A study to determine the affect [sic] of introducing remedial English usage instruction in collegiate business communications
by Lorraine Machina Steerey

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University
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Abstract:
The principal problem of this study was to compare student achievement in business letter writing and traditional coursework in business communications courses following an outline excluding remedial English usage instruction with student achievement in business communications courses following an outline including remedial English usage instruction.

The second problem of this study was to compare the reliability of holistic grading with analytical grading when used to evaluate student achievement in business letter writing.

This study was conducted Winter Quarter 1983 at Montana State University and Eastern Montana College.

Students were given Barton's Language Skills Test for college students in business communications as a pretest. The pretest also included the writing of two business letters.

Control groups received no formal instruction in remedial English fundamentals. The experimental group received instruction in remedial English fundamentals. The experimental group received instruction in remedial English fundamentals by the lecture-discussion method.

After both groups completed the business letter writing unit, they took the postinstructional tests. These tests consisted of Barton's Language Skills Test and the writing of two business letters.

The reliability of holistic and analytical grading was compared. Sample letters were scored by the holistic grading method by trained readers. Then these letters were scored analytically by the same trained readers. The reliability of these methods was determined by using Kuder-Richardson's formula.

Two-way analysis of variance was used to statistically compare student achievement of the groups which received remedial English usage instruction with those students who did not receive this instruction.

The findings of this study indicate that formal instruction in remedial English usage does not significantly affect a student's ability to write a business letter. However, this instruction does significantly increase student formal knowledge of English usage.

The findings of this study also support the use of holistic grading for the judging of student achievement in business letter writing.

A STUDY TO DETERMINE THE AFFECT OF INTRODUCING REMEDIAL ENGLISH USAGE INSTRUCTION IN COLLEGIATE BUSINESS COMMUNICATIONS

by

Lorraine Machina Steerey

A thesis submitted in partial fulfillment
of the requirements for the degree

of

Doctor of Education

MONTANA STATE UNIVERSITY
Bozeman, Montana

March 1984

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This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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Date May 4, 1984

VITA

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ACKNOWLEDGMENT

The writer is grateful to many persons who helped in the completion of this study. She is especially appreciative of Dr. Eric Strohmeyer for his encouragement and guidance throughout the entire process. Gratitude is expressed to the members of the reading committee, Dr. Daniel Hertz and Dr. William Johnstone. Gratitude is also expressed to the other members of the committee, Dr. Floyd Frost, Dr. Gloria Gregg, and Dr. George McClure. A sincere appreciation is also expressed to the participating instructors of the study, Dr. Carol Austin, Dr. Jan Spicer, and Ms. Virginia Hartman. This same sincere appreciation is also expressed to the evaluators who participated in this study. Ms. Marj Charlier, Ms. Jenny Redfern, and Ms. Lorretta Breslin. Without their willing participation this study would not have been possible.

The writer expresses deep appreciation to the memory of her parents without whose past encouragement she would not have been able to complete a project of this magnitude. The writer also expresses deep appreciation to her husband, Willie, for his patient encouragement and suggestions in making the completion of this study possible. Appreciation is also expressed to Sandra P. Collins for her patience and understanding while this study was completed.

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ABSTRACT

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The findings of this study indicate that formal instruction in remedial English usage does not significantly affect a student's ability to write a business letter. However, this instruction does significantly increase student formal knowledge of English usage.

The findings of this study also support the use of holistic grading for the judging of student achievement in business letter writing.

CHAPTER 1

INTRODUCTION

Sound business communications skills have always been important for success in the business world. Modern technology and new developments in the communications area have only made the need for these skills more important. "We are living in the throes of an 'information explosion,' in an age in which the public demand for accountability requires that about every business transaction be put in writing" (Lacombe and Kane, 1977:24). Hulbert reports that top executives spend as much as 90 percent of their time communicating -- reading, writing, speaking, and listening (1979:10).

Business students without communication skills will find it more and more difficult to succeed. "Students in business communications classes must realize that much of a working day for a businessperson involves use of words, either in sending or receiving some kind of information. Words are expensive tools, and how well these tools are used is an important factor in determining the success or failure of a business" (Stiegler, 1977:15). Business executives readily agree that the "ability to communicate" is a prime requisite for managerial success (Hulbert, 1979:10).

Even though this skill is recognized as extremely important for success in business, employers are finding it increasingly difficult to find business graduates who can write effectively.

In an article Norma Carr-Smith quotes Roy Timmerman, Vice President of the Bank of America, as saying:

> If I must choose hiring an applicant who can write well and one who knows accounting well, I would choose the person who can write well. We can provide the necessary training in accounting principles rather quickly and easily. We don't attempt to tackle writing problems because the training process is a long and difficult process (1977:18).

Many educators and business persons believe that before a person can write well, that person must have a solid foundation in the mechanics of the English language. In a study completed by Gump, one businessperson is reported as stating:

> Basic grammar is the foundation for all business communication. Everyday I receive messages (some from major publishing houses) whose meanings are lost in a tangle of misplaced modifiers, mismated verbs and nouns, etc. The concept statements listed in the survey are all important to business communication, but the basics must come first (1979:128).

With the writing ability of students declining and with the increased demands of business for good writers, business communications professors are facing the dilemma -- should the teaching of English mechanics be included in the basic business communications course?

Statement of the Problem

The principal problem of this study was to compare student achievement in business letter writing and traditional coursework in a business communications course following an outline excluding remedial English usage instruction with student achievement in a business communications course following an outline including remedial English usage instruction.

The second problem of this study was to compare the reliability of holistic grading with analytical grading when used to evaluate student achievement in business letter writing.

Need for the Study

Business executive and business teachers have long recognized the "ability to write is one of the best skills a student can bring to the business world" (Boyd and Inman, 1976:132). Several studies have been completed in which business professors and business executives have been surveyed to determine what they feel are necessary competencies for job success. In most of these studies communication skills rise above the technical skills required in the various business fields. In follow-up studies students indicate a desire for more training in the area of business communications. Recent accounting graduates felt that communication skills were even more important than basic accounting skills (Addams, 1978). After spending a session with top marketing people, one student remarked: "It was interesting to learn that the most important background we should get was English composition. Apparently, you have to be able to get your point across on paper or you've had it" (Madeline, 1980:13).

Allen reported a survey in October, 1979, of employees and teacher-coordinators of cooperative education programs to determine the common deficiencies of younger employees both full- and part-time. The study found that most of these deficiencies were related to a lack of communication skills. One comment made was: "little knowledge of grammatical classification was displayed" (1979:55-56).

Huffman feels students should know standard English because:

> Standard English, used by the business community, is a form with which students need a great deal of help. They should recognize that standard English enables them to communicate with people at the business and professional level, without fear of revealing peculiarities about themselves (1969:9).

Business professors often require that students write effectively without grammar, punctuation, and spelling errors. But, how can students write without these errors, if they do not have a solid foundation in English mechanics. Business communications professors can no longer take the viewpoint that English mechanics should be taught before the students reach the collegiate level. "It is no longer safe to assume that students have mastered grammar in their respective high schools" (White, 1979:21). Many students do not possess these skills when they enter collegiate business communications. Furthermore, employers are demanding that their employees possess these skills.

In an interview which was reported in Nation's Business, William R. Sears, Managing Partner of Sears & Company was asked, "Then, why can't many (businesspersons) communicate well?" Sears responded:

> Because they aren't taught how. The requirement for good, solid grammatical, succinct expression seems to be emphasized, in many colleges today, only in English courses. A student can go through a history course or an engineering course and never learn to write well (1969:83).

Although a few studies have been completed in the area of remedial instruction of English mechanics in business communications courses, most of these studies have compared traditional instruction with computer assisted, programmed, or student self-study instruction. While it has been recognized that students may benefit from these other methods, research has been inconclusive.

Because research has been inconclusive, the method of instruction used becomes a decision to be made by the business communications professor.

Christensen concludes:

> Because there are no conclusive results from this study or previous studies concerning a best method of instruction for presenting English competencies to business writing students, it appears that method of instruction should be an important consideration of teachers involved in curriculum development and instruction of these courses (1979:125).

Christensen also recommends that further research is needed to determine how English mechanics can best be presented to students (1979: 126). This study sought to aid those teachers at the participating institutions in designing their business communications courses so that they can best meet the needs of their students and the businesses they are serving. It attempted to provide these teachers with information on the effectiveness of introducing remedial English instruction into the classroom.

Previous research completed in the area of remedial English instruction has not addressed many of the areas and procedures which were included in this study. This researcher's study was unique in the following areas:

Traditional vs. no instruction. Some of the studies completed compared traditional instruction in remedial English usage with computer-assisted, programmed, or student self-study instruction in remedial English usage with no instruction in remedial English usage. One of these studies was completed in 1972; the actual data was gathered during the 1966-67 school year.

The student body has changed very much since that time. In a study completed by Manship the enrollment of "girls" was so small that no effort was made to determine the difference of achievement according to sex (1974:10). The American Assembly of Collegiate Schools of Business reports that women comprised 35 percent of those students graduating from accredited business schools in 1980 (1982:4).

This trend of a changing student mix in our business classrooms points to the need for further study of the effects of remedial English instruction. Warner feels that we should assess our student body frequently.

> We should assess the verbal skills of our students every few years in order to know what ability range and what verbal shortcomings we are confronted with in the classroom. We cannot assume that this year's student mix is the same as that of even four or five years ago (Warner, 1979:17).

Since the student body changes, research must be current so that professors have up-to-date data on the effectiveness of teaching methods and techniques. The correlation between study scores on the preinstructional and postinstructional tests with sex, major, and G.P.A. were addressed in the present study.

Montana institutions. The amount of time devoted to the overall content of a business communications course should also depend on the needs of the students in the particular geographic area, the time frame within which the learning is to occur, materials available, and the capability of the professors involved (Steigler, 1977:16). The researcher could find no study which dealt with the English fundamental needs of the business communications students in Montana.

The writing ability of Montana students was the subject of an article which recently appeared in the Billings Gazette (1982). In this article, Irving Dayton, Commissioner of Higher Education, expresses concern for the writing abilities of the students enrolled in the institutions of higher education in this state. "A severe writing deficiency exists on all six campuses of the state university system," Dayton said; "writing needs to be emphasized in all academic disciplines -- not just in departments of English."

Criterion measure. The criterion measure used in most of the research studies in business communications remedial English instruction was an objective test. However, the method of evaluation in the business world is the business letter or report, not an objective test. Wunsch feels that the business letter is the appropriate criterion measure because this is the way writing ability is measured in business. Furthermore, no objective measure has been designed to measure letter writing ability (1980:27).

This researcher's study used three criterion measures to measure student achievement. They were: (1) an objective test to measure student formal knowledge of English usage, (2) a business letter writing test to measure student writing ability, and (3) a mid-term and a final examination to measure student knowledge of basic business communications course content.

