals with interdependent elements bound in context

to one another. Also, the cloze does not relate directly to specific meaning. Instead, it requires the reader to sample the writer's language patterns and to "guess" what the patterns mean. The cloze procedure is very compatible with Kenneth Goodman's psycholinguistic theories of reading (refer to Chapter II).

The justification for the cloze procedure can be explained by observing that language comprehension depends on total context. It depends on knowledge and control of grammatical structure and verbal symbols as well as non-verbal factors such as past experiences.

Charles Osgood's theories of communication based on redundancies and transitional probabilities in language inspired the development of the cloze procedure. For instance, the phrase "man coming" has the same meaning as "a man is coming this way now." The singular subject is cued by "a," "man," and "is." The present tense is cued by "is coming" and "now." These redundancies make it possible to logically replace any of the aforementioned words that might be omitted in a cloze passage (Osgood, 1952, p. 201).

A person's knowledge of transitional probabilities can also be tested in a cloze passage. Some words are more likely than others to appear in certain patterns. For instance, the phrase "as _____ as" requires an adjective or adverb in the blank space. Habits of expression transfer to reading strategies so that one anticipates words in a familiar structure.

Taylor argues that a random deletion method (or every nth equivalent in a standard cloze) is defensible. In answer to the objection that the random system is unfair because some words are more easily replaced than others, Taylor contends that if a sufficient number of words are deleted, all types will be represented. Through experiments, it has been determined that a representative cross-section of word forms will be deleted in a passage of 175 words minimum with a deletion rate of one in five with a total of thirty-five blanks (Taylor, 1953, p. 424).

In responding to these who would delete only words according to their so-called importance to meaning, Taylor states that cloze tests use words as they occur in larger patterns representing special meaning in a certain context. The result, he says, is that "infrequently used words may not be hard to replace, and supposedly unimportant words may become extremely so" (1953, p. 420).

Correlated data in Taylor's studies suggest that the cloze procedure is effective not only in determining readability of material but also reading abilities of individuals. Even as early as 1953, cloze test results indicated that cloze scores of passage readability correlated highly with tests intended to measure comprehension (1953, p. 432).

Within three years of the first experiments with the cloze procedure used to determine readability of prose, evidence showed that the method could be used effectively

for many other purposes, such as determining listening as well as reading comprehension. By 1956, the procedure had been used at the Universities of Minnesota, Wisconsin, and California, Michigan State University, the American University of Beirut, Oklahoma A&M College (Oklahoma State University) and the Army Language School of Monterey, California.

One of the first uses of the cloze to measure comprehension was conducted at Sampson Air Force Base, New York, with trainees as subjects. Two standardized comprehension test scores were compared with two cloze scores. Both sets of scores were correlated with the general intelligence scores on the Armed Forces Qualification Test. The two comprehension test scores correlated .65 and .70 with the AFQT scores while the cloze scores correlated even better with .73 and .74.

Experiments were conducted using the cloze in a foreign language for the first time in 1954. The Korean language, a mixture of phonetic symbols and Chinese characters, was used to devise a cloze test. The major problem was that a character in Korean is roughly comparable to a syllable in English. A cloze with the deletion of a single syllable does not always serve the same purpose as a whole word deletion.

In conducting the research on the use of syntactic and semantic clues by subjects learning English as a Second Language, I was especially interested in a 1957 study done

by Marion Jenkinson with native speakers. Her research indicated that the subjects used structure clues, semantic clues, and approach clues. Of particular interest was that the native speakers who scored high on the cloze test recognized syntactic clues more frequently than the low-scoring group and also revealed better general comprehension of the material. Jenkinson found a correlation coefficient of .73 between the Level of Comprehension scores on the Cooperative Reading Test and the cloze test scores.

R. H. Bloomer (1962) experimented with the cloze procedure as a remedial reading technique at the college level. As a result of the study, Bloomer noted that the cloze procedure could be used effectively as a teaching as well as testing device. It offers the student practice in making inferences from the reading passage, as well as promoting awareness of the main idea and attention to details.

R. B. Ruddell (1964) used the cloze procedure with elementary level students. He administered a series of six cloze tests to fourth-grade students and correlated scores on these with scores on the paragraph comprehension subtest of the Stanford Achievement Test. In using the exact word deletion method, Ruddell found correlation coefficients ranging from .609 to .722. When synonyms were scored as correct, the responses were not significantly higher.

Ruth Gallant (1965), using scores on a paragraph

reading section of the Stanford test and scores obtained on the same test rewritten as a cloze passage, obtained a correlation coefficient ranging from .65 to .81.

E. B. Coleman (1965) tested subjects for comprehension and retention of reading material based on the length and structure of sentences. His findings were especially significant for the present study because he discovered that retention was greater with short clauses than with long ones. He found that subjects can learn a set of content morphemes put into two clauses better and easier than they can learn the same set of morphemes packed into a single clause. He discovered that active verb transformations are easier to learn than passive ones, and active voice sentences are retained better than passive ones. Coleman tested sentences of various lengths for comprehension by use of the cloze with every fifth word deleted. Although retention was greater with short clauses, actual comprehension was shown to be about the same regardless of sentence length.

John Bormuth (1968) has conducted more experiments with the cloze passage than perhaps any other researcher. He has also given very explicit instructions to other scholars for achieving the most objective results. Most of Bormuth's studies have concentrated on testing the readability of material: "If teachers want their test results to mean anything, they must adhere exactly to the cloze readability test rules which distinguish them from

cloze tests in general" (1965, p. 113). Bormuth used both oral reading and the cloze procedure to measure the readability of prescribed passages. In order to establish criterion reference scores, he used the Gray Oral Reading Tests of 1963. His subjects were 120 students, grades 4, 5, and 6. The cloze tests contained one-inch deletions of every fifth word. Punctuation remained in the test.

Based on the oral reading and the cloze tests, each subject had three scores in the Bormuth study: a set of cloze test scores, a set of comprehension test scores and a set of word recognition test scores. The results showed that cloze scores of 44 and 57 percent correct were comparable to comprehension criterion scores of 75 and 90 percent. Cloze tests also proved to be a valid measure of passage difficulty with correlations of .90 to .96 (Bormuth, 1968, p. 218).

R. D. Robinson (1973) used the cloze procedure to measure reading comprehension of adults. He found a positive and significant correlation between cloze tests and paragraph comprehension.

W. H. Rupley (1973) found cloze tests to be a valid reliable measure of reading comprehension. Rankin (1965) as well as Ellington and Bickley (1970) analyzed cloze procedure which supported it as a measure of comprehension.

R. P. Carver (1973), however, disagreed with those who favored the cloze procedure. He claims that the cloze is invalid in measuring comprehension. He tested 108 college

students, all native speakers. Two tests were used. One was a cloze test with twenty deletions. The second was also a twenty-deletion cloze with the word following the deleted word also removed. Carver insisted the cloze tests do not measure true comprehension. However, he admitted that the cloze tests were effective for recalling and memorizing prose.

Not only can the cloze be used to measure recall but it can also be used to determine listening comprehension. In the oral cloze, silence indicates the missing word. The subject then fills in the blank with the exact word that was removed from the original passage.

The decoding of written language is different from decoding oral languuage (Weaver, 1961). Listening and silent reading behavior with use of the cloze was analyzed by Weaver. He attempted to "determine to what extent certain operational constructs defined by the cloze procedure allow interpretation of aural and written characteristics of style, meaning, and redundancy" (Weaver, 1961, p. 1Ø).

Weaver's study examined types of deletions (lexical and structural) and redundancy. His conclusion was that redundancy is greater in silent reading than in listening and, hence, is also more organized.

Silent reading unlike listening allows unlimited review of the material (provided no time limit is imposed). It allows the reader to guess at the unfamiliar word based

on its use in the sentence.

Weaver (1962) pointed out that more bits of information are available to us in language than we actually need for comprehension. Lexical and structured deletions were compared by Weaver (1961) who concluded that redundancy in structural deletions allows greater predictability than in lexical deletions. Noun verb deletions were the most difficult type. However, in the listening cloze tests, no difference was noted in structural and lexical meaning.

Weaver used the cloze to show that the redundancy pattern is established early in life (by the fifth grade). However, lexical items require more time.

A number of studies have been conducted which show the effects of nonstandard deletions and passage length of the cloze procedure:

Sukeyori (1962) experimented with the cloze using every sixth, seventh, and eighth word deletion instead of the standard fifth word deletion. He thought the subjects might have better scores with deletions spaced farther apart, but actually, the scores were nearly equal.

Bormuth (1965) showed that as long as four or more words of continuous text appeared on either side of the item, the difficulty was unaffected.

Green (1965) experimented with two kinds of cloze tests. In the first, he made no word class restrictions but in the second, he deleted only lexical words (nouns,

verbs, adjectives, adverbs). Both passages had the same number of words and the same number of total deletions. The mean scores from the two tests were not significantly different. In the first it was 54.7 and in the second, 58.0.

Rankin (1957) discovered that lexical (noun-verb) deletions measure factual comprehension, but deleting any word resulted in a better measure of general comprehension and readability. However, the lexical deletions correllated better with pre-reading knowledge.

The use of the cloze procedure with non-native speakers is a fairly recent practice. Klare, Sinaiko, and Stolurow (1971) used the cloze to evaluate translations of military training material from English to Vietnamese.

At about that same time, Donald Darnell (1970) developed a procedure for testing English language proficiency of foreign students which he called clozentropy: a combination of cloze procedure and an entropy measure which assesses compatibility of individual responses with those of a selected criterion group, usually native. The study is based on the assumption that a "measure of proficiency in language should index one's ability to conform to existing group norms rather than to some prescriptive model or idealized language pattern" (p. 36). Darnell maintained that the best measure of proficiency for an individual is in terms of the group with whom he must communicate.

In Darnell's study, the TOEFL and the Clozentropy tests were administered to forty-eight foreign students, graduate and undergraduate, from the University of Colorado. To determine the reliability of the clozentropy, a Hoyt reliability coefficient was computed. The coefficient for the clozentropy test was .859. The total TOEFL reliability coefficient was .864. The correlation between the total clozentropy scores and the total TOEFL scores was .838 for the total group, a very high correlation considering the great difference in the construction of the two tests.

The most significant result of the study showed that no difference exists in English language proficiency between graduate and undergraduate foreign students. This finding suggests that graduate foreign students are probably operating at a greater disadvantage than undergraduates in English-speaking universities. On the other hand, the small number used in the experiment might cause one to question the validity of that conclusion.

Clozentropy, as a measurement of listening skill, has certain advantages. It is based on a functional rather than a formal definition of proficiency: to put it another way, "a speaker's best choice is the one his listener would make if they were to change roles. . . . Clozentropy seems to measure this 'decision compatibility' rather directly" (p. 44). Another advantage of clozentropy is that it is an objective procedure which may be scored by computer.

