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THE EFFECTS OF ERROR CORRECTION TREATMENTS UPON ADEQUATE AND ACCURATE COMMUNICATION IN THE WRITTEN COMPOSITIONS OF ADULT LEARNERS OF ENGLISH AS A SECOND LANGUAGE.

The Ohio State University, Ph.D., 1976 Education, language and languages

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James Michael Hendrickson
1976
THE EFFECTS OF ERROR CORRECTION TREATMENTS UPON ADEQUATE
AND ACCURATE COMMUNICATION IN THE WRITTEN COMPOSITIONS
OF ADULT LEARNERS OF ENGLISH AS A SECOND LANGUAGE

Dissertation

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

James Michael Hendrickson, B.A., M.A.

* * * * *

The Ohio State University

1976

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Approved by

Edward D. Allen
Adviser
Department of Education
DEDICATION

This dissertation is dedicated to the memory of my Little Brother, Michael Joseph Murphy, for having shared with me his human companionship which helped me to make this study a physical reality. May he become bigger than his Big Brother!
I am deeply grateful to many people for having helped me to complete this degree, especially the following persons: my adviser, Professor Edward D. Allen for his practical guidance in my studies and teaching, and on this dissertation; Professor Gilbert A. Jarvis for his subtle, precise and patient approach toward the evaluation of my work; Professor Betty S. Sutton for her valuable editorial suggestions and insightful chats about teaching English as a foreign language; Professor James Kelly Duncan for his statistical advice and reassuring words; Mr. Roger Brown and his research associates for their many hours of help with research design and statistical procedures; Mr. Larry Jones for his assistance in administering and scoring the Michigan Test; my beloved foreign students for having participated in the study; my kind parents for having given me complete freedom to pursue my intellectual inclinations; Jerry and Alice Ervin for their overwhelming generosity and human understanding; and last, but certainly not least, my colleagues and friends for their constructive suggestions and encouraging words which gave me the self-confidence to persevere.
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CHAPTER I
INTRODUCTION

Rationale

Throughout the 1950s and well into the 1960s, the audiolingual approach to foreign language teaching was in full swing. It was a time when students of foreign language devoted many hours of study to memorizing dialog lines, to practicing diverse pattern drills and to learning many grammatical generalizations. Foreign language educators informed teachers that the pedagogical principle underlying this methodology was that some day, when a student found it necessary to communicate with a native speaker in the target language, he would be able to do so in an accurate and fluent manner.

Recent research and common sense indicate that this outcome was rather unrealistic, especially when one considers that most students did not formally study a foreign language for more than two years. A few highly motivated students may have achieved a fair degree of communicative proficiency by learning from the audiolingual method—but only with a great deal of practice in the target language with native speakers. Unfortunately, the majority of students who could not or did not take advantage of this opportunity, soon forgot the dialogs, the drills and the generalizations which they had so earnestly learned in school. They simply had learned what they were taught—and soon forgot most of it.
Not only did many supporters of audiolingualism overestimate communication outcomes for most language students, they also regarded student errors in an almost puritanical manner. In his book, which became a manifesto of the language teaching profession of the 1960s, Nelson Brooks (1960) considered error to have a relationship to learning resembling that of sin to virtue: "Like sin, error is to be avoided and its influence overcome, but its presence is to be expected" (p. 58). Brooks suggested a method which language teachers could use to prevent their students from producing errors in the target language: "The principal method of avoiding error in language teaching is to observe and practice the right model a sufficient number of times; the principal way of overcoming is to shorten the time lapse between the incorrect response and the presentation once more of the correct model" (p. 58). If a student responded in a predictable way to exercises based on the "correct model," he was supposed to make no errors, and would receive his teacher's approval. If, on the other hand, his speech or writing contained errors, inadequate teaching techniques or unsequenced instructional materials were blamed (Corder 1967, p. 163).

This behavioristic approach to preventing errors was widely used and encouraged by many foreign language educators even into the present decade, as illustrated in the following statement taken from the introduction to an elementary English course published in 1970: "One of the teacher's aims should be to prevent mistakes from occurring. In the early stages while the pupils are wholly dependent on the teacher for what they learn, it should be possible to achieve this aim" (Lee 1970). Not surprisingly, most language teachers soon realized that no one
instructional method of teaching a foreign language prevented students from producing errors when they spoke or wrote in that language.

Another method which was used to help teachers to prevent errors was introduced by structural linguists. This method, called Contrastive Analysis, assumed that a student's first language caused errors to occur in his second language. It was believed that once a teacher became aware of the differences between the two languages, he could begin developing appropriate instructional techniques and materials to prevent predictable errors from occurring. A great deal of empirical research indicates, however, that although interference from a student's native language is the major predictor of phonological errors, interference errors are only one of many types of errors found in the lexicon, syntax and morphology of student speech and writing in the target language (Wolfe 1967, Falk 1968, Wilkins 1968, Dušková 1969, Selinker 1969, Buteau 1970, Ervin-Tripp 1970, Grauberg 1971, Hussein 1971, George 1972, Politzer 1973, Richards 1973a, 1973b, Burt 1975, and Hanzeli 1975).

Beginning in the late 1960s, and continuing into the mid-1970s, foreign language specialists recognized and often criticized the limitations of audiolingualism and contrastive analysis. A major factor that influenced this attitudinal change was the new emphasis on the individual learner. This neohumanistic attitude toward learning contributed to a reevaluation of the objectives, the methods and the materials used in foreign language teaching. Instead of requiring students to memorize or to practice grammatical structures according to the "correct model," language teachers now began to engage their
students in a wide variety of oral and written communication activities in the target language.

As this humanistic trend in second language teaching continues to evolve today, a more positive attitude toward student errors is beginning to emerge. The most influential force behind this attitude comes from many psycholinguists who believe that teachers of foreign language should be more tolerant of their students' errors just as parents accept a great deal of their children's deviant speech. Because there is conclusive evidence that children necessarily produce certain errors as they become more proficient in their mother language, many psycholinguists hypothesize that second language learners must also produce certain kinds of errors as they acquire a foreign language.

S. Pit Corder proposed in 1967 that the field of psycholinguistics, particularly in the area of error analysis, may have valuable pedagogical implications for foreign language teaching. He advocates that in order for language teaching methodology to really improve, we first need to know more about how language is learned. He affirms that the analysis of second language errors can be a very productive approach toward achieving that goal. Corder (1967) echoes Von Humboldt's statement that we cannot really teach language, we can only create conditions in which it will develop spontaneously in the mind in its own way. Corder adds:

We shall never improve our ability to create such favourable conditions until we learn more about the way a learner learns and what his built-in syllabus is. When we do know this (and the learners' errors will, if systematically studied, tell us something about this) we may begin to be more critical of our cherished notions (p. 169).
The notion that student errors may reveal new insights into the language acquisition process and, at the same time, provide language teachers with a kind of "internal textbook" for individual learners, may prove to have revolutionary implications for foreign language teaching. In the meantime, Corder (1973) suggests that error analysis has immediate practical applications, particularly for language teachers:

Errors provide feedback, they tell the teacher something about the effectiveness of his teaching materials and his teaching techniques, and show him what parts of the syllabus he has been following have been inadequately learned or taught and need further attention. They enable him to decide whether he must devote more time to the item he has been working on. This is the day-to-day value of errors. But in terms of broader planning and with a new group of learners they provide the information for designing a remedial syllabus or a programme of reteaching (p. 265).

The sharp contrast between preventing errors in the 1960s and learning from errors in the 1970s may have caused George (1972) to remark: "It is noteworthy that at the beginning of the sixties the word 'error' was associated with correction, at the end with learning" (p. 189). Urging teachers to be more tolerant toward student errors, Corder (1967) adds that "errors are not to be regarded as signs of inhibition, but simply as evidence of his strategies of learning" (p. 168). Finally, Zydatiss (1974) proposes that if errors act as signals that actual learning is taking place, then they can serve as indications of progress and success (p. 236).

Before one can intelligently discuss the potential value of student errors for remedial attention, one must first come to terms with the notion of error. According to Webster (1934), the term "error"
is derived from Latin *errare*, meaning "to wander, roam or stray" (p. 869). Generally speaking, then, to err is to deviate from that which is correct within a given native language pattern. But these general definitions of error raise a crucial question: At what point does a non-native speaker's speech or writing no longer reflect correct native language usage, and begin to deviate from such usage? Cohen (1975) believes that the problem of distinguishing correct from incorrect usage constitutes the chief difficulty in identifying errors (p. 416).

Despite the difficulty in defining an error linguistically, it appears feasible to consider the function of error in a pedagogical setting in general, and for remedial attention in particular. From the standpoint of language teaching, George (1972) defines an error simply as "a form which a particular course designer or teacher does not want" (p. 2). Zydatiss (1974) is more specific in confining what the teacher "does not want" to utterances that are "ill-formed and/or inappropriate in the given situation," as determined by adult native speakers (p. 236). Finally, Burt and Kiparsky (1972) label all errors as "goofs," defined as mistakes "students make in learning English as a second language, for which no blame is implied" (p. 1).

Recently, Kellerman (1974) recognized that all errors should not be given equal status within any given learner's grammar (p. 175). Furthermore, an increasing number of scholars in second language learning are proposing that student errors which hinder communication to a significant degree should receive primary consideration for error correction. Olsson (1972) suggests that "a change of attitude from
stressing correctness to considering communicativeness in speech and writing of the learner's performance would not be amiss" (p. 65). Johansson (1975) calls for studies concerning the effect of different types of errors on the efficiency of communication because such studies reveal the areas where the need of teaching is the greatest (p. 334). Valdman (1975) believes that the communicative effect of errors is the kind of error classification that "yields the most useful insights for pedagogical applications" (p. 243). Robinson (1971) claims that the two most practical criteria for error correction are comprehensibility and acceptability by native speakers of a target language (p. 261).

Other scholars have recognized that it may be more efficient to improve learner communication beginning from a reader's or listener's viewpoint rather than from the writer's or speaker's perspective. The rationale behind this suggestion is that communication involves the active participation of a sender and a receiver of any given message. Burt (1975) states that in real communication settings, the speaker or writer (sender) comprises only one-half of the communication event. The other half rests with the listener or reader (receiver) who is usually a native speaker of the target language (p. 54). George (1971) concurs with Burt that improvement in language teaching may be made more economically from criteria developed from the receiving side of communication than from those focused only on the transmitting side (p. 272).

Based on the opinions of these and other scholars, it is clear that a great deal of empirical research on the communicative effect of student errors is needed. Moreover, it seems reasonable that this
research could and should be approached by developing criteria from the receiving end of a message. Results gained from such research could become very useful to language teachers who are native or non-native speakers, and who could use their student errors as a basis for developing more effective and efficient instructional materials and teaching strategies.

Definitions

This study used Brown's (1974) definition of communication as intra- and interpersonal interaction between humans where "the 'sender' hopes to arouse experiences of the 'receiver' similar to those of the 'sender'" for the purpose of establishing community (p. 9). In this investigation, the senders are non-native speakers of English, and the receivers are native speakers of English.

The subjects in this study were all non-native speakers of English as defined by the following criteria:

1. persons over age 18,
2. those functionally literate (i.e. beyond 3rd grade) in a native language other than English,
3. those who completed at least primary school in a non-English-speaking country,
4. those who were functionally literate in English.