Holistic grading. Further investigation revealed that when studies did use business letter writing as a criterion measure, analytical (scaled-point) grading was used instead of holistic grading. Some of

these studies found that the evaluators were inconsistent. Wunsch recommends that further study be conducted to determine the reliability of using holistic grading in evaluating business letter writing (1980: 86). The researcher found no formal research which addressed this specific problem.

Multi-instructor approach. Several of the remedial studies have used the "one-instructor" approach. Leonard West, a leading researcher in business education, states:

> Experiments involving classroom instruction by only one teacher are totally useless if the subject or topic of the research is sensitive to teaching skill or other variations in teaching behavior that are intrinsic to the treatments being contrasted . . . . therefore require a minimum of two teachers . . . . otherwise one cannot know whether it is the teacher or the treatment that accounts for the outcomes (1974:32).

The present study used not only more than one instructor, it used more than one school. There were four instructors, two at Montana State University and two at Eastern Montana College.

Formalized evaluation. Many of the studies completed did not formally evaluate the remedial English work completed. Students were merely required to complete daily reading and some written assignments. Thus, students perceive the ideas and principles introduced as not being important; and they may have little motivation to learn these ideas and principles. This attitude is not only present in the college courses; it is also reinforced in the high school courses. Warner addressed this point in a recent article:

> While their (students) high school composition course included some grammar, "it was never counted." It is no wonder that many of our students begin with little motivation to learn

> in the Business English course which they perceive as one of little importance (1979:21).

The students in the experimental groups of the present study were required to complete drill work. In addition, they were quizzed each day on the remedial English usage unit. These quiz grades and the score received on the Barton Language Skills Test (posttest) counted towards the student grade.

Number of letter assignments. Previous research did not address the number of letter writing assignments completed by the students before the posttest. Students simply completed the posttest after completion of the English usage unit and the business letter writing unit. No mention was made of the number of practice letters written by students before they were judged.

Research indicates (Dalton, 1976; Inman, 1970) that six letters are sufficient for student growth in business letter writing. This study required that all students write six practice letters before they took the business letter writing posttest.

Design. The design of a study that will grade writing is critical. McColly (197:154-155) points out several areas which must be considered in order to make the study as reliable and valid as possible. Several of these areas were not addressed in previous research. These areas were addressed in this researcher's study. These areas were:

1. The use of trained readers
2. The use of established grading criteria
3. The use of preinstructional and postinstructional business letter writing tests

4. The use of writing samples from each student both on the preinstructional and postinstructional business letter writing tests
5. The randomization of the papers
6. The simultaneous grading of the papers by the evaluators
7. That the evaluators work independently
8. The simultaneous grading of preinstructional and postinstructional business writing tests.

If business communications professors are to spend the time necessary to develop basic English skills, they must know whether student achievement increases enough to warrant the time devoted to it. "Obviously, there needs to be more concrete evidence on the part of business and education as to what needs to be stressed in a basic communication course. Rarely will one find the content of one college course parallel to that of another" (Woodcock, 1979:43).

The choice of the teaching method used in teaching any course is usually the decision of the professor of that course.

Guselman feels that teachers may be teaching the right things but in the wrong way:

> Why state that people in business and the professions learn more and more about communication and supposedly communicate better and better, yet the results seem worse and worse? Of course it may be that educators are not teaching the right things or teaching the right things but in the wrong ways (1980:3).

The present study sought to provide business communications professors with additional information on the relevance of teaching remedial English usage by the lecture-discussion method. It also compared

the reliability of holistic grading with analytical grading when used to evaluate student achievement in the business letter writing.

General Questions to be Answered

This study attempted to answer the following major questions:

1. How does student achievement in business letter writing compare between students who had remedial English usage instruction and students who have not had this instruction?

2. How does student formal knowledge of English fundamental compare between students who had remedial English usage instruction and students who have not had this instruction?

3. How does student achievement in the traditional coursework of business communications compare between students who had remedial English usage instruction and students who have not had this instruction?

4. How does student achievement in English fundamentals, business letter writing, and traditional coursework in business communications compare among students who attend class three days per week and those students who attend class four days per week?

5. Is there a difference in student achievement among business majors and non-business majors?

6. Does sex or G.P.A. have any effect on student achievement in English fundamentals, business letter writing, or traditional coursework?

7. Which grading method is more reliable in evaluating business letter writing -- analytical or holistic grading?

General Procedures

Arrangements were made through the chairperson of the Department of Business Education and Office Administration at Eastern Montana College and the Head of the Department of Business, Office, and Distributive Education at Montana State University for conducting this study in the business communications classes taught in those departments Winter Quarter 1983.

Students were given Barton's Language Skills Test for college students in business communications as a pretest. The pretest also included the writing of two business letters. These tests were given the second, third and fourth days of instruction. Students who did not complete the entire pretest were eliminated from the study.

In addition, students were asked to fill out a short personal data form to gather information on sex and major. They also filled out a consent form so the researcher could obtain student G.P.A.'s from the respective schools. This information was used to determine the correlation between G.P.A. and student achievement.

Control groups received no formal instruction in remedial English fundamentals. The experimental group received instruction in remedial English fundamentals. The experimental group received instruction in remedial English fundamentals by the lecture-discussion method. This group also completed daily assignments on the principles presented, and they were tested over these principles.

After both groups completed the business letter writing unit, they took the postinstructional tests. These tests consisted of Barton's Language Skills Tests and the writing of two business letters. In

addition, student achievement was compared on the mid-term and final examinations. This was necessary to determine the effect the teaching of the English fundamentals had on student achievement in the basic content of the business communications course.

The reliability of holistic and analytical grading was compared. Sample letters were scored by the holistic grading method by trained readers. Then these letters were scored analytically by trained readers. The reliability of these methods was determined by using Kuder-Richardson's formula.

Analysis of variance was then used to statistically compare student achievement of those groups which received remedial English usage instruction with those students who did not receive this instruction.

When a predifference was found through analysis of variance, covariance was used to equate the groups on the variable in question.

Limitations and/or Delimitations

This study was limited by the researcher's inability to control the following variables:

1. The assignment of the students to the communications classes at the two schools involved.

2. The assignment of the researcher to teach two of the participating sections.

3. The assignment of students to control or experimental groups in order to insure groups of similar language arts abilities and writing abilities.

4. The differences in the effectiveness of the cooperating professors.

5. The differences in the times of the day that the classes met.

6. The differences of the physical environments of the classrooms.

7. The extent to which the students knew they were part of a study, and the effect this had on their achievement during the study.

The delimitations of this study were:

1. The study considered only those students enrolled in business communications classes at Eastern Montana College and Montana State University during Winter Quarter 1983.

2. No specific restrictions were imposed on the control group for their own out-of-the-class review of English fundamentals.

3. The control groups of this study used the textbook -- Basic Business Communications by Raymond Lesikar and Editing Business Prose by Richard Lanahan.

4. The experimental groups used the textbook -- Basic Business Communications by Raymond Lesikar, Editing Business Prose by Richard Lanahan, and Communicating Clearly, The Effective Message by William H. Bonner.

5. Only those students who complete the entire battery of pretests and posttests were considered in the study.

6. Student knowledge of English fundamentals was measured by Barton's Language Skills Test.

7. Student achievement in business letter writing was measured by the evaluators selected for this study.

Definition of Terms

The following definitions are provided by the researcher or correspond to those used in other research as indicated by the citation and are to be used as definitions for this study.

Analytical grading. Analytical grading means the scoring of a business letter in each of the following areas: purpose, tone, choice of words, English usage, and organization. Analytical grading allows each specific area to contribute to the overall grade of the paper (McColly, 1970:151).

Business communications course. Business communications course means a one-quarter course in which the theory and application of effective business communications is presented. The course includes the writing of business letters. It is the basic or first course in business communications. Specifically, at Eastern Montana College it was BuEd 301, Business Communications. At Montana State University, it was BUED 321, Business Communications.

Traditional course. A business communications course which follows a business communications outline which does not include instruction in remedial English fundamentals.

English fundamentals, English mechanics, or English usage. These terms include instruction in grammar, punctuation, capitalization, and sentence structure. These also imply practical application of the rules of grammar, punctuation, capitalization, and sentence structure. Other

terms which often mean the same thing are basic writing skills, writing mechanics, or writing principles.

Holistic grading. Holistic grading means the scoring of a whole piece of writing based on the theory that the whole piece of writing is greater than its parts (Hatcher, 1979:10). This method of evaluation considers a piece of writing as a whole; it is not divided into its various parts. Such a method examines the piece of writing on its total merit rather than as a sum of its parts (Donahue, 1982).

Remedial English fundamentals instruction. This means special teaching intended to improve the students' general ability in the fundamentals of English.

Summary

Student writing ability has become a concern of both businesspersons and business communications professors. One of the areas of concern appears to be student knowledge of English fundamentals. "Teaching grammar and usage with the best instructional strategy is an important goal of every instructor of a business communications course" (Tesch, 1979:54).

This study attempted to give business communications professors additional information on the influence remedial English instruction in English fundamentals by the lecture-discussion method has on student achievement in business letter writing.

It also looked at the reliability of using holistic grading in judging achievement in business letter writing.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

For the purpose of this study the related literature is presented under the following main topics: Writing Skills in the Business World, Remedial English Usage Instruction -- The Dilemma, What Should be Included in Remedial English Usage, Measuring Improvement in English Usage, The Judging of Writing Tests, Current Research in Remedial English Usage Instruction in Business Communications, and Research Related to Remedial English Usage Instruction in Business Communications.

Writing Skills in the Business World

Importance of Writing Skills. Writing skills have always been important for success in the business world. "The business world literally runs on written communications" (Boyd and Inman, 1976:132). Modern technological developments have led to the paper explosion, and communication skills are now even more important. Business communications is occupying a greater role in this highly industrialized world of the 20th century. "The ability to express ideas in writing is one of the leading requirements for success in the business world. An individual's effectiveness as a business worker and as a person depends upon his ability to communicate with others through the written or spoken word" (Inman, 1970:1).

This need for good writing skills is not new to business executives. In an article in the Nation's Business Rollin Simmonds reports the results of a survey in which several business leaders were asked to identify the skills used most frequently. About 80 percent of the executives responding put skill in writing letters at the top of the list (1960:88).

In addition, with the development of word processing, executives will not be able to rely on the luxury of a private secretary. With word processing, executives originate materials onto some type of recording media. It is their responsibility to properly punctuate, capitalize, and spell any unfamiliar words. In other words, they are expected to have a command of the English language. Van Dyk interviewed ten executives to determine why and how they write for the job. One of them is quoted as saying: "It (word processing) is the wave of the future, so college students can no longer assume that when they enter the business world that they will be able to rely on the editing services of a personal secretary" (1980:6).

Another executive viewed the importance of writing skills as: "In my experience, the most successful executives are those who communicate their ideas to others, both superiors and subordinates" (Stine and Skarzenski, 1979:27).

The need for English fundamentals. The content of the basic business communications course is an area of constant concern. Business communications professors must equip students with the skills necessary for success in the business world. Since basic business communications is

usually a service course, business communications professors must meet the needs of a diverse group of students (Tesch, 1980:34).