Finally, clozentropy can be adapted to specialized uses of language -- jargon or local dialects.

In 1972, Jonathan Anderson conducted a cloze experiment with a dual purpose -- to measure both readability and reading comprehension. He used elementary school age subjects from Papua and New Guinea learning English as a second language. Anderson dealt with the question of whether to give credit for synonym as well as exact word replacement by allowing half credit for each synonym provided it was listed as an appropriate replacement in Collins' Gem Dictionary of Synonyms and Antonyms (1964).

In order to establish realiability of the test, Anderson used three ESL teachers' ratings as the criterion. Those judges' rankings were correlated with the results of the cloze rankings of reading difficulty. The results showed that the cloze technique ranked three passages of English prose in the same order of difficulty as the ESL teachers did. The experiment also showed that very little difference occurred in the synonym and exact word replacement.

J. Donald Bowen (1969) used a system of testing which gave credit for all contextually acceptable responses with non-native speakers. I tend to agree with Gallant (1965) who suggested that when dealing with non-native speakers there is something counter-intuitive about requiring the exact word.

John Oller conducted a study in 1973 to determine the advisability of allowing synonyms or contextually acceptable responses. He administered three cloze tests of varying levels of difficulty to 398 foreign students. All three tests were scored by the exact word methods and also by four other systems allowing partial credit for various responses. The differences were then examined. "The data supported the conclusion that with non-native speakers, the method of allowing any contextually acceptable response is significantly superior to the exact word scoring technique" (p. 109). The three tests ranged in difficulty from fourth grade to seventh grade level according to the Dale and Chall (1948) system. The two more difficult tests yielded results as meaningful as the "easy" test. Oller points out that the results would "seem to indicate a rather high tolerance of the cloze procedure to changes in difficulty. In other words, we might expect to get much the same information out of cloze tests of quite different difficulty levels" (p. 110).

The various tests conducted by Oller revealed some general characteristics of cloze tests used to measure second-language reading skill: (1) Internal consistency--From 150 items only seven failed to discriminate significantly ($p < .05$) by a *t*-test between the top 50% and the lower 50% of students. (2) Reliability--Reliabilities between .80 and .98 were achieved by the Kuder-Richardson formula. (3) Validity--Cloze tests scored by a

semantically acceptable word method have yielded correlations with the total score on the TOEFL ranging between .83 and .89.

Oller makes a valid point by saying that if the test allows synonyms, the scoring should be done by native speakers or by highly proficient non-natives. The fact that cloze tests consistently yielded high item reliability even when scored by several native speakers shows that inter-rater reliability is quite high. Oller's point was certainly validated in my particular study.

Oller (1973) indicates that the major reading strategy measured by the cloze is what he calls the "grammar of expectancy." Kenneth Goodman (1969) points out that the "reader does not process print sequentially. . . . Expectancies about syntax and semantics within context lead to hypotheses which can be confirmed with only a small portion of cues from the text" (p. 82). In a cloze passage, this strategy works because the subject samples the information that is given and forms expectations about the information that is to follow.

An interesting variation of the cloze procedure is called the matching cloze used by Baldauf and Propst (1979) to test reading achievement among Micronesian children in the primary grades. The matching cloze is designed for those who have not developed enough English language proficiency to comprehend typical standardized reading tests nor enough language skill to complete the standard

cloze. Baldauf and Propst point out that "the matching cloze format used for most of the reading comprehension sections of the Micronesian Achievement Test Series is an attempt to devise a wholistic reading measure which requires skills comparable to those needed in actual reading situations" (p. 12). Matching cloze tests are constructed from reading passages by blocking off sets of sentences in which five mutually exclusive words from each blocked off section are deleted and the deleted words are presented in random order in the right margin.

The researchers point out that beginning ESL students need more textual information on which to base their predictions than do more proficient readers. Thus, the matching cloze provides the additional information.

Neville and Pugh (1976) conducted experiments which support Goodman's theory of text sampling to show that cloze test performance is specifically related to the reading process. Their research indicates that poor readers use only information in front of a blank in determining what word replacement to make. However, more skilled readers use information perhaps many words before and after the blank. For beginning level ESL students, matching cloze tests promote the regression and revision necessary for good comprehension. In addition to its use as a test, the matching cloze has been shown to be an effective teaching device to help students develop some of the reading strategies set forth by Goodman (1969).

Experiments with matching cloze were first tried in 1975 and nine studies were conducted by 1979. The results show that the matching cloze is a reliable measure of reading ability for ESL students from grades two to eight, for adolescent slow learners and for lower primary native speakers. Matching cloze tests correlated with other reading achievement tests show that the correlations are statistically significant at $p < .05$ (Baldauf and Propst, p. 16).

Fries (1963) and McLeod (1965) indicate that comprehension of a message depends on an understanding of the grammatical structure of English as well as an awareness of lexical meaning. The cloze procedure tests both of these items.

In using the cloze procedure to analyze reading strategies, an error analysis can also be useful. Errors of competence are caused when subjects have not internalized the "rules" of the second language. Native speakers are usually able to correct their reading errors but not always so with students learning a second language. S. Pit Corder (1973) points out that "the study of errors is part of an experiment to confirm or disprove the psycholinguistic theory of transfer. . . . The study of errors is the search for the universal processes of second language learning" (p. 266). Error analysis is a comparative process, with its object to describe the nature of the learner's "interlanguage." Corder describes the

interlanguage as that process of both transfer and interference between the native and target language.

A fourth type of test used in the present study is called Reading Miscue Analysis which uses an individual case study approach aimed at discovering and observing the mental strategies used by the reader in seeking the meaning of the printed page. The Reading Miscue Inventory, devised by Yetta Goodman and Carolyn Burke, is a derivation of Kenneth Goodman's miscue analysis. Nicholas Anastasiow (1978) explains that the R.M.I. is a means of diagnosing and evaluating a child's oral reading, "derived directly from the psycholinguistic interpretation which perceives the reader as the active interpreter of the written page" (p. 1319). To the creators of reading miscue analysis, not all miscues are of equal importance. The serious ones are those that interfere with the meaning.

The Reading Miscue Inventory Manual offers instruction to the elementary school reading teacher which specifies the exact procedure to be used in evaluating a child's reading ability. The authors, Y. Goodman and C. Burke (1974), instruct the teacher to have the child read a fifteen to twenty minute selection, difficult enough to produce at least twenty-five errors (miscues). Then the child is asked to immediately retell the story--a comprehension loss (none, partial, total) is determined subjectively by the teacher. In addition, a breakdown is made of oral reading errors based on graphophonic,

syntactic, and semantic categories.

However, Anastasiow points out that virtually no reliability or validation data is available for the R.M.I. In addition, he criticizes the time-consuming and complex process involved in administering, scoring, and analyzing the child's oral reading. The manual is very detailed and the administrator of the inventory must fully understand the psycholinguistic approach in order to use the marking schemes. Furthermore, according to Anastasiow, "no data are presented to indicate that remediating a miscue will improve a student's reading ability" (p. 1319). Professor Harry Singer is a bit kinder in evaluating the R.M.I. He says that the evaluation of miscues and reading strategy lessons are consistent with the psycholinguistic reading model theory. "The theory is that orally reconstructed responses to printed material are cued and determined by an interaction among graphophonic, semantic, and syntactic systems" (p. 1320).

However, Singer criticizes the R.M.I. procedure as vague, arbitrary, and subjective. No readability formulas are applied to the reading selections used. Teachers are encouraged to use any material that is approximately one grade level above the child's reading level. Singer points out that such wide variations in the reading selections will adversely affect the validity of the inventory.

Singer points out that one of the most serious problems for test administrators is that miscues do not

always fit the examples given in the manual. Nor does the manual explain why information on grammatical functions is summarized and listed on the reader profile but not interpreted.

Nevertheless, the strength of R.M.I. is in its evaluative procedure for diagnosing miscues and its interpretations of a reader's strategies.

Although the Reading Miscue Inventory is designed for children, two interesting studies have used a type of oral miscue analysis to examine the reading strategies of adults.

Nancy Boraks (1978) examined word recognition strategies of adult beginning readers. Her study revealed few differences between the adult and the child's reading behavior. Although, she indicated, because of their broader experience, adults have much wider semantic variation. In Ms. Boraks' study, adult readers who accurately described their own strategies included lower ability subjects who said they first sound a word, then look at the first letter, think of a word with that initial letter, and see if the other letters fit. The middle-level readers said they first look for a familiar part in the word then spell it out, check to see if the word makes sense, then sound it out if necessary. The upper-level subjects indicated they look ahead and read on to determine if the word fits. Ms. Boraks' study revealed that the adult reader at all levels appears to make a visual scan or

match to find a word with a similar pattern in reading word lists. However, in reading connected discourse, the lower level reader concentrates on words while the intermediate reader uses syntax extensively.

Another study using oral miscue analysis to assess adult reading strategies was conducted by Barbara Raisner (1978). Results of that analysis showed that even remedial adult readers employ all three cueing systems: graphophonic, syntactic, and semantic. The remedial readers that were tested relied heavily on graphophonic information, using word form and sound-letter relationships. But they used syntactic clues less frequently and their substitutions seldom matched grammatical function. However, they demonstrated greater syntactic competence in narrative material than in expository selections. Raisner's study showed that adult readers make more use of graphophonic information when the material is difficult. They make fewer syntactically acceptable responses when the sentence structures are complex. Surprisingly, however, in Raisner's study, more oral miscues were apparent in the passages with the highest comprehension scores and fewer miscues in the difficult passages. Perhaps that observation suggests that adult readers make more effort to pronounce words in difficult passages though they may not comprehend the material.

Raisner's observations of the reading strategies of adult remedial native speakers were similar to discoveries

made in my study of second-language learners. That analysis will be discussed in Chapter IV.

CHAPTER III

DESIGN AND PROCEDURES

The material in this chapter is divided into three sections. The first section describes the pilot study. The second section explains the size and nature of the sample. The third section presents the methodology involved in the collection of the data.

Pilot Study

During the weeks prior to my experiment, I examined a variety of tests that I could use to analyze reading strategies. I discovered that the cloze test has been used for nearly thirty years to evaluate reading comprehension among both native speakers and second-language learners. P. D. Allen (1976) claims that the cloze test and the miscue analysis reveal the thought processes of the reader more clearly than other tests. Both tests reveal the sampling and guessing procedures used by the reader.

Before administering the tests to the students at the English Language Institutes in Oklahoma City and Stillwater, I experimented with a variety of cloze passages, using my own students as participants. On a trial basis, I administered three different cloze passages. One passage was too lengthy to be completed within the allotted time period. Another passage proved to be too culture-bound. The third passage was too difficult for

even the most advanced readers. In one of the passages, I omitted only function words, but I discovered that such a contrived test revealed little meaningful information. I finally decided on two cloze tests, one narrative and one expository, which approximated the reading level of the majority of the subjects.