The principal native speaker of English for this study was the researcher, although other native English speakers were consulted when there was any doubt about the category in which an error was to be classified. Native speakers of English were characterized by the
following criteria:

1. persons over age 18,
2. those functionally literate in English,
3. those who completed at least primary school in an English-speaking country.

This researcher used the following definition of error for the purpose of this study: an error is a linguistic form or structure which is produced by a non-native speaker of English and which is deemed incorrect or inappropriate in a given situation by a native speaker of English.

This study dealt with students' written errors which were classified under two major categories: global errors and local errors. A **global error** is a communicative error which causes a native speaker of English to misinterpret the intended meaning of a written message or to consider the message to be incomprehensible within the total context of the error. A **local error** is a linguistic error which makes a sentence appear ungrammatical or unidiomatic, but causes a native speaker of English little or no difficulty in understanding the intended meaning of a message, given its contextual framework. The researcher further refined the criteria for classifying these two error categories by developing three subcategories defined as follows:

1. Global and local lexical errors

   Base or root morphemes carry the central core of the meaning of a word, and include almost all nouns, verbs, adjectives, and adverbs which are devoid of any affix (e.g., boat, play, blue, slow). **Global**
lexical errors result when a base morpheme is misused, omitted or malformed to the extent that a native speaker of English cannot understand or misinterprets the non-native speaker's message despite its total context. Local lexical errors result when the misuse, omission or malformation of a base morpheme does not interfere with the intended meaning of a message written by a non-native speaker of English. This subcategory includes most lexical homonyms whose meaning can be understood from their contextual clues (e.g., bread/bred).

2. Global and local morphological errors

Affixes are bound morphemes which are attached to base morphemes in order to form new words. Generally, affixes fall into two major classifications. Inflectional affixes in English are most frequently suffixed to base morphemes to distinguish meaning such as person (e.g., I sleep, she sleeps), number (e.g., boy, boys), and verb tense (e.g., I play, I played). Derivational affixes in English regulate whether a word is to be a noun, verb, adjective, or adverb (e.g., base morpheme child + affix hood becomes noun childhood; base morpheme man + affix ly becomes adjective manly) or add lexical meaning (un in uncommon or pre in predict).

In addition to the base morpheme + affix method, English words can be constructed through the combination of two or more base morphemes, each of which is an unbound morpheme. Such a word is called a compound, of which there are two types. Literal compounds are semantically as well as morphologically compounded. That is, the meanings of the two base morphemes determine the meaning of the compound (e.g.,
bird becomes blackbird). Idiomatic compounds have base morphemes which do not reveal their sum meaning (e.g., red + cap becomes redcap meaning a pullman porter).

Global morphological errors result when bound or unbound morphemes are misused, omitted or malformed to the extent that a native speaker of English misinterprets or becomes perplexed by the ambiguous meaning of a given message. Local morphological errors result when bound or unbound morphemes are misused, omitted or malformed, but nevertheless do not cause a native speaker of English to misinterpret a non-native speaker's intended message, given its entire context.

3. Global and local syntactic errors

Syntactic forms and structures carry the functional load of written communication. These include determiners (i.e., definite and indefinite articles, demonstrative and possessive adjectives), modals (e.g., may, can, do), qualifiers (e.g., quite, rather, very), prepositions (e.g., with, after, through), conjunctions (e.g., and, but, or), subordinators (e.g., that, before, after), sentence connectors (e.g., also, still, afterward), question words (e.g., why, when, how) and certain unclassified syntactic classes (e.g., there is, it is).

Global syntactic errors result when syntactic forms and structures are misused, misplaced, malformed or omitted from sentences containing one or more clauses, to the extent that the intended meaning of a message is altered or becomes ambiguous, despite its entire contextual environment. Local syntactic errors result when syntactic forms and are either misused, misplaced, malformed or omitted from sentences,
but nevertheless do not cause a native speaker of English to misinterpret its meaning or find it ambiguous.

In order to classify errors more precisely and consistently, the researcher developed additional classification guidelines as follows:

1. Errors which appeared to violate tense agreement within and between sentences were not tallied. Because subjects narrated written descriptions of picture stories, just as one might orally describe a vacation trip to a friend, a wide degree of descriptive style was tolerated. For example, suppose a subject wrote the following partial description of a picture story:

   In the morning the weather was clear and the sea was calm. The man and his wife are going to the sea to fish. The man tries to take the fish and his wife looks at the water.

   Although this short narrative contains a mixture of simple present and past tenses, no error for verb tense discord would be recorded, for reasons of descriptive license.

2. Identical errors made on the same composition were tallied under their appropriate error types each time they occurred, with the following exception: when the same error type was violated by the same incorrect item more than once, only one error was tallied. For example, in the sentence, "She started crying while her husband atrape a big fish," only one local lexical error would be tallied, despite the fact that there are two separate violations of the same error type: a) incorrect lexical item—the writer meant "caught," and b) malformation of lexical item—the writer meant to spell "trapped."
3. When two or more different error types were violated, each violation was counted as a separate error. For example, in the sentence, "While cutting the fish open she founds her bracelet," there is one local morphological error (addition of a in founds), and one local lexical error (malformation of the verb form found). Because two different error types were violated in this lexical item, two errors would be tallied.

When there was any doubt about whether an error should be classified as global or local, the researcher consulted several other native speakers of English to resolve the question. In order that their decisions would be based solely upon what the students had written, the native speakers read the compositions without seeing the corresponding picture sequences.

In this study the researcher calculated a global error ratio and a local error ratio for each subject's composition pretest and composition posttest. A global error ratio consisted of dividing the total number of global errors on each subject's composition test by the total number of words he wrote on that test. A local error ratio consisted of dividing the total number of local errors on each subject's composition test by the total number of words he wrote on that test.

The terms "adequate" and "accurate" communication as used in this study should be specifically defined at this point. Adequate communication means that a non-native speaker of English can write in that language well enough to have the basic content of his thoughts and feelings understood by a native speaker, despite any local errors he
may produce in doing so. For this reason, a student's ability to com-
municate adequately in written English is measured by his global error
ratio; the lower a student's global error ratio is, the greater is his
communicative adequacy.

Accurate communication refers to the linguistic form of a student's
message in English, quite apart from his ability to communicate ade-
quately in that language. This is, accurate communication represents
the preciseness of form in which a student conveys his thoughts and
feelings in English. Therefore, a student's ability to communicate
accurately in written English is measured by his local error ratio;
the lower a student's local error ratio is, the greater is his communi-
cative accuracy.

Procedures

The empirical study described below was conceived and undertaken
primarily to provide information on the effects of two types of treat-
ment for correcting the lexical, morphological and syntactic errors
produced in the written compositions of adult learners of English as a
foreign language.

This study was undertaken during an eight-week period at The Ohio
State University in the Spring Quarter of 1976. The sample population
consisted of 24 foreign-born adults who voluntarily enrolled in a
course of intermediate English as a foreign language.

In the second week of their English language course, students took
two pretests: one test to measure their ability to describe in written
English three picture stories adapted from the Picture Composition Book
by Hill (1960), and one test to measure their proficiency in English grammar, vocabulary and reading comprehension on the Michigan Test of English Language Proficiency (Form A). The researcher calculated a global error ratio for each student, then formed two groups: students who obtained a low global error ratio ($B_1$), and students who obtained a high global error ratio ($B_2$). The median global error ratio determined the cutoff point between low and high groups. Then students in each of these two groups were randomly assigned to one of two error correction treatments: correction of global errors only ($A_1$), and correction of all global and local errors ($A_2$).

Beginning in the third week of their English language course, and extending over the following six consecutive weeks, all students were given the opportunity to describe in written English 18 different picture stories adapted from the Hill book. The researcher corrected each of these picture story compositions according to the particular treatment ($A_1$ or $A_2$) to which individual students had been randomly assigned. When students received their corrected composition and its corresponding picture sequence at the next class meeting, they studied them alone in separate learning carrels. As each student completed this task, his corrected composition and picture sequence were collected and he was given another picture story to describe in written English.

In the ninth week of their English course, students were administered two posttests which consisted of the identical measures used for the two pretests.
Design

This study utilized a 2 X 2 Treatment-By-Blocks design, comprising the two types of error correction treatment: correction of global errors only ($A_1$), and correction of all global and local errors ($A_2$); and the two group levels of pretest global error ratio: one group consisted of students who obtained a low global error ratio ($B_1$), and one group consisted of students who obtained a high global error ratio ($B_2$). An analysis of variance was run to test the statistical significance of the main and interaction effects of the two types of error correction treatment, and the two group levels of pretest global error ratio on three dependent variables: global error ratio, local error ratio and Michigan score, as measured by the posttests.

Objectives

This study had two major objectives. The first objective was to test the following nine research hypotheses for statistical significance at the .05 alpha level:

1. There are significant differences attributable to type of error correction treatment on the global error ratio variable as measured by the picture composition posttest.

2. There are significant differences attributable to group level of pretest global error ratio, on the global error ratio variable as measured by the picture composition posttest.

3. There is a significant interaction between type of error correction treatment, and group level of pretest global error ratio, on the global error ratio variable as measured by the picture composition posttest.
4. There are no significant differences attributable to type of error correction treatment on the local error ratio variable as measured by the picture composition posttest.

5. There are no significant differences attributable to group level of pretest global error ratio, on the local error ratio variable as measured by the picture composition posttest.

6. There is a significant interaction between type of error correction treatment, and group level of pretest global error ratio, on the local error ratio variable as measured by the picture composition posttest.

7. There are no significant differences attributable to type of error correction treatment on the Michigan score variable as measured by the Michigan (post)Test of English Language Proficiency.

8. There are no significant differences attributable to group level of pretest global error ratio on the Michigan score variable as measured by the Michigan (post)Test of English Language Proficiency.

9. There is no significant interaction between type of error correction treatment, and group level of pretest global error ratio, on the Michigan score variable as measured by the Michigan (post)Test of English Language Proficiency.

The second objective of this exploratory study was to examine students' written errors to determine the major problems which occurred when students expressed themselves in English. These problems were analyzed according to six error types: global lexical errors, global morphological errors, global syntactic errors, local lexical errors, local morphological errors, and local syntactic errors.
Limitations

The subjects in this study were foreign-born adults who were non-academic students learning English as a foreign language at The Ohio State University. The foreign students who were enrolled in regular degree programs at the University were unsuitable as subjects for the study for two reasons: the majority of these students were so proficient in English that they would have produced few global errors on the composition pre- and posttests, and on the in-class compositions; and the few students who would have made enough global errors on their compositions would have biased the results of the study because they were enrolled in English language courses primarily designed to improve their writing skill.

English was chosen for this study because it is a language which is commonly taught in almost every country worldwide, and because it is the native language of the researcher.