What should be included in the content of a basic business communications course? Several studies have been conducted that have addressed this problem. Most have found that instruction in English usage is at the top or near the top of the list.

When Tesch surveyed members of ABCA (American Business Communication Association) and the AACSB (American Assembly of Collegiate Schools of Business), he found that AACSB members felt that English fundamentals needed more emphasis in business communications courses than did the ABCA members. Tesch explains that this disagreement could be attributed to the fact that "English fundamentals are usually incorporated into all aspects of a communication course." But, he continues to say "some emphasis may be needed as a separate topic" (1982:32).

In another study Brown found that an area where employers believed full-time workers needed improvement was in the area of the ability to write effectively (1976:7).

Gump conducted a study in 1979 to determine the concepts which are pertinent to the basic communications course at the collegiate level as perceived by business professors and business executives. The concept which included mechanics of grammar, spelling, and punctuation was ranked among the top five for each of the three groups surveyed (business professors, business communications professors, and business executives). Non-communication business professors most frequently mentioned knowledges and skills relating to writing theory, mechanics, and

oral communications. Business executives made the following comments as to what they felt were the most essential communication skills:

> ability to organize; ability to write whole sentences; ability to spell and punctuate; willingness to condense (1979:86).

From a corporation exporting to West African nations:

> Over the years, we have employed college graduates who are sadly lacking in the basic rules of English grammar, spelling, and sentence construction; unfortunately, that has been more pronounced recently (1979:86).

Stine and Skarzenski conducted a study of 120 businesses with offices in Iowa; 80 percent of the companies responding also had offices outside of that state. When asked, "What writing problems do you see in the paperwork crossing your desk," the executives reported wordiness as the number one problem; grammar, two; sentence structure, three; spelling, four; and punctuation, seven. Professors ranked these same problems with spelling as number one; sentence structure, two; grammar, three; and punctuation, four. The executives and professors were also asked, "What should college writing courses teach your future employees (your students)," the executives ranked grammar as number four; spelling, five; vocabulary and word choice, six; and sentence structure, nine. The professors ranked grammar and mechanics as two. These executives and educators seemed to agree on the point that grammar and mechanics are important basic skills. One business respondent put it this way:

> We would like to see more emphasis on the basics -- even at the expense of creativity. Students should know all about grammar, sentence structure, punctuation, spelling, and style. Yet many do not. Worse, many do not seem to understand why they should care (1979:28).

This survey also indicated that executives do support tough grading standards for grammar and spelling errors. A company president wrote, "I think the rigor of a maximum of one error per 100 words is of the utmost importance and teaches a rigor that must be adhered to" (1979:28).

The accounting profession has repeatedly recognized the need for basic writing skills. In 1978, Addams conducted a study to determine the communication needs of practicing accountants. He attempted to identify those skills and writing projects which were most important to an accountant's success. The study revealed that many accountants felt that communication skills were even more important than basic accounting skills. The study also reported that accountants felt that the teaching of business writing should include: (1) writing concisely, (2) constructing smooth sentences, (3) choosing clear words, (4) making conclusions; and rated slightly lower were: (1) adapting to the writing situation, (2) organizing reports, (3) determining objectives, (4) applying grammar and punctuation. The accountants felt that writing skills including grammar and punctuation were the most difficult area of application for practicing accountants.

The AICPA committee on education and experience requirements for CPA's in 1968 suggests that accounting curricula should include six to nine hours in communications. They went on to say:

> Effective communication, both written and oral, is an indispensable skill of the professional. We are unconcerned with the method adopted by the schools to assure that the student has acquired these skills. But we would recommend that every course the student be required to demonstrate his continuing ability in written communication. Our concern is not with the literary style but with the student's ability to convey

> the intended message clearly, concisely, and precisely, without errors in grammar, punctuation, and spelling (58).

Andrews and Koester were concerned with the disparity which exists between the communication instruction given in the classroom and the accounting student's perception of what should be expected in the "real" business world and of the expectations of the accounting profession on newly-hired employees' communication skills. The Study surveyed accounting professionals and recent accounting graduates in all segments of the accounting profession in all of the states. They found that practicing accountants have a concern about the overall written business communications skills of recent accounting graduates. They also found that this concern was further expressed by a need for accounting students to have more training in writing, organization, and grammar (1979: 33-42).

As previously stated, business communications is occupying a greater role in this highly industrialized world of the 20th century than ever before. The ability to express ideas in writing is one of the leading requirements for success in the business world. An individual's effectiveness as a business worker and as a person depends upon his ability to communicate with others through the English language (Inman, 1970:1).

Nation's Business reports: "Two honor graduates of a highly regarded school of business were called into a vice president's office at a company where they had been working since getting out of school a few months earlier. They were fired on the spot" (1977:60). Why? "Neither could get down on paper in proper English as much as a three

paragraph memorandum" (1977:60). The article further states that another graduate student could not get into his head that a sentence must contain a verb (1977:60).

Business has found that many of those who are the most skilled in their own fields are among the poorest writers. Some of the errors reported are lack of conclusions, excessive wordiness, poor grammar and sentence structure, atrocious spelling, and general confusion. In an article which appeared in Business Week, the President of Pepsi Cola stated he sees an erosion of writing skills in many of the bright young people who are brought into Pepsi. The article further reports that an executive of one of the largest corporations in the world was so insecure about sending a letter to an American Ambassador that he hired a company to compose the letter for his signature (1976:57-58).

This lack of communications skills is further reported in an article which appeared in Nation's Business. The National Assessment of Education Programs found that American teenagers "are losing their ability to communicate through written English" (1977:61).

Remedial English Usage Instruction -- The Dilemma

For years business communications professors have been wrestling with the dilemma -- should business communications courses include remedial English instruction? There is a decline in the English abilities of students. The English scores are continuing to decline on the ACT exam. Newspaper want ads often include requests for applicants with good English skills (Jacobs, 1978:80). Several viewpoints exist and must be discussed.

At one extreme is the attitude that the problem should have been solved before a student reaches a business communications class -- that this is a problem for the students to solve on their own and time in class should not be devoted to remedial English instruction. Faidley feels this way:

> This (business communications) is not another English course. Certainly spelling or other egregious errors that appear should be eliminated but the writing approach should be non-grammatical if student interest is to be maintained (1973: 199).

In response to Faidley's comment that student interest is lost if remedial instruction is introduced into the classroom, Cornwell replies: "The study of grammar does not have to be a negative experience. . . . Relevance may be the key to teaching and learning grammar. . . . Students should be shown the value of everything that is taught" (1980: 306-307). Students themselves believe that grammar material should be discussed in class (Manship, 1974:67).

Another key factor in keeping student interest could be the grading of the grammar principles presented in class. If the grammar unit does not count towards the student grade, then how can we expect the students to feel the subject matter covered is important (Warner, 1979: 17).

Others take the position that students who can demonstrate an acceptable level of competence in English usage should not be required to sit through this instruction (Barton, 1980:90). Barton suggests that these students be allowed to concentrate their efforts on other areas of business communication (1981:90).

Hall also professes that business communications is one of the last courses a student takes, and it should be assumed that the students have had several years of instruction in English and should know the basics (1973:199). But, others believe that no matter how competent a student is in the use of the English language, the student can always benefit from a review and that the student will not suffer as a result of this review (Johnston, 1976:10).

White also agrees with this point. She expresses it this way: "A review at the beginning of the semester proves to be a learning experience for those students whose backgrounds are weak; it serves as a 'memory jogger' to those who may have temporarily forgotten the rules and their applications" (1979:21).

Another current opinion is that English fundamentals should only be taught as the need arises (Clark, 1962:25). In two separate articles, Lesikar (1962) and McBride (1961) warn business communications professors that they must be careful not to let their courses become little more than a review of elementary grammar principles.

> Mcbride suggests that the teacher "assume these fundamentals until, through reviews and preliminary writing exercises, we make the student aware of his deficiencies very early in the course. Then he may either drop the course and remove his deficiencies before pursuing business writing further, or he will (we hope) determine to remove them by constant additional study and effort as he pursues the course, using periodic personal conferences based on the work he's doing" (1961:19).

Then finally, at the other end of the extreme are those who believe that every high school, community college, and university should initiate a course in business English. And, that students should be made to demonstrate facility for using the English language correctly before

they are permitted to enter the classroom (Johnston, 1976:9-10). Jacobs supports this position and believes that high school administrators should implement business English programs (1978:79-81).

However, with the number of required courses increasing in a student's collegiate program, most business communications professors realize that implementing a course in business English is not feasible. They, also, realize that students do not come to class with a knowledge of basics of English usage and that some time must be spent on this topic. "For years teachers have been concerned about the weak language skills of many of our students" (Warner, 1979:32).

In defense of including English usage instruction: "Teachers of written communications have long been plagued by the grammar dilemma. Students with a poor understanding of the rules of grammar cannot be expected to produce effective written communications, yet that is exactly what we ask them to do" (Lacombe and Kane, 1977:25).

Tate asks this question: "Why shouldn't business educators at least try harder to develop students' written communication skills in high school and college?" (1977:250).

In response to, "Why teach basic English," Butler stated four reasons: (1) Most Americans make six job changes in their lifetime. In order to meet the demands of a new job, a person will need reading, writing, and speaking skills. (2) Business education students will have to fill out forms, read documents, and conduct the everyday business to run their lives. (3) Most business education students will eventually marry and have families. It is important for our students to realize that they will be the most influential English teachers

their children will ever have. (4) Business students may find it necessary to return to school to take refresher courses, learn new skills, or complete advanced degrees. These students must be able to handle reading and writing assignments (1979:13).

Another reason for teaching English usage is the maintenance of goodwill and the importance of portraying the right message. Business can be lost because of a misinterpreted message.

> Likewise, the peple who write for the business community should be aware that every message should contain elements that either initiate or maintain goodwill. . . . The sufficient factor is the quality of language. Good strategies that misuse language do not finally communicate goodwill, but the meaning that the receivers get is totally opposite (Switzler, 1977:18).
>
> Small, unintentional, careless blunders have caused more people to lose their goodwill than have misconceived or inappropriate strategies. There is a lot of talk about getting back to basics. Goodwill is a basic. And in writing it is inseparably connected with two other basics -- generosity and grammar (Switzler, 1977: 19).

What Should be Included in Remedial English Usage

"A knowledge of writing principles and communication psychology are essential ingredients for effective communication. More basic, though, is a fundamental grasp of grammar principles -- the way our language is structured. Too many times incidence of miscommunication occur because of faulty grammar" (Clark, 1977:33).

But, what knowledge does a student need in order to prevent these miscommunications. Clark suggests that we prioritize the teaching of grammar principles -- this is teaching only those principles that are essential for effective basic communication, omitting or delaying the teaching of those principles that require the expert level of communication. Priority Level One would include principles that seek to

overcome gross grammatical irregularities (e.g., complete sentence structure, irregular verb forms, subject/verb agreement); Priority Level Two would include those principles whose errors are to be considered not as grievous as Level One (e.g., plural of compound nouns, compound adjectives); Priority Level Three includes only those errors that the expert grammarian could detect (e.g., pronouns after than and as; adjectives that cannot be compared)(1977:33-34).