In the individualized case studies, I attempted to utilize the Reading Miscue Inventory (Goodman and Burke, 1972). However, that test examines only the percentages of graphophonic, grammatical, and semantic errors. It does not offer an analysis of specific errors. Also, in order to arrive at meaningful percentages, I needed to record a minimum of twenty-five miscues for each subject. However, the subjects in my study made too few miscues to make a percentage analysis; therefore, I abandoned the R. M. I. after the pilot study.

For my purposes, I decided to use the miscue analysis in order to examine specific errors. I believe such an individualized study complemented the statistical analysis of the cloze passages.

The Sample

The subjects were composed of seventy-five students from the English Language Institutes in Stillwater, Oklahoma and in Oklahoma City as well as from Southwestern Oklahoma State University in Weatherford. The TOEFL examination was administered within a one-month period between December 15th, 1983, and January 15th, 1984, during

which time no instruction took place which might interfere with test results. In order to show a definite contrast, I compared only the twenty-four subjects scoring highest on the TOEFL and the twenty-four scoring lowest in the study.

Method

Test Administration

An individual meeting was held with the teachers assisting with the study for the purpose of explaining the testing procedures to be used in the collection of the data.

Based on the results of the Woodcock word identification survey, 68% of the subjects placed in the fifth or sixth grade reading level; therefore, Level D of the Gates-MacGinitie Reading Tests was selected. The Gates test was administered the day before the cloze passages were given.

In order to minimize the variables, an effort was made to use cloze passages with vocabulary of the same level. The Buckingham and Dolch Combined Word List was used to show vocabulary equivalency. In Cloze 1, five percent of the words are at grade level 7-9. In Cloze 2, six percent of the words are at that level. All other words in the two passages are below that level.

The Fry Readability Formula, which measures readability levels based on the number of syllables in a sentence, was consulted in selecting the reading passages, but the passages were actually chosen on the basis of the

number of simple sentences in Cloze 1 and the number of complex sentences in Cloze 2 with as much vocabulary equivalency as possible.

In this study, two separate cloze tests were administered during the last week of January, 1984. The first test was a standard cloze in which every fifth word was deleted from a passage composed of simple sentence structures. The second test was also a standard cloze in which every sixth word was deleted from a passage composed of many complex and compound sentences.

The subjects had previously been identified as lower twenty-four and upper twenty-four of the total seventy-five subjects according to their performance on the standardized TOEFL test.

Rating

The two tests were rated by two readers, the researcher and a senior English major at Southwestern Oklahoma State University. It was agreed that not only exact words but also synonyms would be accepted provided the meaning is not altered. J. Charles Alderson (1979) conducted a series of experiments using the cloze procedure to determine how variations in scoring procedure affected the test as a measure of proficiency in English as a Foreign Language. The tests were scored by five separate procedures (1) exact word only, (2) any semantically acceptable word, (3) identical form class, (4) same grammatical function, and (5) any grammatically correct

word, regardless of form class, function, or meaning (p. 221). Alderson concludes that "the best validity correlations are achieved by the semantically acceptable procedure" (p. 225). By permitting synonyms, semantically acceptable substitutions, it is believed that the test is more sensitive to the subject's comprehension of the material.

A statistical error analysis was also made for the two cloze tests. The errors were calculated according to omissions or substitutions of errors classed as either semantic or grammatical (refer to Table 3). An error was classed as semantic if a content word (noun, verb, adjective, adverb) was omitted or was substituted with a word that changed the meaning of the sentence. An error was classed as grammatical when a function word (preposition, conjunction, relative pronoun, or determiner) was omitted or when the wrong form or class of word was substituted, thus altering the structure of the sentence.

Unlike the other instruments used in the study, reading miscue analysis is not a statistical analysis but rather an individual investigation of reading strategies. The Fry readability formula was used in selecting the reading passages for the miscue analysis. In order to elicit sufficient miscues for study, it is recommended by Goodman and Burke (p. 8) that the reading passage should be one level above the subject's proficiency. Of the twenty-one subjects participating in the reading miscue

survey, the levels of proficiency ranged from fifth grade to ninth grade. Consequently, two sixth grade level passages (one fictional narrative and one expository) were chosen for the lower level group and two tenth grade level passages of similar types were selected for the higher group. In order to achieve sufficient contrast in observing reading strategies of two groups, the principle applied in studying the cloze passages was also used in the miscue analysis: The higher and lower thirty percent of the twenty-one subjects, reading from an unfamiliar text, were analyzed for miscues. Deviations were observed between the oral response of the reader (OR) and the expected response of the text (ER). One basic assumption is that the responses will vary qualitatively because some errors do not alter the meaning. Allen and Watson (1976) point out that phonological differences do not seem to affect comprehension (p. 36). Grammatical differences include inflectional endings anad structural changes. Lexical or semantic differences include vocabulary choices.

Chapter IV will offer an analysis of the tests discussed in Chapter III.

CHAPTER IV

Analysis and Interpretation of Data

The purpose of this study was to investigate the reading strategies employed by two groups of readers: A high and a low proficiency group.

Y. Goodman and Burke (1972) point out that reading strategies are concerned with the relationship between and among the three language systems: graphic/sound, grammatical, and semantic (p. 95). An error analysis of the two cloze tests and an individual study of oral miscues focused on the use or misuse of reading strategies.

The subjects were placed into higher or lower groups according to their scores on the TOEFL test. The Gates-MacGinitie reading test, which is designed for native English speakers, was administered for the purpose of showing the relationship between a standardized reading test and the two cloze tests used in this study.

To examine the higher and lower groups with regard to performance on Cloze Test I, the group means were compared employing a between-groups t-test. The analysis yielded $t(47) = 4.6$, $p < .0001$, indicating that subjects in the high group with a mean of 25.96, scored significantly higher than subjects in the low group with a mean of 18.96. The proficiency gap widened considerably between Cloze I and Cloze II. The Cloze II analysis yielded $t(47) = 10.9$,

$p < .0001$, indicating that subjects in the high group with a mean of 50.96 scored significantly higher than subjects in the low group with a mean of 35.32. The analysis of the Gates test yielded $\underline{t}(47) = 6.8$, $p < .0001$ with a mean of 55.50 for the high group and 34.68 for the low group.

Since the TOEFL scores were used to group the subjects, the $\underline{t}$ scores indicate the relationship between the TOEFL and the other tests. The data given in the previous paragraph indicate that a difference in proficiency levels does exist between the two groups of subjects.

The results of the error analysis and the reading miscue analysis indicate weaknesses and strengths in reading strategies used by the higher and lower groups of subjects.

Error Analysis of Cloze I and II

Because of the large number of statistical analyses performed, only differences which reach the .05 level of significance will be reported.

The statistical data is calculated based on the multiple contingency analysis (Satcliffe, 1959). An adjusted error rate is used because a different chance of error is possible in the two cloze tests as well as among the types of error.

Before considering the significant interactions in the analysis, one should look at the breakdown of the percentage of substitutions and omissions in comparing the higher level and lower level subjects:

TABLE 1

PERCENTAGE OF ERRORS

Subjects	Cloze I				Cloze II			
	Higher		Lower		Higher		Lower	
	Gram	Sem	Gram	Sem	Gram	Sem	Gram	Sem
Substitution	32	26	26	17	30	12	25	13
Omission	4	6	36	24	5	4	50	18

A glance at Table 1 appears, on the surface, to reveal some surprising information because it shows that the higher-level subjects made more substitution errors than the lower group in both cloze tests. However, a closer look shows that the lower group made fewer substitutions because they made fewer attempts. Table 1 shows the rate of omissions to be much greater among lower-level subjects. When the total substitution and omission errors are combined, the lower group, not surprisingly, has significantly more errors.

The four-way multiple contingency analysis considered types of error I (substitution vs. omission), type of test (Cloze I vs. Cloze II), type of subject (higher vs. lower), and types of error II (grammatical vs. semantic). The analysis yielded significant main effects for higher vs.

lower subjects ($X^2(1) = 24.69$, $p < .0001$), and grammatical vs. semantic error ($X^2(1) = 23.61$, $p < .0001$). As can be seen in Table 2, the adjusted error rate was bigger for lower-level subjects (N = 209) than for higher-level subjects (N = 119), and subjects, in general, made more grammatical errors (N = 208) than semantic errors (N = 120).

TABLE 2

MULTIPLE CONTINGENCY ANALYSIS (Percentage Data)

	1	2	
Type of Error I	181	147	
Substitution vs. Omission	$X^2 = 1.76 +$	$1.76 =$	$3.52, p < .10$
Type of Test	171	157	
Cloze I vs. Cloze II	$X^2 = .30 +$	$.30 =$	$.60,$ n.s.
Type of Subject	119	209	
Higher vs. Lower	$X^2 = 12.35 +$	$12.35 =$	$24.69, p < .0001$
Type of Error II	208	120	
Grammatical vs. Semantic	$X^2 = 11.80 +$	$11.80 =$	$23.61, p < .0001$

However, these significant main effects must be interpreted in view of three significant two-way interactions: type of error I x type of test ($X^2(1) = 4.33$, $p < .05$); type of error II x type of subject ($X^2(1) = 120.31$, $p < .00001$); and type of test x type of error II ($X^2(1) = 11.04$, $p < .001$).

In comparing the type of error I with the type of test, Figure 1 illustrates an interesting result: more substitution errors were made in Cloze I than in Cloze II ($X^2(1) = 5.62$, $p < .02$), although Cloze I, averaging seven sentences per 100 words, is at a less advanced reading level than Cloze II (four sentences per 100 words). A partial explanation is that somewhat fewer attempts were made in Cloze II, illustrated by the greater number of omissions. This result suggests that subjects are more willing to make guesses with simpler reading material. Another possible explanation may be found in the nature of the material. Cloze I is an excerpt from an expository essay while Cloze II is a complete narrative. With more vocabulary repetition in the story than in the essay, subjects were able to make more accurate guesses using the strategies of expectancy and redundancy. This observation is consistent with the psycholinguistic theory of reading.

The adjusted error rate used in each figure is the sum of percentages shown in Table 1. The raw number was adjusted to account for the difference in the possible number of errors in the two tests.