Organization

Chapter I has given the rationale for the study and also included a statement of definitions, objectives and procedures. Chapter II reviews the literature related to the correction of second language errors, as viewed from the perspective of error analysis. Chapter III describes the design of the study and the development of the instruments and the procedures in detail. Chapter IV presents the results of the data analysis. Chapter V contains a summary of the study as well as several conclusions and recommendations for further research.
CHAPTER II
REVIEW OF THE LITERATURE

Introduction

The information most relevant to the present investigation emanates from research in error analysis. Current studies in error analysis deal primarily with the classification or with the causes of speech errors made by children in their native language (Corbet 1974, p. 52, Angelis 1975, p. 293). The major purpose for analyzing errors has been to examine the systematicity of error in order to better understand the process of first and second language acquisition. Because much of this research is still inconclusive, the findings offer few practical applications for language teachers who seek immediate solutions for coping with their students' errors.

There appears to be very little empirical research related specifically to the correction of written errors produced by adult second language learners. Furthermore, there are few widely-accepted linguistic criteria of grammatical and lexical correction in foreign language teaching (Schultz and Bartz 1975, p. 261), and there are also no standards on whether, when, how or which student errors should be corrected or who should correct them (Burt 1975, p. 53). Consequently, much of what has been published on error correction remains speculative, and needs to be validated by a great deal of empirical experimentation.
The review of literature includes research on error correction in general, and on the correction of written errors in particular. The principal focus on this research is on five specific questions that relate directly to this study:

1. Should learner errors be corrected?
2. If so, when should learner errors be corrected?
3. How should learner errors be corrected?
4. Which learner errors should be corrected?
5. Who should correct learner errors?

Should learner errors be corrected?

Corbet (1974) suggests that before correcting student errors, teachers should first consider whether the errors should be corrected at all and, if so, why (p. 55). Krashen and Seliger (1975) assert that all teachers do provide some means of correcting their students' performance errors in order to give them an opportunity to reconsider their incorrect sentences (p. 180). Allwright (1975) contends that a student really cannot learn in class without knowing when an error is made, either by him or by someone else. According to George (1972), if a learner is unaware of his errors, his teacher will have difficulty in helping him to correct those errors (p. 15). Kennedy (1973) proposes that in both first and second language learning, error correction helps the learner to discover the functions and the limitations of the syntactical and lexical forms of the target language. Krashen and Seliger (1975) conclude that, overall, error correction probably does help the adult learner, and it may even help him to learn the exact
environment to apply rules and to discover the precise semantic range of lexical items (p. 181).

When should learner errors be corrected?

According to Gorbet (1974), perhaps the most difficult challenge of teaching is determining when and when not to ignore student errors (p. 59). Many second language educators have recently rejected the obsessive concern with error avoidance that has generally characterized audiolingually-oriented language instruction (Corder 1967, Holley and King 1971, George 1972, Dresdner 1973, Dulay 1974, Gorbet 1974, Burt 1975, Krashen and Seliger 1975, and Valdman 1975). Because these educators recognize that errors are essential to language learning, they recommend that teachers accept a wider margin of deviance from so-called "standard" forms and structures of the target language.

There appear to be cognitive as well as affective reasons for tolerating some errors produced by foreign language learners. Stressing the need to consider the "economics of intervention," George (1972) recommends that teachers initially determine how likely it is that remedial work will benefit the learner, and how strongly the learner will sense his achievement (p. 73). According to George, drawing a student's attention to every error he makes not only wastes the learner's time, but it also provides no guarantee that he will learn from his mistakes, as evidenced when similar errors reappear on subsequent written work (p. 76). Burt and Kiparsky (1972) and Valdman (1975) agree with George that some errors in students' speech and writing should be tolerated so that learners feel more self-confident about communicating in a foreign language.
How should learner errors be corrected?

Holley and King (1971) and Gorbet (1974) advise teachers to be keenly aware of how they correct student errors, and to avoid using correction strategies that might adversely affect students, such as employing methods which could cause learner inhibition. Allwright (1975) claims that many teachers correct student papers so imprecisely and inconsistently that learners often have difficulty in distinguishing their major errors from their minor ones. Burt (1975) reports that most teacher training programs fail to prepare teachers to handle the variety of errors that inevitably occur in student speech and writing (p. 53).

Corder (1973) suggests that the teacher needs to find ways to exploit students' incorrect forms and structures in a controlled fashion (p. 294). Gorbet (1974) recommends that error correction strategies must be carefully planned before they are implemented to help students. She suggests that one place to begin planning such strategies is to determine what caused the error to occur. Corder (1973) and Cohen (1975) advocate that knowing the cause of a given error helps the teacher to find appropriate and effective strategies to guide a student's discovery of an appropriate solution to his particular linguistic problems.

Lee (1957) and Cohen (1975) recommend that teachers record individual student's errors on diagnostic charts according to the type and the frequency of each error. Corder (1973) notes that by describing and classifying a learner's errors in linguistic terms, "we build up a picture of the features of the language which are causing him learning
problems" (p. 257). Although plotting students' errors in this way may be somewhat time-consuming, it probably is a worthwhile technique for diagnostic purposes. As part of an investigation on the effects of correction, Cohen (1975) found that when he did not use any particular system to record written errors, it was virtually impossible to diagnose his students' linguistic problems.

Research on the systematicity of errors provides additional support for charting written errors for diagnostic and remedial purposes. Dušková (1969) found, that after classifying all errors found in the written assignments of Czech university students studying English as a foreign language, 75.1 percent of their errors were systematic. More recently, Chadessy (1976) discovered that 77.3 percent of the writings of 370 Iranian university freshman learning English contained systematic errors. The most systematic errors that occurred in these students' compositions was the lack of reducing sentences by either conjunction or embedding (p. 80). Chadessy concludes that because the majority of student written errors occur in systematic patterns, they could serve as a basis for developing remedial materials for individual learners (p. 81).

Some foreign language educators propose that if students actively participate in the error correction process, they will undoubtedly learn and retain more information from their corrections. Gorbet (1974) maintains that directly supplying the correct form is probably not very helpful to the student. She suggests that a teacher simply hint at the correct form so that the student discovers it for himself. She urges teachers to experiment with other ways which could help students to
make inferences and formulate concepts about the target language (p. 62). Corder (1967) and Valdman (1975) also suggest that a discovery approach to error correction would be a profitable way for students to learn from their mistakes and to avoid making additional errors in the target language. These two scholars concur with Gorbet (1974) that supplying the correct form might actually prevent the learner from testing alternate hypotheses which could lead to an acceptable grammatical structure or lexical item (p. 168).

Several specific techniques for correcting students' written errors have appeared recently in the methodological literature of foreign language teaching. George (1972) suggests that the teacher first identify and record the error types which each learner frequently makes. Then, the student reads his written work to search out and correct his high-frequency errors, one such error type at a time. For example, if a learner's sentences customarily lack subject-verb agreement, the student is asked to read his composition in order to identify the subject of the first sentence. He then puts the index finger of his left hand on the subject, and moves the index finger of his right hand until he has identified the verb, and checks for concord. After the student proceeds through the entire composition in this way, he reads it once again to check for other error types which he customarily produces. George claims that correcting errors in this way is a highly effective technique that requires relatively little time or effort on the part of the student (pp. 76-77). Bhatia (1974) suggests that "frequent errors common to a large number of students, can be handled on a group basis; whereas infrequent errors, errors causing
trouble to relatively few students, can be handled on an individual basis" (p. 347).

Burt and Kiparsky (1972) recommend that when correcting composition errors, teachers might use different color inks for distinguishing more important errors from less important ones (p. 4). Finally, Farnsworth (1974) suggests that the teacher discuss each student’s composition errors on cassette tapes, as a means of insuring that students will remember the comments.

Judging from the diversity of the error correction approaches and techniques discussed above, there appears to be no single standard method of dealing with student errors. Wingfield (1975), in agreement with this conclusion, points out that the teacher must choose the techniques which are most appropriate and most effective for his individual students. He lists five techniques for helping teachers to decide on how to deal with errors in written work:

1. the teacher gives sufficient clues to enable self-correction to be made;
2. the teacher corrects the script;
3. the teacher deals with errors through marginal comments and footnotes;
4. the teacher explains orally to individual students;
5. the teacher uses the error as an illustration for a class explanation. (p. 311)

Allwright (1975) concludes that the error correction process itself would probably have some of the following general features: indication that an error was committed, identification of the type of error,
location of the error, mention of who made the error, selection of a remedy, provision of a correct model, the furnishing of an opportunity for a new attempt, indication of improvement (if applicable), and the offering of praise.

Which learner errors should be corrected?

Burt (1975) surmises that selective error correction promises to be a more effective instructional technique—both cognitively and affectively—than "all-out" correction (p. 62). Krashen and Seliger (1975) warn that no matter how logical this statement may be, there is still no empirical evidence to verify its validity (p. 181). Until more research has been done on selective correction, what criteria can the teacher use for deciding which student errors to correct?

Dresdner (1973) Bhatia (1974) and Allwright (1975) consider high-frequency errors to have a high priority, although George (1972) feels that excessive correction of such errors may only serve to frustrate learners and to waste their time (p. 75). Johansson (1973) suggests that errors involving general grammatical rules are more deserving of remedial attention than errors involving lexical exceptions. Johansson (1973) Richards (1973a) Sterniglass (1974) Corder (1975) and Hanzeli (1975) propose that errors with stigmatizing or irritating effects to native speakers of the target language, should receive primary consideration for remedial attention. Both Richards (1973a) and Corder (1975) point out, however, that because so little is known about these so-called "errors of appropriacy," the teacher will have to use his own judgement about correcting such errors. Holley and King (1971) and
Olsson (1972) recommend that errors affecting a large group of students should be corrected in class. Cohen (1975) suggests that those errors which are relevant to a specific pedagogic focus may also be important to correct.

In foreign language education today, there is an increased interest in and use of many diverse activities designed to encourage students to communicate in a foreign language. Because many of these activities require spontaneous responses from language learners, many errors will inevitably occur, especially at the beginning and intermediate levels of instruction (Olsson 1972). Kennedy (1973) encourages teachers to provide learners with natural communicative opportunities, and to give their students enough feedback on their errors so that they may test and modify the hypotheses they have established about the grammatical and functional rules of the target language.

An increasing number of foreign language educators suggest that those errors which impede the intelligibility of a message should receive top priority for correction. Fowell (1973) analyzed speech samples collected in individual oral interviews of 223 native American high school students at the end of their second year of French study. She found that the greatest number of errors resulted from reduction. According to Fowell (1975b), "the fact that reductions seemed to be influenced by the need to communicate, suggests that correcting student errors in terms of their comprehensibility to a native speaker might result in a more advanced grammar" (p. 38). Elsewhere, Fowell (1973) adds that "if error correction by the teacher results in a more adult grammar, it is possible that correction in terms of communication
requirements might be more fruitful than any other kind, since this
seems to be important to students" (p. 91). Powell (1975a) suggests
that error in word order is perhaps the most serious threat to com-
munication (p. 12).

Hanzeli (1975) agrees that errors which interfere with the mean-
ing of a message should be corrected more promptly and systematically
than any other. He adds, however, that teachers who are native-
speakers of the target language would have difficulty establishing
standard criteria for distinguishing communicative errors from non-
communicative errors because these teachers often have learned to
interpret their own students' "Pidgin" (p. 431). Powell (1973) admits
that the problem of consistently correcting errors, in terms of how
they affect the comprehensibility of students' messages, would be an
even greater dilemma for teachers who are non-native speakers of the
target language (p. 92).