Wilkinson feels that after grading an estimated 100,000 business communications papers in eight different universities over the past 42 years, the list of what should be taught boils down to a few main points (1977:2):

1. Agreement -- subject/verb, pronoun/antecedent
2. Capitalization
3. Comparisons
4. Diction
5. Emphasis
6. Expletives
7. Fragments
8. Modifier (dangling and misplaced)
9. Punctuation (the 13 often ignored or misunderstood pointers)
10. Passives
11. Reference to pronouns
12. Sentence organization and structure
13. Spelling
14. Unity

Ivarie included the following topics in the English usage curricula for his study (1968:111-131):

1. Review of a glossary of grammatical terms
2. Clauses and phrases
3. Functional classification of sentence parts
4. Ambiguous antecedents and pronouns
5. Uses of active and passive voice
6. Sentence classification
7. Use of punctuation to separate main clauses
8. Punctuating modifier and appositives
9. Typewriter and punctuation marks
10. Connecting elements of equal rank

11. Coordinating conjunctions as connectives
12. Connecting elements of unequal rank
13. Conjunctive adverbs as connectives
14. Correlative conjunctions as connectives
15. Elimination of the comma fault
16. Elimination of dangling modifier and misplaced modifiers

Schlattman's English usage instruction unit included (1979:37-39):

1. Patterns of the simple sentence
2. Achieving sentence variety
3. Making subject and verb agree
4. Solving your verb problems
5. Skill in graphics (punctuations)

The jury of experts who participated in Barton's study felt the following topics were important in the teaching of language skills (1981:55-72):

1. Grammar skills -- possessive forms of nouns; pronoun/antecedent agreement; active and passive voice of verbs; subject/verb agreement; transitive and intransitive verbs; coordinate, subordinate, and correlative conjunctions; comparison of adjectives; prepositional phrases; adverb phrases and clauses

2. Development of effective sentences -- sentence structure; building of sentences; clauses and phrases; appositives; parenthetical words, phrases, and clauses; direct objects; indirect objects; objects of prepositional phrases

3. Word choice, emphasis, and tone

4. Paragraph construction -- topic sentences; unit; emphasis; coherence; paragraph order and development; paragraph sequencing; completeness; length and number of paragraphs

5. Capitalization

6. Use of punctuation -- mastery of the use of semicolons, colon, quotation marks, dashes, and apostrophes; the main uses of periods, question marks, exclamation points, underscores, and hyphens

7. Spelling skills

8. Miscellaneous -- uses of numbers; vocabulary and dictionary studies.

Warner examined writing samples of 431 students, each was marked for errors in English usage. The number of errors per theme was 0 to 32. The mean number of errors per theme was 11. Total errors for the 431 themes was 3,703. The largest number of errors (1264) occurred in punctuation; next was awkward syntax (457); and third was incorrect word choice (451). Punctuation errors included: using commas where none were needed, omitting needed commas, substituting periods for question marks. Awkward syntax was identified as sentence construction which was so poor that the sentence was incorrect, ambiguous, or illogical. Incorrect word choice included using there for their or then for than (1979:18).

Warner further reports that the high error rate in punctuation resulted from: (1) the students not knowing the rules of punctuation; (2) "knowing" the rule but not being able to apply them to their own writing; (3) constructing such poor sentences that correct punctuation was impossible (1979:18).

It is difficult to determine exactly what should be included in the language skills unit. One of the jury members of Barton's study wrote:

> While I'm sure it is impossible to teach all those things included in this listing, I do believe students must have mastered these skills either before or during the course in business communication in order to have a confident command and fluent use of the language. I assume there is a high degree of language skills developed prior to the course in business communication and that would permit the student an opportunity to demonstrate that skill (1981:73).

The entire course of business communications cannot be devoted to remedial English usage, but the topic must be given enough time so that students are not left in a state of confusion. "A rapid brief review often leaves students more confused than as before and less willing to accept the fact that grammar instruction is important" (Huffman, 1969: 11).

"Research indicates the need for English instruction with the suggestion for number of class hours given to the review of English fundamentals subjects as spelling, punctuation, sentence structure, and paragraphing, varying from a total of 3 class periods to 15" (Dortch, 1976:225).

The amount of time necessary to devote to the topic may also vary from 20 percent of total class time for communication fundamentals (communication theory, grammar, and psychology of consideration)(Boyd, 1976:135) to an entire course devoted to the topic of business English. Ivarie reports that in his study the lecture-discussion method took a total of 260 minutes in a three-semester hour course (1968:66).

Traditional vs. Linguistic Approach

Traditional approach treats words separate from their context; for example, a noun is a person, place, or thing. This approach often

includes memorizing rules, completing drills, and diagramming sentences (Levy, 1970:241).

The linguistic approach treats words according to their context in the sentence; for example in Roberts' a noun is a word that patterns as apple does in these positions: I saw the apple; I was disappointed in the apple; Her apple is gone; Apples are plentiful in Washington (Roberts, 1956:13).

Research is not inclusive and cannot identify either of these approaches as being superior. "While many in the field of English agree that grammar is of little use in improving writing there are still a great many teachers who hold to the grammar book, believing that there will be some transfer to better sentences if only students learn their nouns and verbs (Haynes, 1978:83). Haynes reviewed the current research in the teaching of writing, and found that the same statement is true for the linguistics approach. She states, "research is inconclusive regarding whether structural linguistics or transformational grammar aids in writing judging from the studies to date . . . " (1978:86).

The studies reviewed by Haynes all were done in the English area where effective writing is based on creativity and style. However, business letter writing is not so concerned with the writer's style but with the message to be transmitted. "The business person tends to deal in specifics. . . . Perhaps the grammar confuses the meaning. Maybe the spelling distracts. Or the punctuation could lead to a double interpretation" (Boyd and Inman, 1976:133). Miscommunication can cost a company a great deal in goodwill along with time and money. Business

students must be concerned with misplaced modifiers, sentence structure, etc.

Allred and Clark conclude from their study that their findings "indicate a need for a college business communication course to stress the planning and organizing processes as well as the syntax and grammar-related activities" (1978:35).

Measuring Growth in English Usage

While objective tests are a valid measure for judging a student's knowledge of the rules of English usage, they are not a valid measure for judging a student's ability to transfer this knowledge to his writing or for judging a student's writing ability. McColly feels that objective tests, "simply are not measures of writing, for the purpose of the judging of writing ability they should be ignored" (1970:149).

Dierderich completed a study in 1961 to determine if any part of essay evaluation could be done better through objective testing. He concluded that mechanics and wording could be measured more reliably and systematically by objective tests. He also states that these factors take up most of the time in grading since they offer the largest number of small, specific errors to correct. If these principles were tested by objective measures, evaluators of essays would be able to spend more time and more precise observations of the remaining grading factors. Included in an article entitled, "What Does Research Say About the Judging of Writing Ability," this statement is made:

> The judging of writing ability of students is a problem because of the great disagreement among English teachers as to the matter of good writing. Objective tests are of little help, since they are not measures of writing. Essay tests are the only

> valid measures, but to make them as reliable and as valid as possible requires that attention be given to a number of source errors (1970:148).

Holistic vs. Analytical Grading

Analytical grading consists of the evaluator assigning points based on a scale or key and with each category receiving a certain number of points. For example, in the studies of Schlattman (1976) and Pickard (1972) letters were graded in the areas of purpose, tone, choice of words, English usage, and organization. In analytical grading, each of these specific areas contributes to the overall grade of the paper (McColly, 1970:151).

However, McColly does point out that research has shown that "when a judge thought he was responding to some specific quality he was actually responding to his general impression or to the overall quality of the essay" (1970:151).

Holistic grading evaluates each paper for total effectiveness.

> While holistic scoring does not deal with the individual student's writing, if a pre- and post-writing of comparable purpose is used, it can measure growth. For example, to measure improvement in written business communication, students would be asked to write both a pre-instruction and post-instruction letter, and the raters would score the letters holistically (Feinberg, 1980:44).

With holistic grading, papers are graded by use of a simple numerical scale. The two most frequently used are the four- and six-point scales. In each of these scales one point is low, and either four or six points is high. McColly and Reinstad conducted a study to determine which scale was more reliable. They concluded that both scales were reliable. They recommend the use of the four-point scale because

with the six-point scale there was greater difficulty in orienting the evaluators to the use of the scale and in their actual use of it. They go on to say that these two factors make the four-point scale quicker and easier to use (1965:55).

The four-point scale grades could be interpreted as (Myers, 1966: 43):

1. Obviously below a reasonable standard
2. Not sufficient promise or competence to be considered in the upper half
3. Clearly competent, promise of effective performance
4. Superior; not perfect but very good; effective.

In measuring growth in writing for criterion performances, holistic grading on a four- or six-point scale appears to be superior because as "the number of points on a scale is increased and the rater is forced to make finer distinctions he becomes less reliable. There is more chance of variability between his rating on one theme and his rating on another just like it, as well as between his ratings and those of other raters" (McColly and Reinstad, 1965:55).

Opinions are varied (as reported by the Journal of Education Research) and do not point to either the analytical grading method or the holistic grading method as being superior.

> Opinion is divided over the comparative value of judging writing-test essays simply for general merit or for performance on each of several specific factors. The validity of a single rating is not questioned; the issue is whether or not an array of ratings is not more discriminating. Research findings indicate that the controversy may be tour de force, because ratings for specific factors tend to collapse entirely into a single rating through the halo effect (What Does

Educational Research Say About the Judging of Writing Ability, 1970:148).

Even though Pickard used analytical grading, instructions to the evaluators included this statement: "You may reread the letter for the fine points asked on the evaluation sheet, but let your first reaction be your major guide" (1972:173).

It appears that the more simple the grading procedure, the more reliable and valid the results will be. Pickard supports this statement (1972:23-24):

> No complicated patterns were prescribed for rating the letter because of the need to keep the workload of the evaluators as light as possible and to do the rating exercise as simply as possible. By rating the letters one at a time on all thirty-two questions, there was, of course, the possibility that one facet of the letter could influence the ratings of another facet of the letter. For example, the tone of a letter could very well influence the ratings for choice of words; and word choice could influence the tone ratings. Such influence is impossible to avoid even by rating the letters on one category at a time because all the categories are spread throughout each letter, and a rater would be exposed to all categories each time he read a letter, regardless of the category he was rating at any particular reading. Furthermore, the various categories are interdependent on one another. For example, general tone of a letter is "good" or "bad" by virtue of the words chosen to express the tone. Therefore, the simplest and the easiest pattern for evaluating the letters was considered the best.

These statements would appear to support the case for the use of holistic grading for the evaluation of business letters written by students. Interdependence of ratings would lead to the "halo effect" if analytical grading were used.