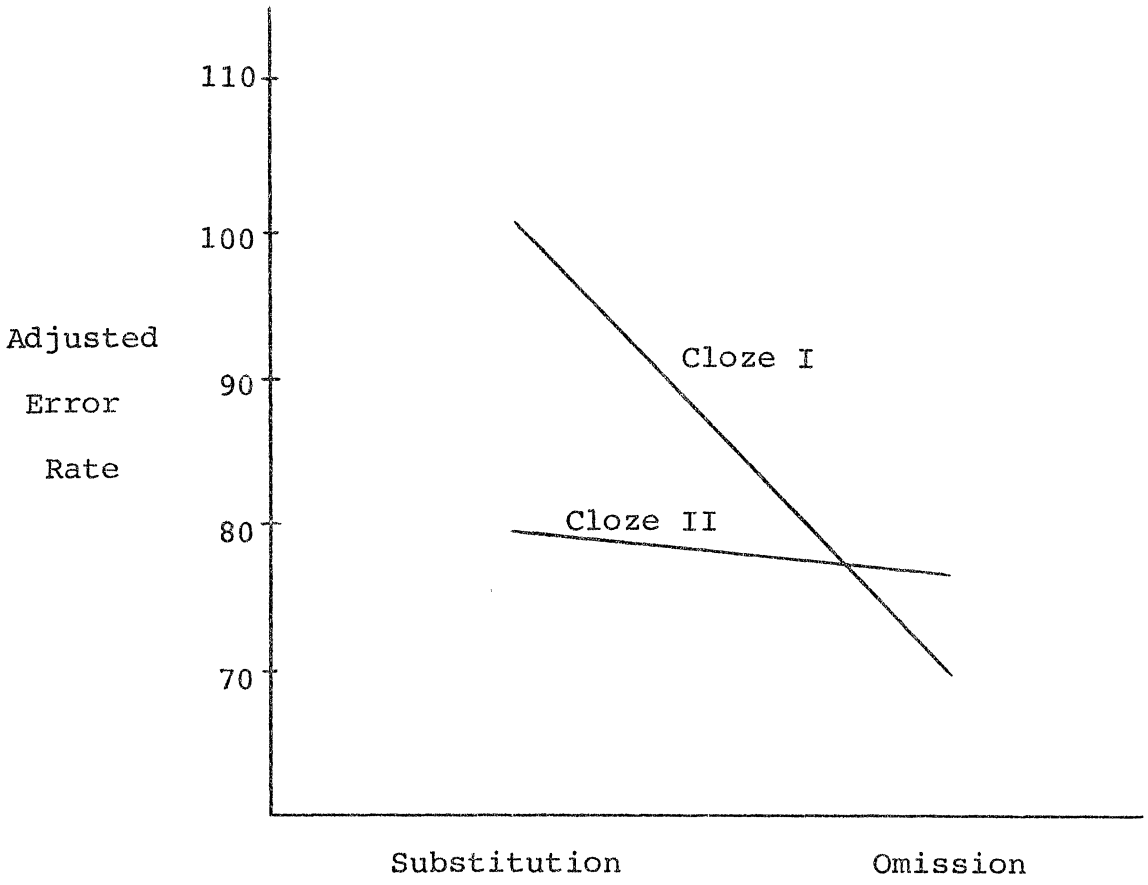

Figure 1.

Another significant effect occurred in examining the interaction between type of test and type of error II. Subjects, both higher anad lower, made more grammatical than semantic errors on both tests; however, the difference is especially pronounced in Cloze II (on Cloze I, $X^2(1) = 3.65$, $p < .05$; on Cloze II, $X^2(1) = 25.28$, $p < .0001$; see Figure 2).

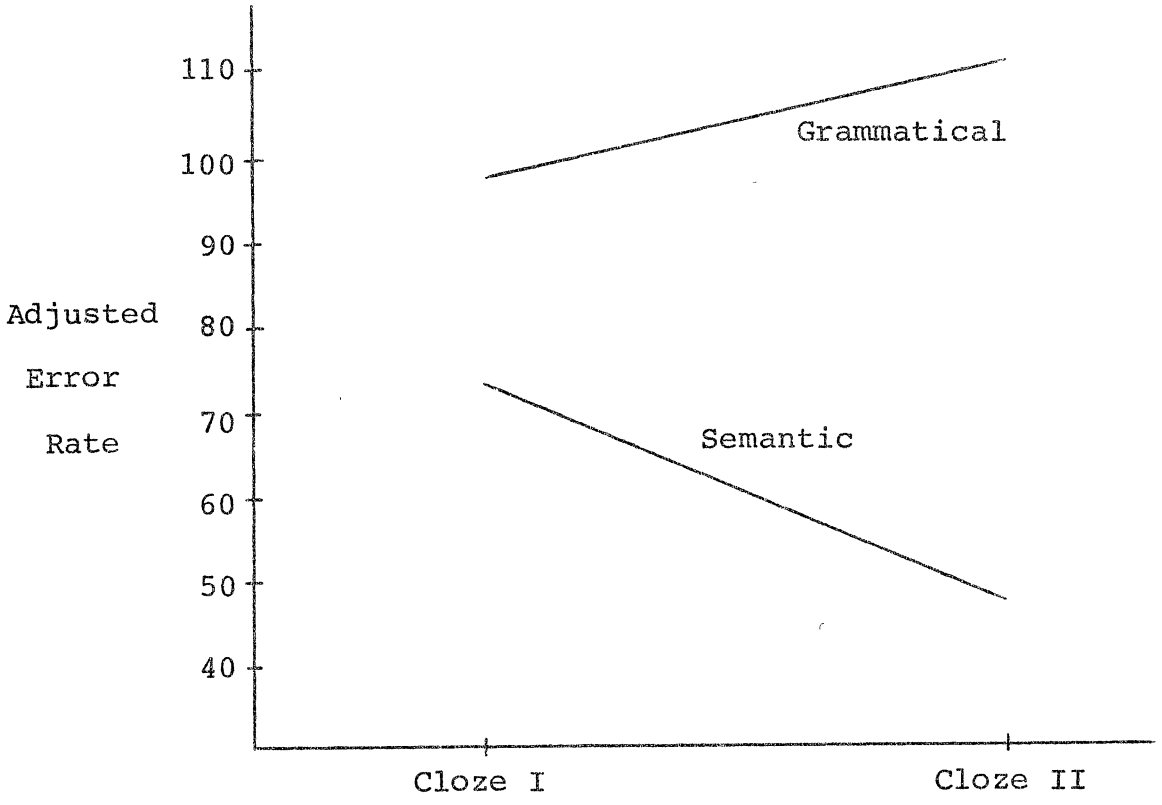

Figure 2.

In considering only the items attempted, excluding all omission errors, the comparison is strikingly similar to the above interaction. Subjects made more grammatical than semantic errors on items attempted in both tests, but especially in Cloze II (on Cloze I, $X^2(1) = 5.00$, $p < .05$; on Cloze II, $X^2(1) = 26.51$, $p < .0001$; see Figure 3). Both analyses indicate general difficulty among ESL students in comprehending functional relationships in reading material, particularly in material that has lengthy, complex sentences (Cloze II).

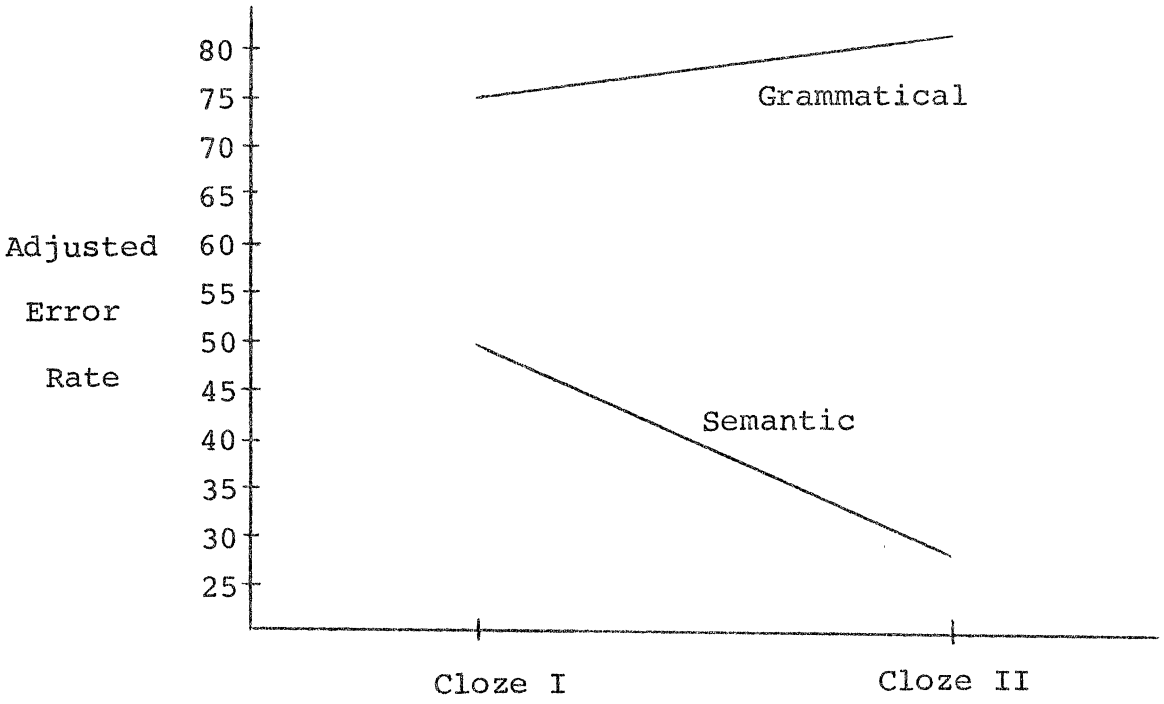

Figure 3.

Finally, the most significant result is shown in comparing the number of substitution and omission errors among the higher and lower subjects. In both cloze tests, the lower level readers made an overwhelming number of omission errors as compared with the higher level group (lower group, $X^2(1) = 80.82$, $p < .0001$; higher group, $X^2(1) = 2.0$, n.s.; see Figure 4). The result obviously indicates that the lower group of readers is less willing to risk error than the higher group. Perhaps it also indicates a greater difficulty among less proficient readers to make contextual connections between ideas. In order to make accurate or even acceptable "guesses" the reader must be able to utilize strategies relating information in both preceding and succeeding clauses.