George (1972) observes that a learner will anticipate or correct
his errors according to the response he expects from the person who is
listening to him or who is reading his work (p. 76). Although George
endorses the priority of correcting communicative errors, he believes
that teachers often overestimate the degree to which communication is
impaired by such errors. He hypothesizes that native speakers would
be able to understand the majority of students' deviant sentences. In-
deed, there is some empirical evidence to support this assumption.
Olsson (1972) submitted passive sentences produced by 240 adolescent
Swedish learners to native Englishmen in order to determine which de-
viations would most likely be misinterpreted. She found that the
Englishmen understood nearly 70 percent of the 1,000 deviant utterances, and that generally, semantic errors blocked communication more than syntactic ones. Valdman (1975) concludes that the most useful criterion for a pedagogically oriented analysis of errors for the purpose of error correction "is whether the deviation involves failure to make or express an obligatory syntactic process mapping deep-structure onto interpretable surface structure" (p. 243).

As its theoretical base, this study adapts Burt and Kiparsky's (1972) global/local classification of student errors. These two scholars collected several thousand sentences from the spoken and written English of learners from many nations worldwide. From these linguistic data, the author selected approximately 300 sentences which contained two or more errors. Then they asked native speakers (e.g., "the company janitor, the car mechanic and shopkeepers") to determine the intelligibility of a sentence as each error was corrected. On the basis of the native speakers' responses, it was found that errors fell into two distinct categories: those errors which caused the listener or reader to misunderstand the message or to consider the sentence incomprehensible (global errors), and those errors which did not significantly hinder communication of the sentence's message (local errors). On the basis of how errors affected the comprehensibility of whole sentences, Burt and Kiparsky showed that one can build a local-to-global hierarchy of errors that could be potentially useful to teachers of English as a foreign language (Burt 1971, Burt and Kiparsky 1972).

Burt (1975) argues persuasively that the global/local distinction is the most pervasive criterion for determining the communicative
importance of errors (p. 58). She claims that the correction of one global error in a sentence clarifies the intended message more than the correction of several local errors, in the same sentence (p. 62). Furthermore, she states that limiting the number of corrections to communicative errors allows the student to increase his motivation and self-confidence toward learning the target language. When the learner's speech or writing in the foreign language begins to become relatively free of communicative errors, Burt suggests that only then should learners begin to concentrate on remediating local errors, if the speaker or writer is to approximate near-native fluency (p. 58).

Several foreign language educators have responded positively to Burt and Kiparsky's distinction of global and local errors. According to Waldman (1975), this kind of distinction is readily translatable into a hierarchy of errors for remedial practice (p. 240). Angelis (1975) agrees that acceptability as defined by Burt (1975) is an extremely valid argument for defining the direction which teaching should take because it fits well into the pragmatic view of language instruction. He adds, however, that the acceptability of spoken English in the context of adult education cannot be considered equal to the acceptability of written English in an academic setting (p. 293).

Who should correct learners' errors?

Allwright (1975) places the burden on the teacher to be a source of information about the target language and to react to errors whenever it seems appropriate to do so. Cohen (1975) lists a series of choices for guiding teachers in correcting their students' errors:
1. whether to treat them immediately or to delay treatment;
2. whether to correct the error-maker directly or to transfer
   the treatment to another individual, sub-group, or the whole class;
3. if the treatment is transferred to others, whether to return
   to the original error-maker to see if he is now aware of his error and
   how to correct it;
4. whether the teacher or another learner provides the correction
   treatment;
5. whether to test for the efficacy of the treatment. (p. 416)

According to George (1972) and Corder (1973), when students read
their compositions to themselves, they generally are unable to identify
many of their errors. George suggests that students need some guidance
in recognizing the deviant forms and structures they have made in their
written work. But merely showing a student where he has made errors
may be an inadequate and perhaps even a harmful approach to remedying
most student errors. Corder (1973) claims that when the learner's at-
tention is drawn to his mistakes, he not only is unable to correct them,
he may even commit another error in trying to do so. Corder claims
that the teacher's function in error correction is "to provide data and
examples, and where necessary to offer explanations and descriptions
and, more importantly,. verification of the learner's hypotheses (i.e.
correction)" about the target language (p. 336).

While no one would be likely to deny the language teacher an
active role in correcting errors, others have suggested that the
teacher should not dominate the correction process. George (1972)
Corder (1973) Ravem (1973) and Wingfield (1975) propose that students may learn more from correcting their own errors than by having them corrected by their teacher. Corder (1973) affirms that teacher correction will most likely help students, but it is probably not sufficient to change error patterns very noticeably. He proposes that student self-correction may do more to eradicate errors than would teacher correction (p. 419). Wingfield (1975) predicts that self-correction would probably be effective with grammatical errors and would be relatively ineffective with lexical errors (p. 312). Ravem (1973) and Cohen (1975) state that different approaches to error correction need to be validated through a series of carefully controlled experiments before being recommended as effective methods for dealing with student errors.

Another recommended approach to error correction is to ask students to correct each other's compositions. Cohen (1975) indicates that such a method would help students to recognize errors. He also proposes that peer correction of written errors will result in more attention being paid to grammatical rather than to lexical errors. In other words, students who correct each other's compositions would tend to concentrate more on the linguistic form of a sentence than on the content transmitted by that sentence. He suggests that this process would be reversed when students correct each other's speech errors (p. 419). Burt and Kiparsky (1972) agree with Corder (1975) and Waldman (1975) that in a heterogeneous class, one student will be able to recognize another's "goof," especially when the correcter has himself just over come some grammatical problems (p. 11).
Summary

The research on the correction of second language errors, as viewed from the perspective of error analysis, appears to be both speculative and scant. Based on the review of the literature on error correction in general, and on the correction of written errors in particular, this writer summarizes below a composite response to whether, when, how or which student errors should be corrected or who should correct them.

1. Some kind of correction of learner errors seems necessary for helping students to learn from their mistakes and to communicate more adequately and accurately in a foreign language.

2. Some tolerance of learner errors seems desirable for helping students to build their self-confidence toward communicating in a foreign language.

3. Correction of learner errors is probably most effective when preceded by careful planning of teaching strategies which would best facilitate students' progress in learning the target language.

4. Correction of all learner errors may or may not be as effective a strategy as correction of selective learner errors. If communication is the primary objective in the foreign language classroom, perhaps students' communicative errors need to be given a high priority for remediation.

5. Correction of learner errors by the teacher alone may not always be the most effective strategy for remediation; peer correction or self-correction with teacher guidance may be a more worthwhile investment of time and effort for the teacher and for the learner.
CHAPTER III
DESIGN AND PROCEDURES

Objectives

This study had two major objectives. The first objective was to test the following null hypotheses for statistical significance at the .05 alpha level:

$H_0^1$ There are no significant differences attributable to type of error correction treatment on the global error ratio variable as measured by the picture composition posttest.

$H_0^2$ There are no significant differences attributable to group level of pretest global error ratio, on the global error ratio variable as measured on the picture composition posttest.

$H_0^3$ There is no significant interaction between type of error correction treatment, and group level of pretest global error ratio, on the global error ratio variable as measured by the picture composition posttest.

$H_0^4$ There are no significant differences attributable to type of error correction treatment on the local error ratio variable as measured by the picture composition posttest.

$H_0^5$ There are no significant differences attributable to group level of pretest global error ratio, on the local error ratio variable as measured by the picture composition posttest.
H06 There is no significant interaction between type of error correction treatment, and group level of pretest global error ratio, on the local error ratio variable as measured by the picture composition posttest.

H07 There are no significant differences attributable to type of error correction treatment on the Michigan score variable as measured by the Michigan (post) Test of English Language Proficiency.

H08 There are no significant differences attributable to group level of pretest global error ratio on the Michigan score variable as measured by the Michigan (post) Test of English Language Proficiency.

H09 There is no significant interaction between type of error correction treatment, and group level of pretest global error ratio, on the Michigan score variable as measured by the Michigan (post) Test of English Language Proficiency.

The second objective of this exploratory study, was to examine students' written errors to determine the major problems they encountered when faced with the necessity of expressing themselves in English. For the purpose of this investigation, these errors were classified into the following six error categories: global lexical errors, global morphological errors, global syntactic errors, local lexical errors, local morphological errors, and local syntactic errors.

Sample

Twenty-six foreign-born adults, 9 males and 17 females, voluntarily enrolled in the two sections of a non-credit Continuing Education course, entitled "American Language and Culture," at The Ohio State
University in the Spring Quarter of 1976. These students, who served as subjects for the study, were between the ages of 18 and 45. Two female subjects, who were unable to complete the corrective treatment phase and the two posttests, were eliminated from the study, leaving 24 subjects.

Most of the subjects had graduated from high school and some of them had completed one or more years of college or professional school in their country of origin. Many of these adult learners enrolled in the English language and culture course to improve their communicative proficiency in English so that they could continue their formal education or training in this country, or locate suitable employment here. Some subjects, on the other hand, had no desire to study or to work in the United States; they merely enrolled in the English course in order to improve their communication skills primarily for social reasons.

The subjects represented a total of twelve native languages and seventeen foreign nations as shown in Table 1.
### TABLE 1.
SUBJECTS’ NATIVE LANGUAGE AND NATIONAL ORIGIN

<table>
<thead>
<tr>
<th>Native Language</th>
<th>National Origin</th>
<th>No. of Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>Egypt</td>
<td>1</td>
</tr>
<tr>
<td>&quot;</td>
<td>Lybia</td>
<td>2</td>
</tr>
<tr>
<td>&quot;</td>
<td>Saudi Arabia</td>
<td>2</td>
</tr>
<tr>
<td>Bengali</td>
<td>India</td>
<td>1</td>
</tr>
<tr>
<td>Hungarian</td>
<td>Hungary</td>
<td>1</td>
</tr>
<tr>
<td>Japanese</td>
<td>Japan</td>
<td>1</td>
</tr>
<tr>
<td>Korean</td>
<td>South Korea</td>
<td>1</td>
</tr>
<tr>
<td>Persian</td>
<td>Iran</td>
<td>1</td>
</tr>
<tr>
<td>Portuguese</td>
<td>Brazil</td>
<td>1</td>
</tr>
<tr>
<td>Russian</td>
<td>Soviet Union</td>
<td>1</td>
</tr>
<tr>
<td>Spanish</td>
<td>Columbia</td>
<td>1</td>
</tr>
<tr>
<td>&quot;</td>
<td>Mexico</td>
<td>1</td>
</tr>
<tr>
<td>&quot;</td>
<td>Nicaragua</td>
<td>2</td>
</tr>
<tr>
<td>&quot;</td>
<td>Venezuela</td>
<td>1</td>
</tr>
<tr>
<td>Thai</td>
<td>Thailand</td>
<td>1</td>
</tr>
<tr>
<td>Turkish</td>
<td>Turkey</td>
<td>1</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>South Vietnam</td>
<td>5</td>
</tr>
</tbody>
</table>
**Instrumentation**

Two instruments were used in this study: one to elicit written communication in English from subjects, and one to test the subjects' proficiency in English grammar, vocabulary and reading comprehension.