The Judging of Writing Tests

The actual grading of writing tests leads to questions of validity and reliability. There are several sources of error which must be controlled.

Writers. When we give the normal student writer a writing test, we create not the best writing condition but the worst. But, since distractions are very much a part of life, who is to say that the result of these distractions (e.g., running lawn mower, a sniffling student) should not be reflected in the student's grade (McColly, 1970:149). We all know that the every day activity of the office is not quiet, and our students must be able to function in that environment.

Readers. The most important reader factor is competence. The more competent the judges of writing tests are, the closer they will be in agreement and the more valid their judgments will be (McColly, 1970: 150).

In a large scale study which looked at essay rating, Dierderich, et al., analyzed the reliability of readers from six fields: English professors, professors of social science, professors of natural science, lawyers, businessmen, and writers and editors. He found that the English teachers graded the papers more reliably than any of the other groups. In addition, all groups agreed with the English teachers more often than they did with members of their own profession (1961:11-14). McColly reminds us that the purpose of this study was to find a difference of opinion. He also feels that the reliability of English teachers compared to the other professions was not surprising (1970:150). It is

noticed that the group of professors did not include business professors, business communication professors, or shorthand professors. These professors often have an extensive background in English usage and in grading written papers. Furthermore, it is quite possible that the reliability of these professors would be just as high as that of the English teachers.

It is plain that readers must be given proper training and orientation, regardless of how knowledgeable they are. Two different approaches exist. One way is to present predetermined standards and criteria and some kind of object to which readers will apply those standards and criteria. The other approach is to have the readers meet and discuss the writings to be graded and allow them to determine the standards and criteria to be used. But, in both cases the readers must practice. The faster the reader can rate the writing pieces, the more valid and reliable his judgments become. If a reader is well trained and oriented, his instantaneous judgment is likely to be a genuine response to the criteria for which he is looking. But, if that reader is given more time to think about the judgment, the more likely irrelevant qualities will enter into his judgment (McColly, 1970:151).

A minor factor to be considered is reader fatigue. However, McColly reports that reader fatigue enters the picture after several days of evaluation (1970:152).

Topics. Writer performance varies from topic to topic. The grading of writing tests could then be influenced by a student's knowledge of the subject. Topics must be carefully chosen and highly structured so that

this concept is not reflected in the students' writing. However, another approach is to give students a basic content, and ask them to make something out of it. This really becomes a task in logic more than pure writing ability (McColly, 1970:152-153).

Since business letters address a certain topic or a particular situation, this second approach would appear to be the approach to use in the grading of business letter writing.

Appearance. "Quality of handwriting has a significant influence on scores given essay tests. Readers are more generous with papers with good script than with poor" (Chase, 1968:318). "The only cure for this condition is to have examination essays typed or put into some other standard printed form" (McColly, 1970:154).

Design and methodology. McColly (1970:154-155) feels that the design and methodology must include control of both chance and systematic factors: "to randomize the effects of the former and either to remove or to spread equally among the factors the effects of the latter."

McColly's list of factors includes (1970:154-155):

1. Effects of reading order will be systematic if each reader grades the writings in the same order. It can be changed to a chance factor by shuffling the writings and having each reader grade the writings in a different order.

2. Readers must work independently for logical and statistical reasons. A normal and independent distribution of data is desired, the aforementioned conditions help to achieve this.

3. Reader's score on any essay or any quality should not be dependent on his score or any other. In other words, readers should not be required to give a certain number of 4's, 3's, 2's, and 1's.

4. Since readers must work independently and simultaneously, they should be provided with solitude.

5. The design of a study which is to evaluate writing tests must be rigorous. "Perhaps the easiest mistake here is in having the pre- and post-essays rated separately. All essays must be rated at the same time" (1970:154). They should be part of an intact rating session. Time allowed between sessions introduces variables which can contaminate the data.

Administration. Any writing test must be impromptu. All writers whose writing tests are to be judged as the same population should take the test at the same time. If that is not possible, the tests should be given under conditions which are as nearly alike as possible (McColly, 1970:155).

The second critical factor under administration is time. "A writing test should be productive of an essay, not mere sentences, and it would seem that at least 40 or 45 minutes are required in order to give students a chance to write an essay" (McColly, 1970:155). The topic must also be compatible with the time. The standards and criteria must accommodate the time allowed (McColly, 1970:155).

The validity of impromptu testing is backed up by the fact that in the business world there may not be time to write. "Today's business people generate communications that appear in final form as writing.

But actual writing -- pushing a pencil across the page -- is constrained by time limitations and new office operating procedures" (Kramer, 1979: 27).

"Another positive aspect of in-class writing is that students develop the ability to think and organize 'on the spot,' which is required in many situations in the business world" (Dortch, 1976:224).

Since business letter writing involves a response to a structured situation and there is also a trend for short, to-the-point responses, many experts recommend that a business letter should average only 100 words. With this in mind, Pickard gave students two hours to analyze three problem situations and to write three letters in response to these situations (1972:10). Schlattman gave students 25 minutes to write each of the evaluation letters (1976:40). Both of these studies included letters from three different types of situations.

Number of practice letters needed. How many letters must be written by the student before achievement can be tested? A current opinion is that students learn by doing. So in order for a student to learn to write better, that student must practice writing. Kramer believes that our students must continue to write as much as possible (1979:27). Dortch reports that when Murphy and Peck surveyed 223 schools, they found that the number of required writing tasks varied from 0 to 50 letters (1976:226).

In the ABCA Bulletin the report of the Ad Hoc Committee on Course Standards suggests that a minimum of 12 assignments be required, ten of those to be short and intermediate pieces of non-routine letters, memos, proposals, problem formulations, outlines, etc. (1974:18).

But, how much writing is necessary for a student to achieve the highest gain in writing skills? This was the focus of two studies, Inman in 1980 and Dalton in 1976.

Inman taught four groups of students, all groups completed the same activities. The single variable was the number of writing activities completed by each group. At the beginning of the semester, the students took a pretest which consisted of the Missouri College English Test and a principles of business writing test which was designed by the researcher. These same two tests and a written letter test made up the posttest. Based on the finding Inman concluded that (1970:6):

1. It appears that frequent writing practice does not improve ability to use English fundamentals
2. Frequent writing practice seemingly does not increase knowledge of the principles of business writing.

Inman also observed that: "Since the students who wrote six letters exhibited approximately the same amount of improvement in writing skill as students who wrote four times as many letters, improvement in writing skill should not be attributed to number of writing assignments" (1979:6).

In 1976, Dalton examined this same hypothesis: At what point do students achieve the highest gain in writing skill (1976:14).

Dalton's population consisted of three communications classes, all taught by the researcher. She measured student achievement in letter writing by the average grade of their business letter problems. The only variable was the number of problems completed. In addition, all students took a pretest and posttest which consisted of an English expression test and a researcher designed writing principles test.

Dalton came to the same conclusions as Inman: Frequent writing practice does not improve student achievement in writing or English fundamentals.

Current Research in Remedial English Usage Instruction in Business Communication

Research in the area of remedial English has been inconclusive in finding one method of instruction significantly better than another method of instruction. Some studies found that the method of instruction made no significant difference.

Ivarie conducted a study in 1968. The purpose of this study was to determine if there were any significant differences in achievement among groups and between levels of ability of students of collegiate business communications who were taught grammar, punctuation, and capitalization:

1. By a lecture-discussion classroom teaching method.
2. By an overt response programmed instruction unit.
3. By a covert response programmed instruction unit.

The study was delimited to three sections of business communications for a total population of 84 students. One instructor taught all three approaches. Topics included in the English usage curricula were:

1. Review of a glossary of grammatical terms
2. Clauses and phrases
3. Functional classification of sentence parts
4. Ambiguous antecedents and pronouns
5. Uses of active and passive voice
6. Sentence classification
7. Use of punctuation to separate main clauses
8. Punctuating modifiers and appositives
9. Typewriter and punctuation marks

10. Connecting elements of equal rank
11. Coordinating conjunctions as connectives
12. Connecting elements of unequal rank
13. Conjunctive adverbs as connectives
14. Correlative conjunctions as connectives
15. Elimination of the comma fault
16. Elimination of dangling modifier and misplaced modifiers

Students were divided into higher/lower ability after taking a pretest consisting of the California Language Test, Form W and a criterion objective test was given as a measure of retention.

The pretest and the posttest did not contain the writing of a business letter.

Conclusions indicated that the traditional approach took significantly longer than the other two treatments; there were no significant differences among the three methods of teaching grammar, punctuation, and capitalization; low ability students learned significantly more than higher students regardless of the treatment; no interaction between ability and treatment was observed; and the amount of achievement gain as measured by the pretest and the posttest was significant for all groups.

Pickard completed his study in 1972. "The purpose of this study was to determine experimentally the effect on achievement in a college business writing course of a traditional letter-writing method of instruction as compared with a traditional letter-writing approach with remedial instruction in English usage" (1972:2). The major null hypothesis of the study was that remedial work with English usage would not affect student achievement in a business letter-writing course (1972:2).

One instructor taught all sections. The population consisted of those students enrolled in the one-quarter, 4-credit hour course of

business correspondence at Ball State University during the school year 1966-67. The independent variable was remedial instruction in English usage. The course was required for students in the secretarial curriculum while other students took the course as an elective. This resulted in a large number of secretarial students in the courses.

In the experimental group, ten to fifteen minutes was spent at the beginning of the period on remedial English instruction. There was no formalized evaluation for grading purposes on English usage. Exercises were not graded, and they were not required to be turned in for recording purposes. The control group received no instruction on the fundamentals. All students were assigned the same number of letter-writing problems. The researcher evaluated each assignment as to the principles studied for that type of letter. English usage errors were marked for both groups and written comments about strengths and weaknesses were made by the instructor. Achievement was measured at the end of the term on three in-class letters. The letters were of pleasant news, negative news, and persuasive news content.

Three evaluators, experts in communications, graded these letters. The evaluators did not meet to decide upon criteria and grading standards. The letters were graded independently, but they were not graded simultaneously. One evaluator, although consistent, differed significantly from the other two evaluators. They used analytical scoring with a letter evaluation guide, which covered the areas of tone, word choice, sentence and paragraph structure, and letter-writing purpose.

There was no significant difference between the control group and the experimental group in achievement on these factors. However, the

control group achieved significantly higher on certain elements of a pleasant news letter and the experimental group significantly higher on certain elements of persuasive news letters. The patterns were so diverse, however, that no generalizations concerning the effect of remedial instruction in English could be made.

Some of Pickard's recommendations included:

> Similar studies concerning the effect of remedial instruction in English usage should be made using different textbooks and different sources of remedial instruction (1972:87).
>
> A similar study on the effect of remedial instruction in English usage has on a student's formal knowledge of English usage should be made (1972:87).

Pickard also makes this observation:

> Research in the business letter-writing field is very limited. Lack of evidence on what to teach and how to teach suggests extensive exploration is needed. Success in business writing will be more easily attained when further information is known (1972:89).