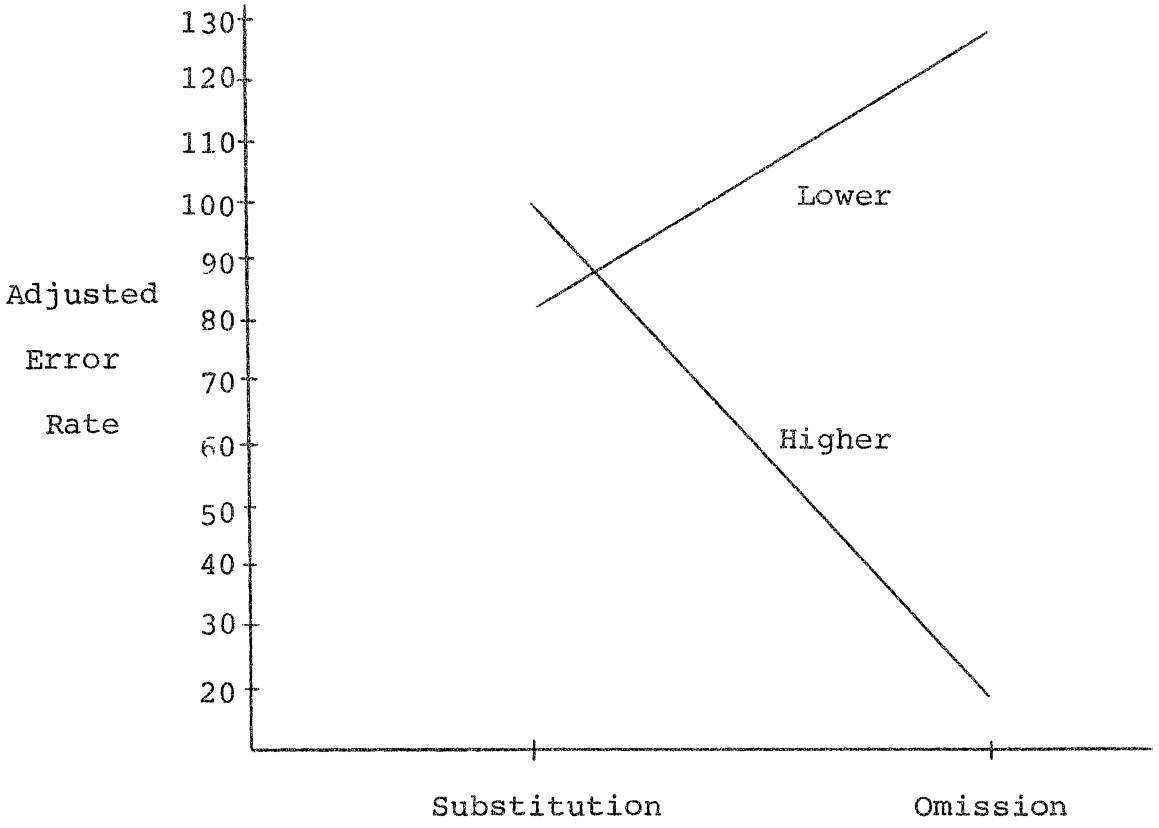

Figure 4.

The statistical analysis can perhaps be made more meaningful by a discussion of specific errors made in the oral miscue analysis.

Reading Miscue Analysis

Miscue research has as its goal to "seek out the unity in reading, to infer from observation of reading behavior the process that underlies the behavior" (P. D. Allen, 1976, p. 63).

Miscue analysis assesses the graphophonic, syntactic, and semantic cues used by the reader to verify his "guesses." Particularly, the types of corrected miscues reveal the strategies used by the reader to verify guesses,

whereas uncorrected miscues that result in meaning loss indicate a failure to use one or more strategies. Finally, uncorrected miscues which result in no meaning loss may be the best indication of a reader's competence in manipulating language by using different surface structures while preserving the deep structure.

In the following analysis, the miscues of seven proficient readers and six unskilled readers were recorded.

The high level group of subjects read orally from a narrative, "Christmases with My Father" by Moss Hart and an expository essay, "The War on the American Family" by Lester Velie. Only the first name of each subject is given:

Kelon (TOEFL score--620) Ten years of English study--Native language (Dutch).

1. The miscue results in a structure which is both semantically and syntactically acceptable with no meaning loss:

ER--theatrical productions

OR--theater productions (The word "theater" can function as either a noun or adjective).

ER--Each time I lied I blamed by father anew.

OR--Each time I lied I blamed by father again.

2. The miscue results in a structure which is syntactically acceptable only with the prior portion of the sentence. It would be possible to complete this segment

and produce an acceptable grammatical structure:

ER--We had long been taking in boarders.

OR--We had long been talking in boarders. (At the end of the sentence, the subject reread the sentence, correcting the miscue.)

In the retelling, Kelon exhibited excellent retention of details as well as comprehension of the main idea. Kelon also indicated an ability to make inferences from the subtle implications of the strained father-son relationship. Likewise, he demonstrated an understanding of the time-shift.

In the second reading, Kelon made the following miscues:

1. The miscue results in a structure which is syntactically acceptable within the total passage-no meaning loss:

ER--She took her young man home to meet the family.

OR--She took her young man home to meet her family.

2. The omission results in a surface structure change but with no change in meaning:

ER--This reduces the income available.

OR--This reduces ____ income available.

Kelon demonstrated excellent understanding of the author's thesis in relation to the opposing opinions stated in the essay. In addition, the student was able to express the meaning of the sentence that was written in metaphorical language.

Nathaniel (TOEFL score--580) Eight years of English--Native language (Spanish).

1. The miscue results in a structure which is syntactically unacceptable:

ER--to live /lɪv/

OR--to live /laɪv/ (Subject corrected miscue at the end of the sentence but missed the infinitive cue prior to miscue.)

2. The miscue results in a structure which is acceptable both semantically and syntactically:

ER--Each time I lied I blamed my father anew.

OR--Each time I lied I blamed by father _____. (The word "anew" is used as an intensifier in the context of the sentence and its omission does not affect the meaning.)

In the retelling, Nathaniel demonstrated excellent comprehension of both the father-son relationship as well as the time change from child to adult.

In the second reading, Nathaniel made the following miscues:

1. The miscue results in a structure which is acceptable syntactically but not semantically:

ER--The carefree life soon became careless love.

OR--The carefree life soon became carefree love.

ER--A colleague of mine

OR--A college of mine

In the retelling, Nathaniel seemed to have some difficulty in distinguishing the author's thesis from the opposing opinions quoted throughout the essay; however, he did demonstrate comprehension of the metaphorical language used.

Tefe (TOEFL score--553) Ten years of English--Native tribal language (Luo).

1. The miscue results in a semantic substitution with no change in grammatical function:

ER--Christmas without her was a bleak and empty one.

OR--Christmas without her was a blank and empty one.

In the context of the sentence above, the substitution of "blank" for "bleak" makes no significant difference in meaning.

2. Miscue results in a structure which is both syntactically and semantically acceptable:

ER--On Christmas Eve my father was very silent.

OR--One Christmas Eve my father was very silent.

In the above miscue, a slight variation in meaning occurs when the demonstrative adjective replaces the preposition. The OR suggests an unspecified Christmas Eve of the past while the ER refers to the particular year mentioned in the narrative.

In the retelling, Tefe had some difficulty grasping the time shift of about forty years; however, he seemed to comprehend the strained relationship between father and son.

In the second reading selection, the following miscues were observed:

1. The miscue results in a structure which is syntactically acceptable within the total passage with no meaning loss:

ER--She took her young man home to meet the family.

OR--She took her young man home to meet her family.

(The reader apparently responded to the redundancy clue, repeating the possessive pronoun "her.")

2. Omission results in surface structure change but with no change in meaning:

ER--alternatives to marriage and the family

OR--alternatives to marriage and ___ family

ER--by the one-time student rebel leaders

OR--by ___ one-time student rebel leaders

ER--She was looking forward to marriage and a family.

OR--She was looking forward to marriage and ___ family.

In the retelling, Tefe demonstrated a good understanding of the author's thesis and was able to distinguish the author's opinions from those expressed by various "authorities" throughout the essay. Tefe was also able to explain the significance of the metaphorical language, "numbers jungle in which the explorer must pick his way with care."

Ezat (TOEFL score--533) Nine years of English--Native language (Persian)

1. Intonation shift causes changes which cross phrase/clause boundaries resulting in meaning loss:

ER--I blamed my father then for the exile of my aunt as well as for the poverty in which we lived.

OR--I blamed my father then for the exile of my aunt as well/as for the poverty in which we lived. (Intonation shift changes the reference of "as well as" from the poverty mentioned in the last part of the sentence to something unmentioned in the previous sentence.)

2. The omission results in a surface structure change but with no change in meaning:

ER--We had long been taking in boarders.

OR--We had long been taking ___ boarders.

ER--I concluded that this walk could mean only one thing.

OR--I concluded _____ this walk could mean only one thing.

ER--He startled me by turning to me and saying . . .

OR--He startled me by turning to me ____ saying . . .

ER--I think I knew that he was a good man.

OR--I think I knew _____ he was a good man.

In the retelling, Ezat demonstrated a good understanding of the reconciliation which took place at the end of the narrative between father and son. Ezat commented on

the significance of the old man touching his son's hand.

In the second reading, the following miscues were observed:

1. The omission results in a surface structure change but with no meaning change:

ER--Nothing assures marriage longevity more than the education that permits the breadwinner to compete.

OR--Nothing assures marriage longevity more than ___ education . . .

ER--It's the poor and not the rich who divorce most often

OR--It's the poor and not ___ rich who divorce most often

ER--The press gives the impression that the country is...

OR--The press gives the impression ____ the country is...

2. The omission results in a deep structure change. The verb is omitted and the participle "finished" becomes the past tense verb. Also, the interrogative intonation is transformed into that of a statement:

ER--But is the family really finished?

OR--But __ the family really finished. (Student corrected the omission and intonation after reading the sentence which followed it.)

In the retelling, Ezat indicated an understanding of the thesis, but he was confused by the significance of the author's reference to opposing opinions. However, the student explained the meaning of the metaphorical language

in some detail.

Marie (TOEFL score--507) Eight years of English--Native language (Spanish)

1. Miscue results in a structure which is both syntactically and semantically acceptable with no loss in meaning:

ER--My father was a bright and blooming ninety years of age.

OR--My father was a bright and blooming ninety years old.

2. Miscue results in an adverb transformation that does not affect sentence meaning:

ER--We started silently back home.

OR--We silently started back home.

ER--My father had worked only spasmodically.

OR--My father had only worked spasmodically.

In the retelling, Marie exhibited an understanding of the narrative and accurately labeled one of the problems between father and son as a lack of communication. She also grasped the two past time references.

In the second reading, the following miscues were made:

1. Miscue is semantically and syntactically unacceptable. Subject substituted a noun for an adjective, resulting in meaning loss:

ER--The ideal way to get at a divorce rate--

OR--The idea way to get at a divorce rate--

2. Miscue is syntactically acceptable within the sentence but not in the total context of the essay:

ER--You are likely to repent later in a divorce court.

OR--You are likely to repeat later in a divorce court.

In the retelling, Marie demonstrated uncertainty about the author's main point. In addition, she failed to comprehend the metaphorical language like "numbers jungle in which the explorer must pick his way with care." Only with considerable explanation did Marie understand that the above clause referred to confusing statistics.

Vartgas (TOEFL score--503) Eight years of English--Native language (Persian)

1. Intonation shift causes changes which cross phrase/clause boundaries:

ER--It was one of the landmarks of poverty that I had come to know well and the one I hated the most.