The instrument that was used to elicit written communication from the subjects was developed by the researcher to meet the following three criteria: it had to be of sufficient difficulty to allow global errors to occur in the subjects' writing; it had to elicit written sentences about specific information to which the researcher could later refer to verify the intended meaning of a subject's message; it had to allow each subject the flexibility to use whatever written communication strategies he commanded.

A pilot study was conducted by the researcher with fifteen subjects similar to those who participated in the full-scale experiment which was undertaken one month later. The following information and insights were gained from the pilot study:

1. The cartoon-type picture sequences contained in the *Picture Composition Book* by Hill (1960) would serve as a valid instrument for eliciting the composition pre- and posttests and the 18 in-class compositions.

2. All subjects were able to describe in written English any one of the picture sequences within 20 minutes. The composition pre- and posttests could be completed, therefore, within a single class session consisting of 105 minutes.

3. All subjects considered that describing picture stories was an enjoyable challenge both to their command of written English as well as
to their creative imagination.

For the purpose of this study, a total of 21 master picture story sheets were adapted from 21 picture sequences found in Hill's Picture Composition Book. These picture sequences, similar in artistic format but very different in situational content from one another, were used as follows: 3 picture sequences served as visual stimuli for the composition pre- and posttests, and 18 picture sequences served to elicit written sentences from subjects on the in-class composition tasks. In order to help students to follow the correct sequence of the picture stories, the researcher cut and pasted the eight frames in each picture sequence in two rows along the length of 8½" x 11" sheets of paper. Frames 1-4 were placed on the top row, and frames 5-8 on the bottom row. Each of the 21 master picture story sheets were then copied via multilith process, one copy for each of the 24 subjects in the study.

The three picture sequences that comprised the composition pre- and posttests were intentionally selected by the researcher, and are described as follows:

1. a simple narrative requiring very common lexical usage with the main action of the story occurring in the simple present tense;

2. a simple narrative requiring very common lexical usage with the main action of the story occurring in the simple present and past tenses;

3. a more complex narrative requiring relatively less common lexical items than picture stories 1 and 2 above, with the main action of the story occurring in the simple present and past tenses.
These three picture sequences were stapled together with a cover sheet and comprised the picture story packet for the composition pre- and posttests. This packet was accompanied by a paper packet comprising three sheets of paper with lines spaced one-half inch apart. Subjects described the picture stories using one sheet of paper for each picture story.

The 18 picture sequences used for the in-class compositions were randomly selected and assigned by the researcher to the 18 class meetings held between the third and the eighth weeks of the course. No attention was given to the lexical usage nor to the temporal attributes of these eighteen picture sequences. Sheets of one-half inch lined paper, identical to those used for the composition pre- and posttests, were used as writing paper for the 18 in-class picture story compositions.

The instrument used for measuring the subjects' general proficiency in English grammar, vocabulary and reading comprehension was the Michigan Test of English Language Proficiency (Form A). This test was used as an additional pre- and posttest measure in order to determine how much each student progressed in the English course, from the beginning to nearly the end of the Quarter. The Michigan Test consists of 100 multiple-choice items divided as follows: Part I (items 1-40), grammar; Part II (items 41-89), vocabulary; and Part III (items 81-100), reading comprehension. The subjects were allowed 75 minutes to take the entire Michigan Test. The Michigan Test Manual was used to standardize test instructions for all subjects.
Procedures

1. The English Language and Culture Course

All class meetings were held at the Learning Resources Center located on the West Campus of The Ohio State University. The researcher was the sole instructor of both the morning and evening sections of the English language and culture course which met on three consecutive days per week for a total of ten weeks. Each class meeting lasted one hour and forty-five minutes, without a break.

The overall goal of the English course was to increase students' ability to understand and to speak English so that they would be better equipped, linguistically, to cope with their individual social and educational needs. The students participated, therefore, in many listening comprehension activities, pronunciation exercises, and especially in small group discussions designed to improve their oral communication skills as well as to enhance their awareness of each other's native culture. Time was also allotted to singing American folk songs, viewing and discussing filmstrips on selected topics of American culture, and to playing many oral communication games.

The text used for the English course was *Encounters: A Basic Reader* by Pimsleur and Berger (1974). One chapter of this text was assigned to each class meeting. For their daily homework assignments, students read the short articles in the text, wrote out the vocabulary-building exercises contained in it, and prepared to participate in a wide range of cross-cultural activities designed for small group settings. Apart from writing the in-class picture story
compositions, the only major writing activity that students participated in was a ten-minute dictation given at approximately two of every three class sessions.

During the first week of the English course, the students were told that they were going to take two tests the following week: one test would measure their ability to communicate in written English, the other test would measure their general knowledge of English grammar, vocabulary and reading comprehension. Each of these two tests served both as pretests and posttests for the study.

2. The Pretests

The test of communication in written English was administered at the class meeting beginning the second week of the course.* The researcher began the session by telling the subjects about the task at hand, paraphrased as follows:

You are going to take a test of your ability to express yourselves in written English. You will take this test twice, once today, and again in the ninth week of the Quarter. You will take the test today to help me find out how well you can write in English at this time. Then, you will take the same test later on so that I can determine how well and how much your ability to communicate in written English has progressed from now to almost the end of the course.

This is a picture story which is very much like the one you will see on the test. It consists of two rows of pictures with each picture enclosed in a frame. As you can see, there are four frames in each row of pictures. Starting with the picture in the first frame in the upper left-hand corner and moving from left to right, you can see that each of the frames includes a number in addition to a picture. The pictures are numbered in order from one to eight. All eight pictures together represent a short story about various people doing various things.

*The researcher decided to delay the administration of both pretests until the second week of the course when class enrollment had become stabilized.
You are going to describe a total of three such picture stories. You will see that all three picture stories contain eight frames numbered in order, from one to eight. Each picture story, however, will be very different from the other two picture stories, as far as content is concerned. Here is how you are going to take the test:

1. You will sit in alternate carrels in which I have already placed a test booklet and a paper packet for each of you. The test booklet contains the three picture stories, and the paper packet contains three sheets of lined paper, one for each composition.

2. You may begin writing as soon as you take your seat.

3. You may not use any dictionaries, grammar books or other materials while taking the test.

4. You may not speak to other students while taking the test. If you need assistance, raise your hand and I will come to your carrel and help you.

5. You will have as much time as you wish to complete the three picture compositions.

6. When you have finished writing your three compositions, read them silently to yourselves and check them carefully for mistakes. Then, hand in the compositions to me.

7. Do you have any questions now about the test or the test instructions?

8. Please take the pencils that I asked you to bring with you today. If you forgot to bring a pencil, I have one you may borrow.

9. You may now proceed to the testing area and begin writing the three compositions.

When the students had finished writing and checking their composition pretest, their test booklets and paper packets were collected. This procedure ended the administration of the picture composition pretest.

At the class session following the administration of the composition pretest, the subjects were tested for their general knowledge of English grammar, vocabulary and reading comprehension. The researcher told the students the following information about the task
at hand, paraphrased as follows:

The English test you are going to take is called the Michigan Test by many foreign students. The Michigan Test is divided into three parts: grammar, vocabulary and reading comprehension. This test was not designed to measure your mastery of a particular English course or program of study; rather, it will be used in this course to help me to determine your general readiness to study in an English language university, as many of you indicated you will do in the near future. You will take this test twice, once today, and again in the ninth week of the Quarter. The reason you will be tested twice is to measure how well and how much your ability to understand written English has progressed from now to almost the end of the course.

The researcher then followed the instructions for the administration of the Michigan Test contained in the test Manual. After these instructions were given to the subjects, the following directions were added:

1. You will sit in alternate carrels in which I have already placed a test booklet and an answer sheet for each of you.

2. Do not begin taking the test until I tell you to do so.

3. You may not use any dictionaries, grammar books or other materials while taking the test. Please take only the #2 pencils you brought with you today. If you forgot to bring a #2 pencil, I have one you may borrow.

4. You may not speak to other students while taking the test. If you need assistance, raise your hand and I will come to your carrel and help you.

5. As I mentioned before, when I read the directions to you from the test Manual, you will have exactly 75 minutes to finish the Michigan Test. You may use your own watch or the large clock above the carrels to watch your time. I will tell you when the 75 minutes have expired.

6. Do you have any questions now about the test or the test instructions?

7. You may now proceed to the testing area.

8. (After everyone was seated,) You may now begin taking the test. You have until __________ o'clock to take the entire test.

When the 75-minute testing period had expired, the subjects' test booklets and answer sheets were collected. This procedure ended the
administration of the pretest of general English language proficiency. All 24 subjects completed both the composition pretest and the Michigan pretest in the second week of the course.

3. The Picture Composition Tasks

At the first class meeting of the third week of the course, the subjects were given an identical picture sequence and a lined sheet of paper. Subjects were asked to sit in alternate learning carrels and were told to describe the picture story as best they could in written English on the lined sheet of paper. Very similar procedural directions used for the administration of the composition pretest were also followed for the administration of this picture composition task. As subjects finished their picture compositions, the researcher collected the picture sequences and the lined sheets of paper on which the compositions were written.

During the remaining 17 class meetings in the six consecutive weeks that followed, all subjects had the opportunity to write 17 additional picture compositions, one at each class meeting. Thus, if students were present at every class meeting beginning in the third week of the course, they would have written a total of 18 compositions in class. If a student was absent from a given class meeting (e.g., #5), but was present at the next class meeting, he would describe the picture story assigned to that particular class period (e.g., #6). Therefore, at any given class meeting, all subjects who were present described the identical picture story assigned to that day. This procedure was followed in order to minimize experimental interference which might have
resulted if any exchange of information between students took place regarding the situational content of the picture sequences.

4. The Treatments

The treatment phase of this study was based upon the operationalized criteria developed by the researcher to classify student written errors as either global or local errors (see Chapter I). The researcher used these criteria as a guide to maximize the consistency of correction for each subject’s composition pre- and posttests as well as for the 18 picture story compositions.

The 18 in-class compositions were corrected according to a subject’s random preassignment to either Treatment \( A_1 \) (correction of global errors only), or to Treatment \( A_2 \) (correction of all global and local errors). To illustrate how each of these two correction methods were undertaken, the writer presents below two identical picture story compositions. The first composition illustrates Treatment \( A_1 \), the second one illustrates Treatment \( A_2 \).

**ILLUSTRATION OF TREATMENT \( A_1 \): CORRECTION OF GLOBAL ERRORS ONLY**

his

In the summer Mr. Smith and her wife leave the camping.

on

They fishing in the lake. She lost her watch in the lake. She

is sick. Mr. Smith fishing one big fish. They walking at home.

She craing. He said "No problem. I buy new watch."
In the home she cooking the big fish. She cutting the fish.

In the fish is her watch. Mr. Smith and her wife are happy because she has her watch and he not buy new watch.

ILLUSTRATION OF TREATMENT A2: CORRECTION OF GLOBAL AND LOCAL ERRORS

summer his camp
In the summer Mr. Smith and her wife leave the camping.

are on
They are fishing in the lake. She lost her watch in the lake. She

is catching a are to the camp
is sick. Mr. Smith is fishing one big fish. They are walking at home.

is crying will a
She is crying. He said "No problem. I will buy a new watch."

At camp is
In the home she is cooking the big fish. She is cutting the fish.

In the fish is her watch. Mr. Smith and her wife are happy because she has her watch and he not buy a new watch.