In 1974, Manship reported on the effect of three different methods of presenting a review of writing principles and grammar to business communication students at Boise State College during the 1972-1973 school year.

The hypotheses tests were (1974:4-5):

1. There will be no significant differences in the standard of performance in grammar proficiency achieved by business communication students who have taken the traditional course when compared with students who have

   a. Had access to the effective writing principles text but followed the traditional course.

   b. Studied the effective writing principles text along with the traditional course.

   c. Studied the effective writing principles text and received reinforcement along with the traditional one.

2. There will be no significant difference in the standard of performance in the traditional course work achieved by business communication students in the traditional courses when students who have

   a. Had access to the effective writing principles text but followed the traditional course.

   b. Studied the effective writing principles text along with the traditional course.

   c. Studied the effective writing principles text and received reinforcement along with the traditional course.

3. There will be no significant difference in the standard of performance achieved by business communication students because of the different instructors in the corresponding classes of the two semesters.

The control group received the traditional course with no remedial instruction. Experimental Group One received the traditional course with access to, but no testing on, effective writing principles. Experimental Group Two received the traditional course with effective writing principles study and testing. In this group the students were required to take a test which covered the specific unit of study. The grade on this test was then recorded and counted. Experimental Group Three received the traditional course with effective writing principles study, testing, and reinforcement. This group also took unit tests, but they were required to achieve a "C" or better on any unit test and retook that test until they passed. Student study of effective writing principles took place outside of class. Two experienced business communications professors taught the groups. All students completed a pretest which consisted of an objective test based on the text, Effective Revenue Writing. Two regular examinations and a final examination were given to the students in each of the sections during the semester.

The scores on the two regular examinations were compared for all groups by means of analysis of variance.

The posttest was the same as the pretest. The gain score was determined and was compared by means of two-way analysis of variance. Analysis of variance was also used to determine treatment-instructor interaction. There was no business letter writing test.

Manship found that the group that studied effective writing principles and received reinforcement along with the traditional course achieved significantly higher scores than did any of the other groups. The group that studied the effective writing principles without reinforcement did better than the group who simply had access to the principles or the group who received no instruction in effective writing principles. There was no significant difference between the group that had access to the writing principles and the group that received no instruction in effective writing principles. Manship concluded that the difference was attributed to the treatment and not to the instructors.

Based on these findings Manship concluded that students can achieve a significantly higher standard of performance in grammar proficiency through self-study of effective writing principles during a regular one-semester course in business communications (1974:68).

Manship does recommend, however, that further study should be conducted "to determine whether a better understanding of effective writing principles results in greater effectiveness in communicating ideas in letters and reports" (1974:69).

It should be remembered in this study the traditional class received no instruction in English usage; and, therefore, no attempt was made to

compare traditional grammar instruction to the self-study methods used.

Tesch analyzed three methods of teaching grammar and usage. They were: no instruction, classroom instruction, and programmed instruction. The sample included three sections of business communications at the University of Georgia. Group one consisted of 32 students who met in the fall term 1977 and received no instruction in English usage. They took a grammar and usage test and were instructed not to study for this test. The second group consisted of seven students who met during the summer term of 1978 and received traditional instruction in English usage. The third group (no enrollment figure was given) of students received programmed instruction in English usage. The traditional and programmed instruction groups took pretests, unit tests, and posttests. The unit tests were counted as part of the student's overall grade. Tesch used one-way analysis of variance to determine statistical significant differences.

Tesch found that there was a significant difference between no instruction and classroom instruction. There was a seven-point spread between these two approaches. He found no significant difference between the traditional and programmed approach, even though there was a six-point spread between the two approaches.

Tesch states:

> Since the majority of educators and business people see the need for college graduates to know and use correct English grammar, classroom instruction of grammar should be utilized in business communications . . . if an instructor has a choice of the two methods (classroom or programmed) he/she should use the traditional approach (1980:58).

However, the traditional class consisted of only seven students. The Hawthorne effect could have been at work. Tesch himself admits this in his report of the study: "The instructor gave enthusiastic presentations in dealing with the relatively boring rules of English grammar and usage. . . . With this small number of individuals the Hawthorne effect was at work" (1980:58).

There was no business letter writing test. Also, it must be noted that students using the programmed materials were simply told to use them as needed. No attempt was made to insure student use or to see that the materials were used properly (1980:59).

Schlattman in 1976 completed a study which compared the traditional method with programmed English usage instruction. The study was conducted during the fall semester 1974 at the University of Wisconsin -- Eau Claire. Eight sections of business communications were used with a total population of 520. Four instructors participated in this study, with each teaching a control and an experimental group so the effect of teacher personality was not considered. ACT scores and G.P.A. were obtained for each student. A class mean was computed for each of these variables. The t test was used to determine if there was a significant difference among the classes -- no significant difference was found. Students were then divided into three achievement groups (high, medium, and low) based on the pretest of the Missouri College English Test (Form B) and the English 3200 test.

The control group followed the "traditional" course which did not include instruction or handouts in English usage. Only the medium and low students in the experimental group were required to complete the

programmed materials which covered English usage. The in-class activities for the experimental group were identical to the control group. Students in the experimental medium and low groups were required to take unit tests on English usage. If they did not score at least 85 percent, they could retake this test once to improve their grade. At the close of the instruction period several posttests were administered to both groups: test one consisted of the English 3200 pretest; test two, an objective principles of letter-writing test; test three, three in-class writing tests (letter types covered included pleasant news, negative news, and persuasive news). Students were given 25 minutes to write each of these letters. Analytical grading by a letter writing guide developed by Arno Knapper in 1961 was used to evaluate each of these letters. The instructors (evaluators) were given 15 letters to evaluate. It was found that 72.4 percent of the time at least three of the four evaluators scored letter variables on the identical mark. Schlattman determined this to be sufficient agreement. After the letters were scored, each student's set of three scores were averaged. The t test was again used to determine whether or not there was a significant difference in the means of the groups. The means of the groups were computed for the objective test; the t test for independent means was used to determine a significant difference. The degree of correlation was determined between the objective test scores and the letter scores.

Schlattman concluded that programmed English instruction has a significant effect on students' letter writing ability. It also had a significant effect on the students' general English usage competencies.

Programmed instruction did not have an effect on letter writing purpose. There was no significant difference in the performance of the groups on the objective communication tests. Students responded favorably to the use of the programmed materials.

Schlattman recommends that programmed remedial instruction should be used as a learning tool for business communications students needing this type of instruction.

Christensen's study compared individually prescribed instruction of English usage with the traditional approach. The study was delimited to those students enrolled in report writing and communication at Northern Illinois University during the school year 1978-1979. There were two control groups and two experimental groups, one control and one experimental section was included each semester. Units of instruction included (1979:41):

1. Sentences and clauses
2. Verbs
3. Singular and plural forms
4. Pronouns
5. Adjectives and adverbs
6. Capitalization
7. Punctuation
8. Clause and phrase placement
9. Parallelism
10. Possession
11. Topic sentences
12. Forming sentences
13. Developing sentences in paragraphs
14. Concluding sentences in paragraphs
15. Paragraph series

This study did not attempt to measure the effect sex, grade level, major, or I.Q. had on student achievement.

The control group received English usage instruction by the traditional lecture-discussion method. They took the McGraw-Hill Basic

Skills System Writing Test which covered the same topics as the experimental group diagnostic interview. The control group received a mini-lesson presented at the beginning of class starting the second week of the semester and ending the sixth week of each semester. The lessons lasted a minimum of 4 minutes and a maximum of 12 minutes. The instructor suggested that the students take notes so that they could be reviewed for the posttest. Students received no handouts or additional references.

The experimental group received individual diagnostic interviews with the instructor. These interviews established the student placement in the English usage unit. The lab was available 40 hours per week at various hours. As the units were completed, the lab assistant checked the completion of the unit by inspection of the complete answer sheet. This completion date was then recorded. The completed answer sheet remained in the student folders in the lab.

During the seventh week both groups took Form B, of the McGraw-Hill Basic Skills System Writing Test. During the eighth week, as part of the mid-term, both groups completed a short memo writing test. This test was scored by three jury members. There was a preinstructional memo writing test. Only one writing sample was obtained for each student on both the preinstructional and postinstructional writing test.

The jury members were three business communications professors. In addition, the tests for each semester were not graded simultaneously by the evaluators. Furthermore, each jury member graded the memos at different times. Analytical grading was used.

The t test was used to assess the degree of difference between the experimental and control group responses on pretest and posttest achievement. When a significant difference was found, co-variance was used to analyze the posttest data by adjusting for the initial pretest difference between the two groups.

Christensen concluded that writing skills achievement as measured by the McGraw-Hill Tests was not affected by the method of instruction. A significant difference was found in the mean scores in organization and mechanics in the memo writing posttest for the fall semester and combined semesters. No significant difference appeared in the mean scores in content and language usage (1979:121).

Christensen did find a relatively high standard deviation in scoring. She states that this may have been caused by inconsistent scoring among jury members (1979:122).

Christensen made these recommendations:

> Because there are no conclusive results from this study or previous studies concerning a best method of instruction for presenting English competencies to business writing students, it appears the method of instruction should be an important consideration of teachers involved in curriculum development and instruction of these classes (1979:125).
>
> Because business writing courses seek to help students achieve adequate English competencies for employment in business, teachers could explore:
>
> How can English competencies be presented most efficiently to students of business writing courses at the collegiate level? (1979:127)

Christensen also makes the following statement: "Teachers of business writing courses should continue to search for alternative methods

of instruction in an attempt to achieve optimum teacher effectiveness and optimum student learning" (1979:128).

Research Related to Remedial English Usage Instruction in Business Communications

Bell concentrated on punctuation as an important skill. This study used linear regression to test the effectiveness of programmed instruction (PI), computer assisted instruction (CAI), and regular classroom instruction to improve punctuation skill. Tests with 172 students showed CAI-treated students had higher gain scores between the pretest, posttest, and retention test, although not significant at the .05 level. Also, tests concluded that CAI students completed a punctuation review 40 percent faster than other groups (significant at the .00001 level) (1981:33). The control group received no instruction in punctuation. The students in the experimental groups received instruction and drill in punctuation rules. Since a large number of students in the study were secretarial science majors, one can only speculate on the results if students other than secretarial science majors were included. "But, that instructors are cautioned that, the CAI hardware unless already available is expensive" (1981:33-44).

The construction and validation of a language skills test for college students enrolled in basic business communications was the topic of a study completed by Barton in 1981.