OR--It was one of the landmarks of poverty that I had come to know/well and the one I hated the most.

The above miscue results in a structure that is syntactically acceptable in the prior part of the sentence but not in the latter part.

2. The omission results in a surface structure change but no change in meaning:

ER--I blamed him for the fact that I was unable to graduate.

OR--I blamed him for the fact ____ I was unable to graduate.

ER--I was beside myself with delight and an inner relief.

OR--I was beside myself with delight and ___ inner relief.

ER--We hurried on, our heads bent against the wind.

OR--We hurried on, ___ heads bent against the wind.

ER--My heart leapt within me.

OR--My heart leapt _____in me.

In the retelling, Vartgas indicated some confusion of the time element, but seemed to understand the significance of the father-son relationship.

In the second reading, the following miscues were observed:

1. Intonation shift causes changes which cross sentence boundaries:

ER--The nuclear family was washed up, finished. The future belongs to group marriage.

OR--The nuclear family was washed up, finished the future belongs to group marriage.

2. Semantic miscue results in a syntactically acceptable structure--No real meaning loss.

ER--It's a circular situation.

OR--It's a cyclar situation.

ER--All they're really seeing are transient arrangements.

OR--All they're really seeing are transit arrangements.

In the retelling, Vartgas demonstrated an amazing recall of factual details, but he seemed to miss the thesis of the essay. He also failed to comprehend the metaphorical language. He interpreted the word "jungle" literally--in "numbers jungle."

Winnie (TOEFL score--480) Six years of English--Native language (Chinese)

1. The miscue results in a structure which is syntactically acceptable only within the sentence, but it does not fit in the time frame of the narrative.

ER--I grew up in an atmosphere of poverty.

OR--I grow up in an atmosphere of poverty.

ER--I think I knew that he was a good man.

OR--I think I know that he was a good man.

2. The miscue results in a structure which is syntactically unacceptable:

ER--to live /lɪv/

OR--to live /laɪv/ (Subject failed to correct miscue which resulted in meaning loss.)

ER--I was unable to graduate

OR--I was unable to graduation

In the retelling, Winnie failed to comprehend the time element. The narrative refers to two major incidents, one that took place during the author's childhood and another that occurred about forty years later but still in the past. Winnie used the present tense verb form throughout the narrative.

In the second reading, the following miscues were observed:

1. The miscue results in a structure which is semantically acceptable only within the clause. The OR is semantically acceptable; however, it does not fit within the semantic constraints that are operating within the larger context of the material:

ER--It is a shouting war, waged in the press and on TV.

OR--It is a shooting war, waged in the press and on TV.

2. The miscue results in a structure which is semantically and syntactically acceptable only with the prior portion of the sentence:

ER--I asked Professor Broderick why many professors seem to be so eager to tout far-out experiments.

OR--I asked Professor Broderick who many professors seem to be so eager to tout far-out experiments.

ER--I studied the faces of the listening professors as the invited gravediggers buried the family.

OR--I studied the faces of the listening professors as

they invited gravediggers buried the family.

In the retelling, Winnie confused the author's thesis with the opposing opinions of others who were quoted in the essay. She also failed to understand the metaphorical language used in the "numbers jungle" clause.

All seven of the subjects who read the Moss Hart selection had difficulty with the following passage:

ER--I was ten years old and a good deal beyond just a toy.

Every reader paused after the word "beyond" and seemed unsure how the last three words fit into the meaning. Upon questioning, every subject but one indicated that the word "beyond" referred to the age of the narrator--"ten years old and a good deal beyond"--Only one subject reread the sentence with correct intonation linking the words "beyond just a toy."

The lower 30% of the subjects read orally from a fictonal narrative, "The Wise Old Woman" and a non-fiction expository essay, "Early Humans." Both of these selections are sixth-grade reading level, one level above the reading ability of the lower group.

Mai (TOEFL score--390) Two years of English--Native lanaguage (Vietnamese)

1. The miscue results in a structure which is syntactically unacceptable:

ER--Those who turned seventy-one were carried into the

mountains, never to return.

OR--Those who turned seventy-one were carried into the mountains, never ___ returned.

ER--There lived in this village a kind young farmer.

OR--There lived in this village a kind of young farmer.

2. Omission disrupts the structure, changes the meaning, and creates a sentence fragment:

ER--Before long, she reached the terrible age of seventy-one.

OR--Before _____ she reached the terrible age of seventy-one.

3. Omission of adverb suffix results in no meaning change:

ER--The two of them lived happily together.

OR--The two of them lived happy__ together.

In the retelling, Mai demonstrated a good grasp of the narrative form and was able to recall the sequence of events as well as the theme of the story.

In the second reading, the following miscues were observed:

1. Miscue results in a sentence which is syntactically and semantically unacceptable:

ER--Why did humans survive when huge animals all died?

OR--Why did humans survive when hug animals all died?

ER--They found a skull in East Africa that was two million years old.

OR--They found a skull in East Africa that was two million years ago. (Three other subjects in this group made the same miscue.)

2. Miscue results in a word substitution which does not disrupt the structure or the meaning:

ER--They learned to make a fire for heat and to cook their food.

OR--They learned to make a fire for heat and to cook the food.

ER--They were able to raise animals.

OR--They was able to raise animals.

In the retelling, Mai indicated a basic understanding of the essay's purpose although she was unable to recall most of the details.

Dat (TOEFL score--383) Two years of English--Native language (Vietnamese)

In the first reading, the following miscues were observed:

1. Miscue results in a surface structure change caused by different language rules--omission of inflectional endings and articles--but with no meaning loss.

ER--Many long years ago.

OR--Many long year_ ago.

ER--There were records in the village.

OR--There were record_ in the village.

ER--He heard his mother breaking off small twigs.

OR--He heard his mother breaking off small twig_.

ER--You are wonderfully wise.

OR--You are wonderful__ wise.

ER--leaving his mother in the mountains

OR--leaving his mother in ___ mountains

2. Miscue is the omission of dialogue carrier, causing confusion of characters' conversation:

ER--"Mother, what are you doing?" he asked.

OR--"Mother, what are you doing?" _____

ER--"Of course, my son," she said.

OR--"Of course, my son," _____

3. Miscue results in a semantic change acceptable only within the sentence but not within the total context.

ER--He lifted his mother to his shoulders.

OR--He lifted his mother to his soldiers. (The above miscue probably was caused by expectancy since the word "soldiers" has been used in the previous paragraph.)

In the retelling, Dat demonstrated an understanding of the basic theme of the story, but he was confused about the action of the old woman's son. Dat thought her grown son was responsible for the decree which sent her to the

wilderness to die.

In the second reading, the following miscues were observed:

1. Omission results in surface structure change but with little or no meaning change:

ER--They examine the bones.

OR--They exam___ the bones.

ER--They make tests to find out how old they are.

OR--They ____ test_ to find out how old they are.

2. Transformation changes statement to question resulting in meaning loss:

ER--It is difficult to decide.

OR--Is it difficult to decide.

3. Omission of verb in addition to pronunciation change indicating verb "separate" instead of adjective form. The two miscues work together to cause significant meaning change as well as syntactic change:

ER--The fingers on the hand are all separate.

OR--The fingers on the hand ____ all separate.

4. Insertion of modal auxiliary caused by the expectancy of repeating the word "can" used in previous clause: No meaning loss.

ER--The human brain can remember. Animals remember too.

OR--The human brain can remember. Animals can remember too.

In the retelling, Dat indicated confusion about the

nature of an expository essay: He thought it was a fictional story like the previous selection. Dat misunderstood the purpose of the essay.

Hong (TOEFL score--377) Three years of English--Native language (Vietnamese)

In the first reading, the following miscues were observed:

1. The miscue results in a structure which is semantically unacceptable and disrupts the meaning of the sentence:

ER--I decree that anyone over seventy-one must be sent away.

OR--I deceive that anyone over seventy-one . . .

2. Miscue results in a surface structure change caused by different language rules--omission of inflectional endings and articles--but with no meaning loss:

ER--Tell me how to meet Lord Higa's demands.

OR--Tell me how to meet Lord Higa___ demands.

ER--Ash crumbles at the touch of the finger.

OR--Ash crumbles at ___ touch of the finger.

3. The miscue results in a structure which is syntactically and semantically acceptable within the sentence but not within the total context of the narrative:

ER--They shook their heads and sighed.

OR--They shook their heads and signed.

4. Addition changes the deep structure as well as the

surface structure--meaning changed:

ER--Only one thing can save you.

OR--Only one thing he can save you.

In the retelling, Hong indicated a good understanding of the general theme of the narrative but she misunderstood

ER--Only one thing can save you.

OR--Only one thing he can save you.

In the retelling, Hong indicated a good understanding of the general theme of the narrative but she misunderstood many of the details.

In the second reading, the following miscues were observed:

1. Intonation shift causes changes which cross phrase/clause boundaries resulting in meaning change:

ER--They can teach their children. In this way, human knowledge increases.

OR--They can teach their children in this way. Human knowledge increases.

2. Omission of inflectional ending causes significant meaning loss:

ER--Their son Richard found a skull a half million years older.

OR--Their son Richard found a skull a half million years old___.

3. The miscue results in a structure which is syntactically unacceptable: Meaning is lost.

ER--They study the remains of villages.

OR--The study the remains of villages.

ER--It took thousands of years for humans to change from gatherers of wild plants to farmers.

OR--It took thousands of years for humans to change from gatherers, to wild plants to farmers.

4. Omission results in surface structure change but in no meaning loss:

ER--The oldest writing ever found is 5,000 years old.

OR--___ Oldest writing ever found is 5,000 years old.

In the retelling, Hong indicated a good recall of isolated details but a failure to comprehend the implications of the essay.

Syn (TOEFL score--363) Two years of English--Native language (Vietnamese)

1. Miscue results in a structure which is syntactically unacceptable resulting in total meaning loss:

ER--"If I could fool the cruel lord," the farmer thought.

OR--"If I could fool the cruel lord," the farmer those.

2. Miscue results in a structure which is syntactically and semantically acceptable within the sentence but not within the total context of the narrative:

ER--His mother saw the troubled look on his face.

OR--His mother saw the terrible look on his face.

ER--How could anyone make a rope of ash?

OR--How could everyone make a rope of ash?

3. Substitution of preposition results in no meaning loss:

ER--Lord Higa of the town beyond the hills

OR--Lord Higa from the town beyond the hills

ER--The troubled look on his face.

OR--The troubled look in his face.

In the retelling, Syn indicated a lack of comprehension of the main point of the story as well as confusion about the details.

In the second reading, the following miscues were observed:

1. The miscue results in a structure which is syntactically acceptable only with the prior portion of the sentence:

ER--The oldest writing ever found is 5,000 years old.