As a remedial exercise, each of the 18 corrected picture story compositions and its corresponding picture sequence were returned to students at the last half-hour of the next class meeting. During that time, students were asked to study their compositions carefully. The following procedures were adopted and strictly followed during this feedback period:

1. Subjects sat in alternate learning carrels as before.
2. Subjects could begin studying their errors immediately.
3. Subjects were not permitted to use any dictionaries, grammar books or other materials while studying their errors.

4. Subjects were asked to study their errors alone in order not to communicate with any other subject who may have received a different error correction treatment. When individual subjects requested assistance from the researcher, precautions were taken to avoid introducing any experimenter bias.

5. Subjects were permitted to use an unlimited amount of time to study their errors.

6. Although the subjects were permitted to write on their corrected compositions, they were not permitted to take home notes concerning these compositions. There were two reasons for following this procedure: a) Seriously incorrect sentences were rendered understandable, yet often remained ungrammatical for students receiving correction of only their global errors. If a student from this treatment group copied his ungrammatical sentences, he could have shown them to native speakers of English who might well have pointed out his incorrect sentences. Such information would have confused the student who had thought that his sentences had been completely corrected. This confusion could have resulted in an explanation which might have contaminated the effect of the experimental treatment. b) Subjects who received different treatments might have compared notes and discovered that their compositions were corrected differently. Such a discovery could also have significantly contaminated the experimental treatment effect.

As they finished studying their errors, the students returned their picture story composition and its accompanying picture sequence to
their teacher in exchange for another sheet of lined paper and the picture sequence assigned to that particular class meeting. The students then returned to their learning carrels where they wrote a new composition based on the description of the new picture sequence.

From the third to the eighth week of the English language and culture course, students studied their errors and wrote a new picture story composition during the last half hour of each class meeting. Students who were absent from any given class meeting studied their corrected composition at the next class meeting they attended. It was found that one-half hour gave most students time to study their errors on one composition and to write another picture story composition. Those students who finished these two tasks in less than one-half hour, could begin their homework for the next class meeting, or leave class early, if they wished. Those few students who could not finish these two tasks in one-half hour, were given additional time to do so.

5. The Posttests

The English composition test and the Michigan Test were administered as posttests at the beginning of the ninth week of the course. Except for the obvious deletion of the reference to retaking the pretests in the ninth week, the researcher followed the identical testing procedures used for the two pretests as described on pages 42-44 in this Chapter. All 24 subjects completed both the composition posttest and the Michigan posttest in the ninth week of the course. The completion of these two posttests ended the procedural phase of the study, and the data analysis phase was begun.
Design

This study utilized a 2 X 2 Treatment-By-Blocks design, comprising two types of error correction treatment: correction of global errors only (A₁), and correction of all global and local errors (A₂); and two group levels of pretest global error ratio: one group consisted of students who obtained a low global error ratio (B₁), and one group consisted of students who obtained a high global error ratio (B₂). An analysis of variance was run to test the statistical significance of the main and interaction effects of the two types of error correction treatment, and the two group levels of pretest global error ratio on three dependent variables: global error ratio, local error ratio, and Michigan score, as measured by the posttests.
CHAPTER IV
DATA ANALYSIS

The analysis of the data is presented in four sections: 1) the analysis of the global error ratio, 2) the analysis of the local error ratio, 3) the analysis of the Michigan score, and 4) the analysis of the six error types described in this study (see Chapter I).

Analysis of the global error ratio

The means and standard deviations of the averaged global error ratios are presented in Table 2. In Table 3 the results of the 2 X 2 weighted-means analysis of variance are presented for the posttest global error ratio.

Hypothesis I: There are no significant differences attributable to type of error correction treatment on the global error ratio variable as measured by the picture composition posttest.

An examination of Table 3 indicates that this null hypothesis was retained, $F(1, 20) = .067, p > .05$. Across experimental groups, neither the correction of global errors only, nor the correction of all global and local errors made any significant difference in the improvement of their global error ratio after a six-week treatment period.

Hypothesis II: There are no significant differences attributable to group level of pretest global error ratio, on the global error ratio variable, as measured by the picture composition posttest.
TABLE 2

MEANS AND STANDARD DEVIATIONS FOR THE POSTTEST GLOBAL ERROR RATIO BY TYPE OF ERROR CORRECTION TREATMENT AND PRETEST LEVEL OF GLOBAL ERROR RATIO

<table>
<thead>
<tr>
<th>Correction Treatment</th>
<th>Low</th>
<th></th>
<th></th>
<th>High</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Only Global Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected</td>
<td>7</td>
<td>.022</td>
<td>.014</td>
<td>6</td>
<td>.034</td>
<td>.031</td>
</tr>
<tr>
<td>Global and Local Errors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected</td>
<td>7</td>
<td>.021</td>
<td>.014</td>
<td>4</td>
<td>.037</td>
<td>.017</td>
</tr>
<tr>
<td>Totals</td>
<td>14</td>
<td>.022</td>
<td>.013</td>
<td>10</td>
<td>.035</td>
<td>.025</td>
</tr>
</tbody>
</table>
### TABLE 3
ANALYSIS OF VARIANCE OF THE GLOBAL ERROR RATIO BY ERROR CORRECTION TREATMENT AND LEVEL OF PRETEST GLOBAL ERROR RATIO

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error Correction Treatment (A)</td>
<td>1</td>
<td>.000b</td>
<td>.000b</td>
<td>.005</td>
<td>.99</td>
</tr>
<tr>
<td>Pretest Global Error Ratio Level (B)</td>
<td>1</td>
<td>.001</td>
<td>.001</td>
<td>2.710</td>
<td>.11</td>
</tr>
<tr>
<td>Interaction (A X B)</td>
<td>1</td>
<td>.000b</td>
<td>.000b</td>
<td>.067</td>
<td>.99</td>
</tr>
<tr>
<td>Residual</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>.000b</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Probability of rejecting a true null hypothesis  
  p: Computer program rounded these values to only three digits

An examination of Table 3 indicates that this null hypothesis was 
retained, $F(1, 20) = 2.710, p > .05$. Across experimental groups, placing 
students into either a low or a high group based on their pretest global 
error ratio made no significant differences in the improvement of their 
global error ratio after a six-week treatment period.

**Hypothesis III:** There is no significant interaction between type 
of error correction treatment, and group level of the pretest global 
error ratio, on the global error ratio variable, as measured by the 
picture composition posttest.

An examination of Table 3 indicates that this null hypothesis was 
retained, $F(1, 20) = .067, p > .05$. 
Subjects who obtained a low global error ratio on the composition pretest and had only their global errors corrected on their in-class compositions, showed a very slight difference in the improvement of their posttest global error ratio, compared to other students in the low pretest global error ratio group who had all their global and local errors corrected on their in-class compositions.

Subjects who obtained a high global error ratio on the composition pretest and had only their global errors corrected on their in-class compositions also showed a slight difference in the improvement of their posttest global error ratio, compared to other students in the high pretest global error ratio group who had all their global and local errors corrected on their in-class compositions.

Analysis of the local error ratio

The means and standard deviations of the averaged local error ratios are presented in Table 4. In Table 5 the results of the 2 X 2 weighted-means analysis of variance are presented for the posttest local error ratio.

Hypothesis IV: There are no significant differences attributable to type of error correction treatment on the local error ratio variable, as measured by the picture composition posttest.

An examination of Table 5 indicates that this null hypothesis was retained, $F(1, 20) = 1.700, p > .05$. Across experimental groups, neither the correction of global errors only, nor the correction of all global and local errors made any significant difference in the improvement of their local error ratio after a six-week treatment period.
<table>
<thead>
<tr>
<th>Correction Treatment</th>
<th>Pretest Level of Global Error Ratio</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
<td>n</td>
<td>Mean</td>
</tr>
<tr>
<td>Only Global Errors Corrected</td>
<td>7</td>
<td>.113</td>
<td>.054</td>
<td>6</td>
<td>.166</td>
</tr>
<tr>
<td>Global and Local Errors</td>
<td>7</td>
<td>.112</td>
<td>.055</td>
<td>4</td>
<td>.098</td>
</tr>
<tr>
<td>Corrected</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>14</td>
<td>.112</td>
<td>.052</td>
<td>10</td>
<td>.139</td>
</tr>
</tbody>
</table>
TABLE 5
ANALYSIS OF VARIANCE OF THE LOCAL ERROR RATIO BY ERROR CORRECTION TREATMENT AND LEVEL OF PRETEST GLOBAL ERROR RATIO

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error Correction Treatment (A)</td>
<td>1</td>
<td>.005</td>
<td>.005</td>
<td>1.700</td>
<td>.21</td>
</tr>
<tr>
<td>Pretest Global Error Ratio Level (B)</td>
<td>1</td>
<td>.003</td>
<td>.003</td>
<td>1.190</td>
<td>.29</td>
</tr>
<tr>
<td>Interaction (A X B)</td>
<td>1</td>
<td>.006</td>
<td>.006</td>
<td>2.277</td>
<td>.14</td>
</tr>
<tr>
<td>Residual</td>
<td>20</td>
<td>.056</td>
<td>.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>.071</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Probability of rejecting a true null hypothesis

Hypothesis V: There are no significant differences attributable to group level of pretest global error ratio, on the local error ratio variable, as measured by the picture composition posttest.

An examination of Table 5 indicates that this null hypothesis was retained, $F(1, 20) = 1.190, p > .05$. Across experimental groups, placing students into either a low or a high group based on their pretest global error ratio made no significant differences in the improvement of their local error ratio after a six-week treatment period.

Hypothesis VI: There is no significant interaction between type of error correction treatment, and group level of the pretest global error ratio, on the local error ratio variable, as measured by the picture composition posttest.
An examination of Table 5 indicates that this null hypothesis was retained, $F(1, 20) = 2.277, p > .05$.

Subjects who obtained a low global error ratio on the composition pretest and had only their global errors corrected on their in-class compositions, showed a very slight difference in the improvement of their posttest local error ratio, compared to other students in the low pretest global error ratio group who had all their global and local errors corrected on their in-class compositions.

Subjects who obtained a high global error ratio on the composition pretest and had only their global errors corrected on their in-class compositions, showed a very substantial (but statistically insignificant) difference in the improvement of their posttest local error ratio, compared to other students in the high pretest global error ratio group who had all their global and local errors corrected on their in-class compositions.

An examination of Table 4 indicates that the students in the high group who had all their global and local errors corrected during the six-week treatment period received an average of .098 on their posttest local error ratio as opposed to an average of .166 for students in the high group who had only their global errors corrected during the same period. This finding is not surprising because the students in the high group who had only their global errors corrected were not made aware of the many local errors they produced on their in-class compositions.

The students in the low group who had all their global and local errors corrected did not obtain a very different local error ratio on the posttest than other students in the low group probably because all
students in this low group tended to make substantially fewer local
errors in their compositions than students in the high group. In other
words, students in the high group had more potential room for improve­
ment of their local error ratio compared to students in the low group.

Analysis of the Michigan score

The means and standard deviations of the averaged Michigan scores
are presented in Table 6. In Table 7 the results of the 2 x 2 weighted­
means analysis of variance are presented for the posttest Michigan score.