Barton used a panel of experts to determine what topics should be covered on this test. Topics covered on this test include:

1. Grammar
2. Sentence structure, word choice, emphasis, tone, and paragraphs
3. Capitalization
4. Punctuation
5. Spelling
6. Miscellaneous

The second objective of this study was to develop and validate an instrument to measure language usage skills (1981:73). Item analysis was completed for each of the six subtests. Raw scores, z scores, frequency distributions for part and total scores, means, standard deviations, coefficient alpha (reliability coefficient), correlation coefficient for each item, difficulty indexes, percentages of pass distributions were computed. The final test form consisted of 85 items covering the six topic areas. The test was administered to seven sections of basic business communications at the University of Nebraska-Lincoln during the first week of the Fall Semester 1980-1981. Total population was 166 students. Concurrent validity was determined by selecting 30 students randomly from the population and administering the Cooperative English Test, English Expression Form 1B. The Pearson product moment was used to determine the degree of correlation between the two tests.

Based on the findings, Barton concluded that the contents of the test were valid and reliable. In addition, since the mean score was 52.0602 on the language skills test, the students who participated in the study were weak in the area of language skills (1981:89).

Barton also recommends that the instrument be used in further study in testing populations from other schools and that language usage skills be stressed in basic business communications (1981:90).

The effects of individualized written feedback, rewriting, and group oral feedback on business letter writing was the problem of Wunsch's study in 1980.

Students were given a pretest which consisted of the Missouri College English exam and the writing of one business letter. The posttest consisted of one business letter which was administered after the treatments were completed.

Wunsch found that students with a strong background in English do write better business letters. The proportion of the variance in the mean score of the independent variable accounted for by the objective test was .26. Wunsch states, "this is worthy of consideration" (1980: 58).

The posttest letters were graded three times by three different instructors. No letter was regraded except when the letter graded exceeded the range limits.

Wunsch found that there were no significant differences for the mean effect of the treatments administered (1980:79).

Wunsch also found positive correlations between G.P.A. objective test score, and the score on the first letter test. And, he found positive correlations between G.P.A., objective test score, score on the first test, and the score of the independent variable (posttest business letter writing test)(1980:81-82). He feels these correlations are worth further investigation (1980:58).

Tomlinson reported the findings of her study, "A Study of the Effectiveness of Individualized Writing Lab Instruction for Students

in Remedial English Composition" at the annual meeting of the Eastern College Reading Association in 1975.

The study attempted to establish the effects of three different levels of writing lab use on the writing proficiency and attitudes of students enrolled in remedial freshman composition at the University of California, Riverside. These levels were:

> Level One -- small group discussion focused on techniques for organizing and developing compositions -- met two hours weekly -- students spent four hours per week in writing lab.
>
> Level Two -- classroom/lecture -- large lecture classes -- met four hours weekly -- grammar taught through extensive classroom discussion and chapters in a programmed test -- non-diagnostic basis.
>
> Level Three -- lecture/lab -- attended classroom lecture as well as two additional lab hours per week.

Tomlinson found no significant differences in writing proficiency according to group treatments. She did find that all groups showed significant growth in writing.

Two evaluators graded the papers separately. The essays were rated on major grammatical errors which included: sentence fragments, run together sentences, agreement problems, major verb or part of speech misuse, and idiom misuse and reference problem. Minor grammatical errors included: errors in modification, coordination, subordination, prediction, mixed construction, parallel construction, and coherence. Each paper received a major, minor, and total essay grade. She used a 2 x 2 analysis of variance.

Summary

The inclusion of remedial English instruction has been a highly controversial topic for business communications professors for decades. It appears that our students are becoming weaker in the area of English usage and that this problem can no longer be ignored. Business communications professors can no longer take the attitude that the students should have mastered these basics before entering the college classrooms; many have not. In order to be prepared for the business world, students must be equipped with the required communication skills. Business executives believe that English usage skills are among the most important skills that a student can bring to the marketplace.

Research has not proven any one method of instruction in remedial English usage as being superior to another. But, research does point to the fact that students may benefit from some type of instruction in English usage. The method chosen depends on many variables. A few of these variables are teacher preference, time available, budgets, equipment available, and student needs. Further research is needed to aid instructors in deciding whether they should include remedial English instruction in the business communications classroom.

CHAPTER 3

PROCEDURES

Introduction

The principal problem of this study was to compare student achievement in business letter writing and traditional coursework in a business communications course following an outline excluding remedial English usage instruction with student achievement in a business communications course following an outline including remedial English usage instruction.

A second problem of this study was to compare the reliability of holistic grading with analytical grading when used to evaluate business letter writing.

This chapter includes the following sections: Population Description, Hypotheses to be Tested, Study Procedures, Description and Evaluation of Tests Used, Analytical vs. Holistic Grading of Business Letters, Rating of the Business Letter Writing Tests, and Statistical Treatment of Data.

Population Description

The participating schools were Montana State University and Eastern Montana College. Both participating schools (MSU and EMC) offer courses in basic business communications. Business communications is included in the core requirements for all business majors at both

schools. In addition, business communications is available for non-business majors as an elective at both schools.

Permission was obtained from both department heads (MSU -- Department of Business, Office, and Distributive Education; and EMC -- Department of Business Education and Office Administration) involved to run this study at their respective schools.

A total of four instructors participated in this study. Two instructors were at MSU, and two (one being the researcher) were at EMC. There were three participating sections at each school (each school offered only three sections). Of these sections there was one control group and two experimental groups at each school. Each instructor taught at least one experimental class.

The basic business communications course at MSU is three quarter credits. Therefore, it met only three days per week. At EMC the course is four quarter credits. It met four days per week. For this reason, the data for the schools was treated separately. There was daily and weekly articulation among the teachers and the researcher to assure systematic and appropriate emphasis of material.

The sample consisted of three classes at Montana State University and three classes at Eastern Montana College (all sections taught participated), each consisted of at least 20 students at the beginning of each quarter. There was one control group and two experimental groups at each school. If an instructor was scheduled to teach only one section of business communications, it was an experimental section. If an instructor was scheduled to teach two sections, the designation of a

class as being control or experimental was determined by the flip of a coin.

The study was limited to those students who completed the entire pretest/posttest battery.

Hypotheses Tested

The following null hypotheses were tested at the .05 level of significance:

1. There was no significant interaction between the number of days of instruction students received and treatment on the pretest of Barton's Language Skills Test.

2. There was no significant difference in English fundamental achievement between the control group means and the experimental group means on the pretest of Barton's Language Skills Test.

3. There was no significant difference between the means of those students who received three days of instruction per week and those students who received four days of instruction per week on the pretest of Barton's Language Skills Test.

4. There was no significant interaction between the number of days of instruction students received and treatment on the posttest of Barton's Language Skills Test.

5. There was no significant difference between the control and experimental group means on the posttest of Barton's Language Skills Test.

6. There was no significant difference between the means of those students who received three days of instruction per week and those

students who received four days of instruction per week on the posttest of Barton's Language Skills Test.

7. There was no significant interaction between the number of days per week students attended classes and treatment on the gain total achieved between the pretest and posttest of Barton's Language Skills Test.

8. There was no significant difference between the control and experimental group means on the gain total achieved between the pretest and posttest of Barton's Language Skills Test.

9. There was no significant difference between the mean gain total of those students who attended three days per week and the mean gain total of those students who attended four days per week between the pretest and posttest of Barton's Language Skills Test.

10. There was no significant interaction between the number of days per week the students attended classes and the treatment on the business letter writing pretest.

11. There was no significant difference between the experimental and control group means on the business letter writing pretest.

12. There was no significant difference between the means of those students who received three days per week of instruction and those students who received four days per week of instruction on the business letter writing pretest.

13. There was no significant interaction between the number of days per week students attended classes and treatment on the business letter writing posttest.

14. There was no significant difference between the control group means and the experimental group means on the business letter writing posttest.

15. There was no significant difference between the group means of those students who attended classes three days per week and those students who attended classes four days per week on the business letter writing posttest.

16. There was no signifianct interaction between the number of days per week students attended classes and treatment as measured by the mid-term examination.

17. There was no significant difference between the control group mean and the experimental group mean on the mid-term examination.

18. There was no significant difference between the group mean of those students who attended classes three days per week and the group mean of those students who attended classses four days per week on the mid-term examination.

19. There was no significant interaction between the number of days students attended classes and treatment on the final examination.

20. There was no significant difference between the control and experimental group means on the final examination.

21. There was no significant difference between the group mean of those students who attended classes three days per week and the group mean of those who attended classes four days per week on the final.

22. There was no significant interaction between sex and treatment on the pretest of Barton's Language Skills Test.

23. There was no significant difference between male and female achievement on the pretest of Barton's Language Skills Test.

24. There was no significant interaction between sex and treatment on the posttest of Barton's Language Skills Test.

25. There was no significant difference between male and female achievement on the posttest of Barton's Language Skills Test.

26. There was no significant interaction between sex and treatment on the gain total achieved between the pretest and posttest of Barton's Language Skills Test.

27. There was no significant difference between male and female achievement on the gain total between the pretest and posttest of Barton's Language Skills Test.

28. There was no significant interaction between sex and treatment on the business letter writing pretest.

29. There was no significant difference between male and female achievement on the business letter writing pretest.

30. There was no significant interaction between sex and treatment on the business letter writing posttest.

31. There was no significant difference between male and female achievement on the business letter writing posttest.

32. There was no significant interaction between sex and treatment on the mid-term examination.

33. There was no significant difference in achievement between males and females on the mid-term examination.

34. There was no significant interaction between sex and treatment on the final examination.

35. There was no significant difference in achievement between males and females on the final examination.

36. There was no significant interaction between major and treatment on the pretest of Barton's Language Skills Test.

37. There was no significant difference in achievement between majors and non-majors on the pretest of Barton's Language Skills Test.

38. There was no signficant interaction between majors and treatment on the posttest of Barton's Language Skills Test.

39. There was no significant difference in achievement between majors and non-majors on the posttest of Barton's Language Skills Test.

40. There was no significant interaction between major and treatment on the gain total achieved between the pretest and posttest of Barton's Language Skills Test.

41. There was no significant difference between major and non-major achievement on the gain total between the pretest and posttest of Barton's Language Skills Test.

42. There was no significant interaction between major and treatment on the business letter writing pretest.

43. There was no significant difference between major and non-major achievement on the business letter writing pretest.

44. There was no significant interaction between major and treatment on the business letter writing posttest.

45. There was no significant difference between major and non-major achievement on the business letter writing posttest.

46. There was no significant interaction between major and treatment on the mid-term examination.

47. There was no significant difference between major and non-major achievement on the mid-term examination.

48. There was no significant interaction between major and treatment on the final examination.

49. There was no significant difference between major and non-major achievement on the final examination.

50. There was no significant correlation between G.P.A. and student achievement on the pretest of Barton's Language Skills Test.

51. There was no significant correlation between G.P.A. and student achievement on the posttest of Barton's Language Skills Test.

52. There was no significant correlation between G.P.A. and student achievement on the business letter writing pretest.

53. There was no significant correlation between G.P.A. and student achievement on the business letter writing posttest.

Study Procedures

All experimental and control classes met during Winter Quarter 1983. All classes used the same basic textbooks. These were Basic Business Communications by Raymond Lesikar and Editing Business Prose by Richard Lanham. In addition, the control group used Communicating Clearly, The Effective Message by William O. Bonner.