OR--The oldest writing was found is 5,000 years old.

2. Insertion results in no meaning loss:

ER--It took hundreds of thousands of years from the time humans first began to make tools until they could write.

OR--It took humans hundreds of thousands of years from the time humans first began to make tools . . .

3. Omission of past perfect auxiliary has little effect on meaning:

ER--They had worked for years.

OR--They ____ worked for years.

4. Miscue results in a structure which is syntactically acceptable only with the prior portion of the sentence:

ER--Humans have some advantages over animals.

OR--Humans have some advantages our animals.

5. Intonation shift causes changes which cross phrase/clause boundaries resulting in meaning loss:

ER--They make tests to find out how old they are. Little by little, as information is gathered, we are learning more about early humans.

OR--They make tests to find out how old they are little by little. As . . .

In the retelling, Syn indicated a failure to comprehend the main point of the essay. She was able to recall many of the details, but failed to understand their significance.

Mau (TOEFL score--370) One year of English--Native language (Vietnamese)

In the first reading, the following miscues were observed:

1. Miscue results in a structure which is syntactically unacceptable, resulting in meaning loss:

ER--What good is your wisdom?

OR--What good in your wisdom?

2. Miscue results in a structure which is acceptable within the sentence but not within the total context of the narrative:

ER--If I could fool the cruel lord.

OR--If I could feel the cruel lord.

3. Miscue is syntactically acceptable only within the prior portion of sentence:

ER--They are neither useful nor able to work for a living.

OR--They are either useful nor able to work for a living.

4. Omission of inflectional ending results in a structure which is syntactically unacceptable:

ER--On and on he climbed, not wanting to stop.

OR--On and on he climbed, not want___ to stop.

In the retelling, Mau indicated a failure to follow the course of the narrative. Although he was able to recall isolated incidents, he demonstrated an inability to comprehend the relationships of those incidents.

In the second reading, the following miscues were observed:

1. Omission of inflectional ending causes little meaning change:

ER--How did humans survive the ice ages and other changes in climate?

OR--How did humans survive the ice age_ and other change_ in climate?

2. Miscue results in a structure which is syntactically acceptable with only slight meaning change:

ER--Humans have very little body hair.

OR--Humans have a little body hair.

3. Intonation shift causes changes which cross phrase/clause boundaries, resulting in meaning loss:

ER--This is when the group became a society. Thousands of years later, people developed a system of writing.

OR--This is when the group became a society thousands of years later--people developed a system of writing.

ER--When people started to write, history began. Hundreds of thousands of years from the time humans first began . . .

OR--When people started to write history--began hundreds of thousands of years from the time humans first began

4. Miscue results in a structure which is syntactically acceptable only with the prior portion of sentence:

ER--It took thousands of years for humans to change from gatherers of wild plants to farmers.

OR--It took thousands of years for humans to change from gathering of wild plants to farmers.

In the retelling, Mau indicated good recall of details, but he indicated confusion about the thesis of the essay.

Both Syn and Mau made the following miscue:

Intonation and pronunciation /w/→/hw/ changes the word from an interjection to an adverb. Thus, the statement becomes a question resulting in loss of meaning. In addition, the OR becomes syntactically unacceptable because

the subject and verb are not transformed to become a question: The sentence is stated in the text--"Why that is not such an impossible task." and also the sentence: "Why, that is not so hard."

Truong (TOEFL score--367) One year of English--Native language (Vietnamese)

In the first reading, the following miscues were observed:

1. Miscue results in a structure which is acceptable within the sentence but not within the total context of the narrative:

ER--The farmer knew that the lord would send his soldiers

OR--The farmer knew that the lord could send his soldiers

ER--So the farmer told her of the impossible demand.

OR--So the farmer told her of his impossible demand.

2. Miscue results in a structure which is syntactically unacceptable, with meaning loss:

ER--Once more the lord rewarded the young farmer.

OR--One more the lord rewarded the young farmer.

ER--We must be conquuered by yet another cruel lord.

OR--We must be conquered by jet another cruel lord.

3. Omission of intensifier results in no significant meaning loss:

ER--But the lord's troubles were not over even then.

OR--But the lord's troubles were not over _____ then.

4. Omission of preposition results in a structure that is syntactically unacceptable--the prepositional phrase becomes a direct object, with meaning loss:

ER--He sent a log with a small hole.

OR--He sent a log a small hole.

In the retelling, Truong demonstrated good recall of details but she was unable to comprehend the inferences about human values implied in the narrative.

In the second reading, the following miscues were observed:

1. Intonation shift causes changes which cross phrase/clause boundaries, resulting in meaning loss:

ER--It appears the person was like a modern human.

A few years later, Richard Leakey found another skull.

OR--It appears the person was like a modern human a few years later.--Richard Leakey found another skull.

ER--It took thousands of years for humans to change from gatherers of wild plants to farmers. They still hunted sometimes, but farming was more important.

OR--It took thousands of years for humans to change from gatherers of wild plants to farmers they still hunted--sometimes but farming was more important.

2. Miscue results in a structure which is semantically and syntactically unacceptable:

ER--The oldest writing ever found is 5,000 years old.

OR--The oldest writing over found is 5,000 years old.

3. Omission results in a sentence which is semantically unacceptable with meaning loss:

ER--Why did humans survive when huge animals all died?

OR--Why did humans survive when _____ animals all died?

In the retelling, Truong indicated lack of recall of most details as well as a failure to comprehend the main point of the essay.

In the analysis of miscues, phonological variations are no longer recorded for research purposes because studies have shown that pronunciation and dialect differences do not seem to affect comprehensiosn (Allen & Watson, 1976, p. 36).

In the present study, the number of words combined in the two selections read by the high-level group totalled 3500. The two selections read by the low-level group totalled 2600 words. Yet more miscues were tabulated for the low-level group, which is not surprising. The low-level group averaged eleven miscues for each subject while the high-level group averaged slightly more than five miscues each. However, perhaps more significant than quantity is the quality of miscues. In the high-level group, 51% of the miscues were acceptable with no meaning loss while only 32% of the low group's miscues were acceptable with no meaning loss.

An analysis of types of miscues in the high-level group of readers revealed reading strategies that include

good use of expectancy, redundancy, and punctuation clues. In only two instances did a miscue result in a structure which was acceptable only with the prior portion of the sentence. The infrequency of that type of miscue indicated the ability of the high-level group to anticipate the next phrase or clause.

The high-level group also demonstrated the use of redundancy clues. For instance, in the following sentence, the subject repeated the pronoun used earlier in the sentence, instead of the article "the" used in the text: "She took her young man home to meet the [her] family." The miscue resulted in no meaning loss. Eight other similar miscues were observed in the oral responses of the high-level group. One of the most obvious differences observed between the two groups was in their use of punctuation clues in reading. In only two instances did a subject from the high-level group make an intonation shift, crossing phrase/clause boundaries. In all other instances, the high group observed punctuation markers. Most of the miscues observed from the high group included omission of relative pronoun and articles and substitution of determiners that result in little or no meaning loss. For the most part, they had miscues that preserved the sense and structure of the text although they may have no graphic or phonemic similarities.

In contrast, the low-level group relied heavily on graphic similarities to confirm a word choice. The most

frequent miscues of that group included words that looked like the expected response. For instance, substitutions included "one" for "on," "hug" for "huge," "soldiers" for "shoulders," "would" for "could," "deceive" for "decree," "feel" for "fool," "jet" for "yet," "the" for "they," "in" for "is," "signed" for "sighed," "thought" for "those," "terrible" for "trouble," "our" for "over," and "though" for "thought." The subjects' failure to correct the aforementioned miscues is an indication that they are still reading at the word level rather than the phrase/clause level.

The less proficient readers also made a number of intonation shifts crossing phrase/clause boundaries. They often ignored terminal as well as internal punctuation. As a result, a phrase or clause intended to modify one sentence might appear to modify the preceding or following one. Such miscues often cause total meaning loss.

Other reading strategies which the lower group has not yet developed include the technique of looking ahead to the next clause or phrase before making a word choice. For instance, a frequent miscue involved a structure that is syntactically acceptable with the prior portion of the sentence but not with the latter, thus indicating a failure to anticipate the sense and structure of the total sentence. For the most part, the less proficient readers indicated a deficiency in reading at the phrase/clause level.

In the summary or retelling of the passage, most of the low-level readers missed the theme of the story or essay although they were able to grasp the meaning of isolated details. One of the most significant differences in the two groups was in the ability of the good readers to distinguish factual and judgmental statements. One interesting characteristic of both the low and high-level readers is their general competence in reading narrative material as opposed to expository essays. The study conducted by Raisner (1978) with a remedial group of adult native speakers revealed similar results.

Another interesting observation is that the less proficient readers made fewer correction attempts than the high-level group although they had more miscues. Perhaps that practice is another indicator of failure to comprehend the material. This observation is corroborated by P. D. Allen's study (1976) which showed that even when the miscue is graphically or phonemically close to the textual material, if it does not "sound like" language (syntax) or if it doesn't have meaning sense (semantic), then the proficient reader will correct it.

Because function words (prepositions, determiners, conjunctions) are easily interchangeable, many such miscues occur which do not necessarily change syntactic or semantic acceptability. These kinds of acceptable miscues were observed, especially with the more proficient readers.

Allen points out that beginning readers [native

speakers] quickly demonstrate facility in handling grammatical structures, "a strength which they bring from oral language development" (p. 91). However, most foreign students do not have the basic oral language background in English. Therefore, Allen's observation that the syntactic acceptability of miscues is always significantly higher than their semantic acceptability was not substantiated in the present study. On the contrary, most of the unacceptable miscues in the present study were syntactic in nature. Perhaps another reason for the difference is that often the first instruction given to second-language learners emphasizes vocabulary more than grammar and sentence structure. Also, many ESL students seem more willing to memorize word lists than to analyze structures.

In conclusion, the results of both the cloze tests and the miscue analysis show significantly more syntactic/ grammatical errors than semantic errors in both the higher and lower level group, although the difference is much greater in the lower group. (Refer to Table I).

CHAPTER V

SUMMARY AND RECOMMENDATIONS

Summary

This study investigated the relationship between the general English proficiency of adult second-language learners and their reading strategies. The sample for this research was seventy-five foreign students ranging in age from eighteen to twenty-nine years, representing various language backgrounds. Based on the results of the TOEFL test, the higher and lower 30% of the subjects were used in the analysis of cloze tests in relation to scores on the TOEFL and the Gates-MacGinitie tests. An error analysis of the cloze tests was also calculated based on a multiple contingency analysis. Finally, in individual case studies, the reading strategies of thirteen subjects were examined based on an oral reading miscue analysis.