Hypothesis VII: There are no significant differences attributable
to type of error correction treatment on the Michigan score variable, as
measured by the Michigan (post)Test of English Language Proficiency.

An examination of Table 7 indicates that the null hypothesis was
retained, $F(1, 20) = .029, p > .05$. Across experimental groups, neither
the correction of global errors only, nor the correction of all global
and local errors made any significant differences in the improvement of
their Michigan score after a six-week treatment period.

Hypothesis VIII: There are no significant differences attributable
to group level of pretest global error ratio on the Michigan score vari­
able as measured by the Michigan (post)Test of English Language Profi­
ciency.

An examination of Table 7 indicates that this null hypothesis was
retained, $F(1, 20) = .029, p > .05$. Across experimental groups, placing
students into either a low or a high group based on their pretest global
error ratio made no significant differences in the improvement of their
Michigan score after a six-week treatment period.
TABLE 6
MEANS AND STANDARD DEVIATIONS FOR THE POSTTEST MICHIGAN SCORE BY TYPE OF ERROR CORRECTION TREATMENT AND PRETEST LEVEL OF GLOBAL ERROR RATIO

<table>
<thead>
<tr>
<th>Correction Treatment</th>
<th>Pretest Level of Global Error Ratio</th>
<th>Low</th>
<th></th>
<th></th>
<th>High</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Only Global Errors</td>
<td>Corrected</td>
<td>7</td>
<td>55.4</td>
<td>20.6</td>
<td>6</td>
<td>43.0</td>
<td>13.9</td>
</tr>
<tr>
<td>Global and Local Errors</td>
<td>Corrected</td>
<td>7</td>
<td>55.1</td>
<td>22.7</td>
<td>4</td>
<td>46.8</td>
<td>16.5</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>14</td>
<td>55.3</td>
<td>20.8</td>
<td>10</td>
<td>44.5</td>
<td>14.2</td>
</tr>
</tbody>
</table>
TABLE 7
ANALYSIS OF VARIANCE OF THE MICHIGAN SCORE BY ERROR CORRECTION TREATMENT AND LEVEL OF PRETEST GLOBAL ERROR RATIO

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error Correction Treatment (A)</td>
<td>1</td>
<td>10.848</td>
<td>10.848</td>
<td>.029</td>
<td>.99</td>
</tr>
<tr>
<td>Pretest Global Error Ratio Level (B)</td>
<td>1</td>
<td>655.165</td>
<td>655.165</td>
<td>1.766</td>
<td>.20</td>
</tr>
<tr>
<td>Interaction (A X B)</td>
<td>1</td>
<td>23.188</td>
<td>23.188</td>
<td>.063</td>
<td>.99</td>
</tr>
<tr>
<td>Residual</td>
<td>20</td>
<td>7419.301</td>
<td>370.965</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>8131.934</td>
<td>353.562</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Probability of rejecting a true null hypothesis

Hypothesis IX: There is no significant interaction between type of error correction treatment, and group level of pretest global error ratio, on the Michigan score variable as measured by the Michigan (post)Test of English Language Proficiency.

An examination of Table 7 indicates that this null hypothesis was retained, $F(1, 20) = .063$, $p > .05$.

Subjects who obtained a low global error ratio on the composition pretest and had only their global errors corrected on their in-class compositions, showed a very slight difference in the improvement of their posttest Michigan score, compared to other students in the low pretest global error ratio group who had all their global and local errors corrected on their in-class compositions.
Subjects who obtained a high global error ratio on the composition pretest and had only their global errors corrected on their in-class compositions showed a small increase of almost 4 percent on their post-test Michigan score, compared to other students in the high global pretest error ratio group who had all their global and local errors corrected on their in-class compositions.

Analysis of the six error types

The final section of the analysis of the data reports the major problems that students generally encountered in each of the six error types described in this study.

1. Global lexical errors accounted for most of the three global error types, for two specific reasons:
   
   a. Many foreign students were unable to produce some of the nouns, verbs, adjectives and adverbs that native speakers of English would most likely use for describing the picture stories used in this study. Because these students were not permitted to use bilingual dictionaries or to speak to one another while writing their picture story compositions, they resorted to a variety of strategies to communicate their lack of knowledge of these lexical items. Apart from several subjects who cleverly avoided taking the risk of producing any errors when faced with overwhelming demands upon their limited lexical knowledge, students used at least three strategies to communicate their lexical deficiencies in English: line replacement (e.g., "Two boys are playing in the camp with a __"), ellipsis replacement (e.g., "The boy took
the clothe from the ...."), and question mark replacement (e.g., "Two boys are beginning to play the ? when it is windy"). Occasionally, a student simply omitted the lexical item all together, either accidentally or intentionally (e.g., "They think that have to go up to in there").

In an effort to communicate their description of the picture stories despite their inadequate lexical knowledge, many students took an even greater risk of producing errors. To illustrate, students used at least three different strategies to convey the meaning for the noun "fence" in their compositions, and produced global lexical errors in doing so: circumlocation (e.g., "leap," "door," "walk," "gate,"); approximation (e.g., "wall," "hedge," "railing"); and word coinage (e.g., "penetre"). Occasionally, students produced global lexical errors simply by using an item that changed the sentences' meaning (e.g., "cattle" instead of "sheep"), or made no sense at all (e.g., "hours" instead of "wristwatch").

b. When students knew an approximate pronunciation of the nouns, verbs, adjectives and adverbs relevant to their interpretation of the picture stories, they were often unable to correctly spell these lexical items and, consequently, they produced global errors. To illustrate some typical examples of global lexical errors caused by misspelling, one student wrote the following sentence: "The wife coke the fish but in the fishs have the washes." What the student actually meant to write was: "The wife cut the fish, and in the fish there was the watch." In this student's incorrect sentence, the verb "coke" and the noun "washes" were
tallied as global lexical errors due to incorrect spelling. (A global morphological error would also be recorded since the picture story clearly shows the fish contained a single watch.) This writer proposes that the chief cause for misspelled lexical items that seriously impaired communication, resulted from the students' lack of adequate knowledge of correct sound-symbol correspondence in written English, as well as interference from subjects' native language phonological patterns.

2. **Global morphological errors** accounted for the smallest number of global errors. This error type occurred most frequently when Verb + *ing* was substituted for Verb + *ed* (e.g., "The girl is surprising" instead of "The girl is surprised"). This particular type of global error seemed to occur most often with verbs and adjectives expressing an emotion (e.g., "exciting" instead of "excited;" "interesting" instead of "interested"). Occasionally, when a picture story portrayed only one person or object, a student would consistently refer to this noun in the plural without any indication of singularity in the context of the composition (see the example "washes" in the preceding paragraph). Sometimes, this phenomenon was reversed (e.g., "The farmer took the animal to the barn" instead of "The farmer took the animals to the barn").

3. **Global syntactic errors** occurred most frequently with two different grammatical parts of writing:

   a. The misuse of prepositions caused the native speakers of English to misinterpret the student's intended meaning (e.g., "He went up downstairs to see this amazing thing" instead of "He went downstairs..."
to see this amazing thing;" "They worked and at last they found their sheeps without frozen" instead of "They worked and, at last, they found their sheep were not frozen"). Sometimes the omission of prepositions caused global syntactic errors to occur (e.g., "They are going a brizde" instead of "They are going on a bridge").

b. The misuse of pronouns also resulted in frequent misinterpretations of meaning. This was especially true when subject or possessive pronouns were misused (e.g., "When the woman watch this he is scare and cried" instead of "When the woman watches this, she is scared and cries;" "The wife of the family man wants some ornaments from his husband" instead of "The wife of the family man wants some ornaments from her husband"). Sometimes, students omitted a pronoun, thus causing considerable ambiguity (e.g., "Her husband followed her carring the fish which was hunting for their eating" instead of "Her husband followed her carrying the fish he had caught for their meal").

4. Local lexical errors accounted for one-third of all global and local errors on students' pre- and posttest compositions. Two of the greatest problems that students had with this error type were the following, described in the order of their frequency:

a. By far the greatest difficulty students encountered with local lexical errors (perhaps as much as 60% of all local lexical errors) was to correctly spell the many nouns, verbs, adjectives and adverbs they used in their picture story narrations. Although the following sentences are typical representations of such misspellings, the native speaker of English will have little difficulty in understanding their meaning:
"The plane went to sky."
(The plane went up into the sky)

"Then the boy goes up the three and the girl helps him."
(Then the boy climbs up the tree and the girl helps him.)

"You must be carefull, I'm not going to buy onother watch for you."
(You must be careful; I'm not going to buy another watch for you.)

b. Students also made many local lexical errors by choosing the incorrect lexical item to describe the picture stories. The following examples serve to illustrate typically incorrect lexical choices made by students:

"He finded one bird-home and her eggs."
(He found a bird's nest and its eggs.)

"Two boys are sliccing tree know at night."
(Two boys are sawing down a tree now at night.)

"The small boat runs fast to the beach."
(The small boat moves fast toward the beach.)

"Before the sleep, he turn-off the curtains on the window."
(Before going to sleep, he closes the window curtains.)

5. Local morphological errors appeared in the compositions of all 24 students, in varying frequencies. Most of these errors occurred in two specific areas:

a. Lack of subject-verb agreement accounted for a very large portion of all local morphological errors as typified by the following sentence: "The little brother look at his sisters who play badminton" instead of "The little brother looks at his sisters who play badminton."

b. Errors resulting from the misuse and malformation of regular and irregular past tense forms pervaded the compositions of even the most advanced students in the class. Several examples will serve to
illustrate this problem:

"They digged around the small tree."
(They dug around the small tree.)

"Their mother didn't spanked them."
(Their mother didn't spank them.)

"It's impossible it has grew very rapidly."
(It's impossible that it has grown very rapidly.)

6. Local syntactic errors also accounted for approximately one-third of all global and local errors students made on the composition pre- and posttests. Three of the greatest problems that students had with this error type are described below.

a. Although the use of prepositions caused all 24 subjects a great deal of difficulty, it was found that the combinations of in-on and to-at were especially troublesome. Students experienced two problems with prepositions. One problem was the inappropriate use of prepositions, as illustrated by the following examples taken from several student's compositions:

"When he rides bicycle's, one car hits to him."
(When he is riding his bicycle, a car hits him.)

"They are enjoying each other at living room."
(They are visiting with each other in the living room.)

"There are also a man who is saying good-bye with his wife."
(There also is a man who is saying good-bye to his wife.)

Another problem that students had with prepositions was omitting them in their sentences, as shown in these examples:

"He is listening the talk of the man."
(He is listening to the man talking.)

"They are running at the river that is close the house."
(They are running toward the river which is close to the house.)
b. Incorrect word order also caused many problems for students, as indicated in the following sentences:

"They enjoy highly the cooking."
(They highly enjoy the cooking.)

"I did it well until now without it."
(Up to now, I did well without it.)

"Well, nothing is forever," told them their mother."
("Well, nothing is forever," their mother told them.)

The frequencies of error types on the composition pre- and post-tests are summarized in Table 8.