From a statistical analysis of errors in the cloze tests the following conclusions can be drawn:

Fewer semantic errors in the narrative passage (Cloze II) than in the expository passage (Cloze I) indicate an ability to make good "guesses" based on expectancy and redundancy clues that are more prevalent in the narrative than in the expository essay.

More grammatical than semantic errors in both groups, but particularly with the lower group in Cloze II, indicate

difficulty in comprehending material with multiple dependent clauses and appositive phrases.

More substitutions than omissions among higher-level subjects and, conversely, far more omissions than substitutions among lower-level subjects indicate that the latter group is less willing to "guess" and to risk error.

The oral reading miscue analysis complemented the error analysis. Miscue results revealed the higher group's use of expectancy, redundancy, and punctuation clues in their reading strategies. On the other hand, the lower group relied more on graphic similarities to decide on a word choice in reading. The lower group also demonstrated less inclination to look ahead and make predictions. In addition, they often ignored punctuation as a clue to structure and meaning.

In general, the more proficient readers demonstrated their ability to utilize the syntactic and semantic systems effectively, while the less skilled readers depended more on the graphophonic system.

Recommendations

Beginning ESL readers often confuse words that are graphically similar. The confusion is compounded if the words have the same grammatical function (brought/bought). The habitual association of the two words can be broken if the words are used in separate reading selections, making sure that the habitually associated word could not make sense as a substitution. To reinforce the distinction, the

teacher should help the reader associate forms of the word by using the word "bring" in the paragraph with "brought," for instance. Reading strategy lessons of that type help the reader focus on meaning. As Yetta Goodman (1976) points out, "The main strategy which a reader must employ is continuously asking 'Does this make sense to me.' Since making sense to the individual is a unique aspect of reading, preparing the same strategy lesson for everyone will prove fruitless." (p. 101). The individualized strategy lessons suggested by Goodman and Burke would be particularly useful in a multi-level class where uniform group lessons are impossible.

Further, it is recommended that the reading selections and strategy lessons must contain language familiar to the reader, grammatical structure that is not ambiguous and meaning that is clear. Even so, students often are confused in matching reference pronouns with the appropriate antecedent. (This observation was made particularly in the cloze passages.) In preparing a strategy lesson to help solve the problem, the teacher might use blanks for pronoun slots, thereby encouraging the student to use prior information to predict the necessary pronoun. The lessons should be clear and simple with no ambiguity.

Taking into account the analysis of the present study, the ESL teacher would do well to consider the principles in teaching the expectancy strategy outlined by Pierce (1973):

"(1) awareness of structural clues in understanding sentence development, (2) recognition of basic sentence patterns, even in complex structures, (3) an understanding of the sentence subject as unit that determines sentence development" (p. 169).

The results of the present study corroborate David Eskey's (1970) recommendation that teaching structure is the major task in reading instruction for advanced level students. Ronald Mackay (1979) points out that too much time spent on letter-sound patterns gives students "a poor priority of strategies" (p. 11).

Muriel Saville-Troike (1979) suggests specific strategy lessons appropriate for adaptation to beginning, intermediate, and advanced readers. She recommends that beginning readers who are still having problems with word recognition should have new words in a passage introduced in advance of reading it. They should also be taught to use explanation, comparison, contrast, and synonym clues to deduce the meanings of words in context. Intermediate readers should be taught phrase-reading strategies by being made aware of the relationship of function words to content words. For instance, they should be taught that function words depend on content words and serve as noun markers (a, the, few, any, etc.), phrase markers (up, down, below), clause markers (if, because, when), and question markers (who, what, why). Analyzing sentences will help students become aware of relationships among words, thus improving

comprehension. Saville-Troike points out that "recognizing meaningful groups of words is a big step in recognizing redundancies in the language and using them to predict what follows" (p. 32). Advanced students should be made aware of the usual placement of topic sentences. They should be taught to recognize main ideas by observing key word repetition and paraphrase. The teacher should be aware that the rhetorical patterns of organization in English may differ greatly from the writing structures used in the student's native language. For instance, punctuation symbols may be very different in English. The results of the present study show that students often misunderstand the material because they are confused by punctuation clues or ignore them altogether. It is recommended that ESL students be taught what kind of information they can anticipate after a comma, dash, colon, or semicolon.

Also, considering the difficulty with function words that the lower-level students confronted in both the cloze passages and the oral reading, it is recommended that they be taught to recognize the significance of coördinate and subordinate conjunctions as indicators of sentence meaning.

Joanne Sullivan (1978) compared strategies of good and poor readers and made some suggestions for classroom exercises that could be adapted to the ESL multi-level class: Various exercises can be used in which the same statements are rephrased in several forms to help students recover the deep structure. For instance, phrases and

clauses can be rearranged and recombined, observing possible change or retention of meaning. Such paraphrasing exercises permit students to use language at their own level. Peer teaching could also be used in the multi-level class by pairing good readers with poor readers. The present study shows that the proficient readers have few omissions, indicating their willingness to risk error. As proficiency increases, risk-taking and "guessing" also increase. In peer "teaching," perhaps this necessary quality of confidence can be transmitted to the lower-level readers.

Peer-teaching, small-group sessions, and individualized assignments are appropriate not only for multi-level classes but also for the application of psycholinguistic principles recommended in this study. Kenneth Goodman (1967) points out that reading is an interaction between thought and language. The reader brings his knowledge of the world to the reading task. Therefore, each reader's perception of the text will differ to an extent. Clarke and Silberstein (1977) emphasize the importance of individualized reading tasks which use passages that are conceptually complete. As a preliminary to individualized or small-group reading, the teacher should prepare students to decide, in advance, their expectations for a particular reading task and to use reading strategies appropriate to the task. The authors also recommend that students be encouraged to take risks

and to use the fewest number of clues to obtain maximum information.

In addition to the suggestions for procedures to be used in the ESL reading class, certain practices can have a negative effect and should be avoided. For instance, P. D. Allen (1976) is concerned about the preoccupation in reading instruction with letter-sound relationshsips. The oral miscue analysis in the present study illustrates that a reader can comprehend the material without being able to pronounce every word. Word attack skills overemphasize words. Psycholinguistiic principles, confirmed by many experiments, show that it is not necessary to identify every word in order to comprehend the material. Allen also suggests that too much teacher interference such as "unnecessary prompting and insistence on super-correct oral reading performance" can actually block the reading process by discouraging guessing and regressing. In these ways the teacher "short circuits" the process, preventing the reader from utilizing his own strategies (p. 117).

The selection of second-language English texts should reflect the correlation between level of proficiency and complexity of structure. Texts with abundant complex sentences should not be used with students of low-level proficiency. In addition, based on the observation made in the miscue analysis and the cloze tests, narrative material is easier to comprehend than expository essays; therefore, I recommend that narrative material be adopted for the less

proficient reader.

Based on my research, I make the following recommendations for future study:

1. More research should be conducted to establish the significance of syntax on reading strategies.

2. Studies should be conducted to examine the extent to which specific miscues affect reading comprehension.

3. Finally, research should be conducted to examine the different strategies used in reading a variety of materials such as narration and exposition.

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APPENDIX A

CLOZE PASSAGE I

NATIONAL PARKS

Canada and the United States are huge countries that stretch from the Atlantic Ocean to the Pacific Ocean. For centuries the North American Indians lived close to nature using only what they needed. But when the Europeans arrived, they saw an endless supply of materials they could use and sell. They killed the animals and cut the forests. They used farming methods that allowed the wind and rain to take away the rich topsoil. They did not worry because there were always more forests, animals and farmlands.

Nevertheless, a few people thought about the future. They travelled and saw the magnificent scenery in the West--the snow-covered mountains, clear lakes, and huge trees. They worried that their grandchildren would never see these natural wonders. Instead they would see towns and cities where there had once been wild beauty.

This handful of people persuaded their governments to start national park systems. The parks would protect places of wild beauty, of scientific interest, or with unusual plants and animals. The government would take care of them and keep them natural forever.

In 1872, the United States government passed a law making Yellowstone National Park in Wyoming, the first park

to belong to all the people in the nation. It is an area with hot springs, waterfalls, and lakes.

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APPENDIX B

CLOZE II

MAN OVERBOARD

We first became aware that something unusual was happening when one of the ship's officers came up to the Chief Engineer who was sitting at our table, and spoke to him in a low voice. The Chief Engineer got up from the table immediately and with a brief excuse, which told us nothing, left the dining room. At first we thought that there had been an accident or that a fire had broken out on board, but in a few minutes word went around that a man had been seen floating in the ocean. We noticed that the ship was slowing down, and then, with a sudden violent motion, it began to turn around. Some of the passengers did not wait to finish their meal but immediately rushed up on deck. Others crowded around the portholes. There was so much confusion in the dining room that we finally decided to join those who had gone up on deck.

Once we stepped out on deck, we found out that one of the crew had seen a man in the ocean some distance from the ship. He had informed the captain, and the captain had ordered the ship to be turned around at once. We were now only about two hundred yards or so from the man, and a lifeboat had already been lowered into the water. In it there were four crewmembers, an officer and the ship's

doctor. The officer shouted an order and the crew began to row away from the ship. Looking in the direction the lifeboat was heading, we were able to make out the exact position of the man in the water. He was holding on to some large object that might have been a broken section of a small fishing boat.

The lifeboat finally reached the man and two of the crewmembers managed to hoist the man into the boat.

Then the crew began to row back to the ship again. The rescued man, wrapped in a blanket, was helped up the rope ladder and onto the deck. Leaning on the arm of the ship's doctor, but still able to walk in spite of his experience, he was led off to the ship's hospital. As they passed along the deck, everyone cheered and applauded.

Byrne, D., & Cornelius, E. T. 1978. 30 Passages. New York: Longman. p. 69.

VITA 2

Ramona Jeanne Ellinger

Candidate for the Degree of

Doctor of Philosophy

Thesis: AN ANALYSIS OF READING STRATEGIES USED BY A HIGH AND LOW PROFICIENCY GROUP OF STUDENTS LEARNING ENGLISH AS A SECOND LANGUAGE

Major Field: English

Biographical:

Personal Data: Born in Purcell, Oklahoma, October 14, 1938, the daughter of George and Uvabelle Peltier. Married to Wayne Ellinger on June 2, 1956. Three daughters and one son were born of that union.

Education: Graduated from Purcell High School in 1955; received Bachelor of Arts degree in English from Southwestern State College, Weatherford, Oklahoma, in May, 1964; received Master of Arts degree in English from The University of Oklahoma in May, 1966; completed requirements for the Doctor of Philosophy degree at Oklahoma State University in May, 1985.

Professional Experience: Teaching Assistant, English Department, University of Oklahoma, September, 1964 to June, 1965; Teaching Assistant, Department of English, Oklahoma State University, August, 1980 to May, 1981; Instructor and Assistant Professor, Division of Language Arts, September, 1965 to present.