<table>
<thead>
<tr>
<th>Error Type</th>
<th>Pretest Frequency</th>
<th>Posttest Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Syntactic Errors</td>
<td>535</td>
<td>519</td>
</tr>
<tr>
<td>Local Lexical Errors</td>
<td>501</td>
<td>417</td>
</tr>
<tr>
<td>Local Morphological Errors</td>
<td>279</td>
<td>318</td>
</tr>
<tr>
<td>Global Lexical Errors</td>
<td>186</td>
<td>179</td>
</tr>
<tr>
<td>Global Syntactic Errors</td>
<td>81</td>
<td>84</td>
</tr>
<tr>
<td>Global Morphological Errors</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Total Errors</td>
<td>1,592</td>
<td>1,524</td>
</tr>
</tbody>
</table>
The reader will notice by examining Table 8 that student errors did not appear to decrease substantially from the composition pretest to the composition posttest. Actually, the number of errors students produced did decrease substantially, but because students wrote many more words on the composition posttest, the amount of errors they made on that test increased significantly. It was found that the number of words written by students on the composition posttest (10,366 words) increased by exactly 30 percent over the number of words they wrote on the composition pretest (7,966). A possible cause for this substantial increase in number of words may be a function of practice in describing picture stories over the six-week treatment period.
CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This empirical study was conceived and conducted primarily to provide information on the effects of two types of direct teacher correction upon the communicative adequacy and linguistic accuracy of compositions written by adult learners of English as a foreign language. The second reason for undertaking this exploratory study was to examine students' written errors in order to determine the major problems that occurred when foreign students were faced with necessity of expressing themselves in English.

The review of literature on the correction of second language errors, as viewed from the perspective of error analysis, appears to be both speculative and scant. The researcher found very little empirical research related specifically to the correction of written errors produced by second language learners. Indeed, there appear to be no widely accepted linguistic criteria of grammatical and lexical correction in foreign language teaching, and no standards on whether, when, how or which student errors should be corrected or who should correct them.

The researcher developed criteria to classify student errors as either global or local errors, based on the definition of these two
terms by Burt and Kiparsky (1972). To recapitulate, a global error is a communicative error which causes a native speaker of English to misinterpret a written message or to consider the message incomprehensible in the context of the error itself. A local error, on the other hand, is a linguistic error which makes a sentence appear ungrammatical or unidiomatic but, nevertheless, causes a native speaker of English little or no difficulty in understanding a sentence's intended message, given its contextual framework. Each global and local error was further classified in one of three subcategories developed by the researcher. These three subcategories dealt with the lexical, morphological and syntactic items and structures of English which were either misused, omitted or malformed by the non-native speakers of that language in their written compositions.

The study was undertaken during an eight-week period at The Ohio State University in the Spring Quarter of 1976. The sample population of the study consisted of 24 foreign-born adults who voluntarily enrolled in a course of intermediate English as a foreign language.

In the second week of their English course, students took two pretests: one test to measure their ability to communicate in written English by describing three picture stories, and one test to measure their proficiency in English grammar, vocabulary and reading comprehension on the Michigan Test of English Language Proficiency (Form A). The researcher calculated a global error ratio, consisting of the total number of global errors a student produced on the composition pretest divided by the total number of words written by that student on that test.
Then the researcher formed two groups: students who obtained a low global error ratio \( (B_1) \), and students who obtained a high global error ratio \( (B_2) \). Students in each of these two groups were randomly assigned to one of two error correction treatments: correction of global errors only \( (A_1) \), and correction of all global and local errors \( (A_2) \).

Beginning in the third week of their English course, and extending over the following six consecutive weeks, all students were given the opportunity to describe in written English 18 different picture stories. The researcher corrected each of these picture story compositions according to the particular Treatment \( (A_1 \) or \( A_2) \) to which individual students had been randomly assigned. When students received their corrected composition and its corresponding picture sequence at the next class meeting, they studied them alone in separate learning carrels. As each student completed this task, his corrected composition and picture sequence were collected, and he was given another picture story to describe in written English.

In the ninth week of their English course, students were administered two posttests consisting of the identical measures used for the two pretests.

This study utilized a 2 X 2 Treatment-By-Blocks design, comprising two types of error correction treatments: correction of global errors only, and correction of all global and local errors; and two group levels of pretest global error ratio: one group consisted of students who obtained a low global error ratio, and one group consisted of students who obtained a high global error ratio. An analysis of
variance was run to test the statistical significance of the main and interaction effects of the two types of error correction treatment, and the two group levels of pretest global error ratio on three dependent variables: global error ratio, local error ratio, and Michigan score, as measured by the posttests.

The analysis of variance for each of these three dependent variables revealed no significant differences, at the .05 alpha level, for the main and interaction effects of the type of error correction treatment, and the group levels of pretest global error ratio.

The major problems that students encountered when faced with the necessity to express themselves in English are summarized below in each of the six error types described in Chapter I of this study.

**Global lexical errors** accounted for most of the global errors on students' compositions for two reasons: 1) students lacked sufficient knowledge of the nouns, verbs, adjectives and adverbs they needed to describe the picture stories, and 2) students lacked sufficient knowledge of the correct spelling of those lexical items which they did use in their picture story compositions.

**Global morphological errors** were few in number compared to the higher frequencies of other global errors. This error type occurred most often when Verb + ing was substituted for Verb + ed (e.g., "The girl is surprising" instead of "The girl is surprised").

**Global syntactic errors** occurred most frequently when prepositions and pronouns were either misused or omitted on students' compositions, thus resulting in a misinterpretation of a sentence's message.
Local lexical errors accounted for one-third of all errors on students' pre- and posttest compositions. By far the greatest difficulty that students had with this error type was the incorrect spelling of the nouns, verbs, adjectives, and adverbs they used to express their interpretations of the picture stories. Students also made many local lexical errors when they substituted near synonyms for describing the lexical content of the picture stories (e.g., "The small boat runs fast to the beach" instead of "The small boat moves fast toward the beach").

Local morphological errors appeared on the compositions of all 24 students in varying frequencies. A large percentage of these errors were caused by lack of subject-verb agreement, and a smaller number of them resulted from the misuse and malformation of regular and irregular past tense forms (e.g., "Their mother didn't spanked them;" and "They digged around the small tree").

Local syntactic errors accounted for approximately one-third of all global and local errors made on students' pre- and posttest compositions. Two major problems students had with this error type were the misuse and omission of prepositions, and incorrect word order.

Conclusions and recommendations

1. The global/local error distinction developed by Burt and Kiparsky has served as a useful theoretical base for developing criteria for the classification of students' written errors. These criteria should be further refined so that errors can be classified more precisely and consistently. One way to refine the classification would be
to add two more error types to the six used in this study, namely, global and local orthographic errors.

Another way to pinpoint students' problems of adequate and accurate communication would be to add a subscript to each error type. For example, suppose a student wrote the following two sentences: "So man who live in building was very angry. He get water in large punch glass and he try put water over cat." The two most frequent problems concerning accurate communication in these sentences are the omission of articles (local syntactic errors) and the lack of subject-verb agreement (local morphological errors). One could add a subscript to each of these two error types as follows: LSa would signify a local syntactic error due to misuse, omission or malformation of a definite or indefinite article; LMs-V would represent a local morphological error due to misuse, omission or malformation of an inflection to signal subject-verb agreement.

Probably the most practical use of the global/local error classification system for teachers of English as a foreign language is a fast and simple technique for diagnosing those errors which reflect the greatest difficulties of adequate and accurate communication experienced by individual students. The system could be learned by most English teachers without expending too much time or effort, and would yield a considerable amount of useful diagnostic information on each of their students. Furthermore, this classification system could be used to identify errors in written as well as oral compositions, especially if those compositions are elicited by some sort of pictorial stimuli.
with which the intended meaning of students' sentences could be easily verified.

2. In general, picture stories served appropriately as a semi-controlled technique for eliciting written communication from students. Furthermore, these students commented that the picture stories provided a challenge to their ability to write clearly in English about their own interpretations of each picture sequence. Unfortunately, the lexical and grammatical demands of the particular picture stories used in the study were often beyond the linguistic repertoire of many students. This writer suggests, therefore, that if teachers wish to use picture stories as stimuli for eliciting written (or oral) sentences from their students, the picture stories should be carefully selected to include lexical items and grammatical structures within the linguistic range of most students. Another possibility is to teach students the items and basic structures in the picture story that they do not know—before students begin writing their compositions. Students should also be permitted to use bilingual dictionaries in combination with monolingual dictionaries when describing these picture stories in written English.

3. Because relatively few students participated in this study, its findings may not be generalizable to other foreign students who were somewhat equally proficient in English, and who expressed similar communication goals.

Future research on error correction treatments of students' written compositions should focus on several specific variables. This
study used a rather direct approach to correcting students' written work. It may well be that less direct methods and techniques are necessary to help students recognize their errors, such as the use of a coding system to identify certain errors which a learner customarily makes. The student would correct his coded errors either alone or with another student, then verify his corrections with the teacher in a private conference.

Another effective strategy may be to systematically correct particular kinds of global or local error types that a student frequently makes on his compositions. For example, the teacher may want to concentrate only on a student's frequent errors resulting from the misuse or omission of prepositions. As a student increasingly uses prepositions correctly and confidently on his subsequent compositions, he would begin concentrating his attention on other kinds of high-frequency error types, until his written work is acceptable in terms of his pre-established writing goals.

There is a great need to conduct additional empirical studies on error correction using intact classes, large numbers of students, and various instructional levels of English as a foreign language. Information should be gathered on the error correction strategies used by teachers in adult basic education classes, intensive language programs and academically-oriented university courses, among other instructional situations. This information could be disseminated, evaluated and adapted by English teachers to help foreign students to solve their communicative and linguistic problems reflected in their writings. The
results of these studies could also help to guide textbook writers in designing more relevant learning materials than are currently available in English language teaching.

4. Intermediate learners of English as a foreign language need to greatly improve their vocabulary-building skills, preferably in communicative situations, if they are going to communicate adequately in written English (i.e. reduce their global error ratio). This conclusion is in agreement with Richards' (1976) recommendation that "beyond the elementary levels of instruction, a major feature of a second language program should be a component of massive vocabulary expansion" (p. 84). Richards suggests that a very effective technique for developing students' vocabulary is the cloze exercise.

Intermediate students who need or want to communicate more accurately in written English must concentrate on remediating errors in subject-verb agreement and in intelligible--yet misspelled--lexical items (i.e. reduce their local error ratio). Asking students to read over their compositions to check for these two kinds of errors should prove very beneficial to them. The extensive use of dictations should also be helpful to students who need to improve their ability to correctly spell English words.

5. Some scholars believe that those errors which seriously interfere with the communication of a second language learner's message (i.e. global errors) are not the only kinds of errors on which teachers should place high priority for remediation. Corder (1975) and Richards
(1973a) propose that those errors which particularly annoy native speakers should be eliminated early from students' writing (and speech) in order that it may be more socially accepted in the society where that language predominates.

The researcher and several of the native speakers of English consulted in this study, found that certain errors produced by learners (such as lack of subject-verb agreement), seemed to be somewhat "irritating to the eye," so to speak, especially when these kinds of errors appeared frequently in students' compositions. This writer, in agreement with Richards (1973a), proposes that empirical research be undertaken to identify the specific errors which most annoy native speakers of English. Such studies could have far-reaching pedagogical implications for English as a foreign language.
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