During the first class meeting, students in all sections were asked to complete a consent form to be used to obtain student official G.P.A. and major from the registrars of the participating schools. This information was used to determine if these factors affect student achievement.

Both the control and experimental groups completed the pretests the second, third, and fourth days of class. Make-ups were given within one week of these dates.

Professors met and discussed the outline for the basic business communications concepts to be taught during the quarter.

Topics covered included:

Introduction
- Introduction to Communications
- Listening Skills
- Nonverbal Communications

Fundamentals of Business Writing
- Adaptation and the Selection of Words
- Construction of Clear Sentences and Paragraphs
- Writing for Effect

Basic Patterns of Business Letters
- Directness in Initiating Routine Letters
- Answering Routine Letters
- Indirectness for Bad News and Persuasion
- Strategy in Job Applications

Fundamentals of Report Writing
- Basics of Report Writing
- Report, Structure, the Shorter Forms
- Graphic Aids to Communication
- Physical Presentation of Reports and Letters

Editing Business Probe was used throughout the entire quarter by students and instructors. It was used to reinforce the topics covered in the unit, Fundamentals of Business Writing.

Instructors met to select appropriate writing assignments for the quarter. These assignments were selected from those provided in the textbook Basic Business Communications. All students were required to complete six letter writing assignments. The letter writing situations were the same for all sections. Students were required to write two letters in each of the following situations: routine inquiries

Lesikar, 1982:95, 96, 100, 101), routine responses (Lesikar, 1982:121, 136, 137), and negative responses (Lesikar, 1982:169, 173). Instructors were required to read the first letter in each situation, giving the students general feedback on their writing before students completed the second letter writing situation for a grade in each category. Instructors were required to grade the second letter in each writing category.

When grading these letters, instructors followed the Letter Evaluation Guide included in the Appendices (p. 177). Areas to be graded included: Purpose -- Completeness, Tone, Choice of Words, English Usage, and Organization. This was the same evaluation form used in studies by Schlattman, 1976; Christensen, 1979; and Pickard, 1972. Grading standards were set by instructors before the beginning of the quarter. They were the same for all classes.

No attempt was made to regulate the times the classes met at either school. However, they were scheduled during the "regular" school day (i.e., no night classes participated).

The assumption was also made that the classrooms used at the schools would have no affect on student achievement. Rooms had adequate lighting, equipment, heating, and arrangement. At both schools it was possible to schedule the courses to meet in the same room.

The posttest of Barton's Language Skills Test and the business letter writing test were given after the experimental sections had finished the remedial English unit. All make-ups were completed within one week of the testing dates.

Students who did not complete the entire battery of pretests and posttests and the mid-term and final were eliminated from the study.

Control group. The control group followed the basic business communications course outline established by the participating instructors. This outline did not include instruction in English fundamentals. Because these sections did not receive instruction in English fundamentals, they received additional in-class and out-of-class writing exercises and assignments. These assignments were researcher approved since there was only one control group at each school. The control section at EMC received more of these assignments since it met four days per week and at MSU the control section met three days per week.

Students were instructed that English usage is important. They were told that business communications was not an English course, and that, they, the students, were expected to demonstrate proficiency in the English language. Since they had all completed high school, they were expected to be able to effectively use the English language. They were also told that the written assignments they completed would be graded for English usage. Any errors made were counted against them. They were told that their textbooks contained a reference section on English fundamentals; they were to refer to that section if they had any difficulties. They were told that they would receive written feedback for major flaws in English usage. They were responsible to look up the appropriate rules for future writing assignments.

The handouts given to the control group during Winter Quarter 1983 did not contain information on English usage. The control group

completed the posttests after the completion of the chapters: Adaptation and the Selection of Words, Construction of Clear Sentences and Paragraphs, Writing for Effect, Directness in Initiating Routine Letters, Indirectness for Bad News and Persuasion, and after the experimental groups completed the English unit.

All of the criterion measure posttests except the language skills test counted towards the students' grades.

Experimental group. This group completed the basic communications outline and some of the assignments that were completed by the control group. In addition they completed the remedial English usage unit.

The study followed the English usage outline suggested by the jury of experts in Barton's study. Major topics included (1981:57-72):

Parts of Speech
Development of Effective Sentences
Capitalization
Punctuation
Spelling Skills
Miscellaneous -- Writing of Numbers
Dictionary and Vocabulary Studies

The textbook for this section of the course was Communicating Clearly, The Effective Message. Transparencies based on the material covered in the text, Communicating Clearly, The Effective Message were provided to the instructors by the researcher. Instructors were allowed to supplement these with the approval of the researcher. All experimental sections completed the same outline and the same sections of the textbook.

Instructors were to spend a minimum of five minutes and a maximum of 15 minutes on each assignment. Instructors kept track of the amount

of time devoted to the remedial English unit. This enabled the researcher to monitor time spent on this unit. It also allowed the researcher to compute the mean amount time required to cover this material by the lecture-discussion method (see Table 1). The instructors took a mean amount of 327 minutes to complete the grammar unit.

Table 1

Mean Amount of Time Required to Complete Grammar Unit

Instructor	Number of Minutes
1	283
2	331
3	304
4	390
Mean = 327 Minutes	

In addition to completion of the materials in class, students were required to complete the textbook exercises. They were also quizzed each day on the previous lessons. The quizzes were worth five points each and were given at the start of each class period. There were a total of 20 quizzes; students were allowed to drop the lowest two quiz grades. Total points available for the quizzes was 100 for EMC, 90 for MSU. There were no make-ups on the quizzes. These quizzes were researcher supplied and were not part of the statistical analysis. Students were advised at the beginning of the quarter that the quizzes would count towards their overall grade.

Students were advised that English usage errors would count against them in their letter writing. They received written feedback on their English usage skills.

The experimental group completed the posttests after completion of remedial English unit and the same textbook chapters as the control group. They were instructed that the grade on all posttests would count towards their final grade.

Description and Evaluation of Tests Used

Both the pretest and the posttest consisted of Barton's Language Skills Test and the writing of two business letters. The situations for the writing skills were decided by a consensus of the participating instructors. They were chosen from situations supplied in the Basic Business Communications textbook. Students were given four situations (two for each day of writing). They were required to write appropriate letters for two of these situations (one for each testing day). These situations covered the areas of routine responses, routine inquiries, and negative responses. Students were given 25 minutes on two separate days to complete the business letter writing test. There were two forms of the business letter writing test, Form A and Form B. Students who completed Form A as a pretest took Form B as a posttest. Those taking Form B as a pretest took Form B as a posttest. Form A for the posttest was changed because instructors inadvertently assigned one of the situations in this test as an assignment. The situation substituted was chosen randomly from the remaining test situations.

Barton's Language Skills Test. After a review of literature search, Barton found that there was not an established instrument which would test a student's knowledge of the wide range of language usage skills which would be covered in a basic business communications course (1981: 6-7). The result of Barton's study was the development of a language skills test which would measure these skills. The final test form consists of 85 questions covering the necessary topics. The test was proven to be reliable and valid. Validity was measured by the opinions of the jury of experts, and reliability as correlated with the Cooperative English Test, Form 1B (1981:89, 53). "The coefficient alpha test was used and indicated a coefficient of .8359. This high coefficient signifies that the test is reliable and is a suitable instrument for identifying language usage strengths and weaknesses" (Barton, 1981:88). A letter (see Appendix B, p. 182) was received from Barton giving permission to use her test for this study. This test was chosen because it is the only test designed to test the skills needed for basic business communications. Barton also recommends that the test be used on other populations (1981:90).

For the purposes of this study Barton's Language Skills Test was divided into the following parts:

Parts	Questions
Part I (Grammar)	1-23
Part II (Sentence structure, word choice, emphasis, paragraphs)	24-32
Part III (Business Writing Principles)	33-39, 80, 82, 83, 84

Parts (Continued)	Questions
Part IV (Capitalization and Punctuation	40-68
Part V (Spelling)	69-75
Part VI (Miscellaneous)	81 and 85, 76-79

Business letter writing tests. The instructors met prior to Winter Quarter 1983 to choose 12 situations which could comprise the pretest and the posttest for the business letter writing tests. The four situations which comprised each test were selected randomly; the instructors did not know which situations had been chosen until the posttest was given. There was at least one situation in each of the categories -- routine inquiries, routine responses, and negative responses. Students were given information concerning a specific situation, and they were expected to compose an appropriate letter. Students were given the pretest in sealed envelopes. Written instructions were provided to the instructors. These were read to the students before they began the pretest. Professors were instructed not to give additional help. During the pretest, they were instructed not to "walk around" the room. Students then took the pretest. After completion of the pretest, the students then sealed their responses in envelopes. This precaution was necessary to ensure that the instructors would not know which situations would comprise the tests. In this way, students did not receive prior knowledge of which situations were included in the tests.

The posttest was administered in a similar method, with this exception: instructors received the tests in a sealed envelope. Since it was the posttest, the instructor could see the situation questions.

But, they again were instructed not to give additional help to the students.

Since the quality of handwriting had been proven to affect the grade given to a writing test, all letters were retyped in the same format. Letters were retyped exactly as they appeared. Any errors (for example, misspellings) were not corrected.

All letters were coded so that any personal identification was removed. Evaluators were not able to identify the student. The coding was known only to the researcher.

Mid-term and final examinations. The mid-term and final examinations were the same for all sections. These tests covered the content of the basic business communications course. The questions were based on the material covered in the book, Basic Business Communications. These tests were compiled by the researcher and were subject to the approval of the participating instructors.

Analytical vs. Holistic Grading of Business Letters

After the preinstructional and postinstructional business letter writing tests were completed by all sections, the reliability of analytical vs. holistic grading was studied.

Out of the 580 business letter writing tests (both preinstructional and postinstructional) a systematic random sample of 48 papers was selected. A stratified sample was also used to insure that the population proportions were accurately represented in the sample. This sample included:

1. an equal number of preinstructional and postinstructional business letter writing tests. (i.e., There were 24 preinstructional tests and 24 postinstructional tests.)

2. an equal number of business letter writing tests from each section. (i.e., There were four preinstructional and four postinstructional tests from each section.)

There were three evaluators and one supervisor. The evaluators for this study all hold master's degrees. Two hold master's degrees in journalism, and the third has a bachelor's in English and a master's in Educational Administration. The evaluators each had at least one year of experience teaching communications. Since the researcher understood the grading procedures and the requirements of the research project, the researcher acted as the supervisor for the grading sessions.

The same evaluators were used for grading the papers both analytically and holistically. The three evaluators graded the papers holistically and then analytically. There were two consecutive grading sessions. One for each grading method. Evaluator reliability was computed for each grading method.

At the beginning of each session evaluators and the supervisor met to discuss the criteria to be used for each grading method. During these training sessions, the evaluators scored 11 training papers selected randomly from the remaining preinstructional and postinstructional business letter writing tests.

Each evaluator was given four business letter writing tests to read and evaluate. They were then given an opportunity to discuss their opinions of the papers and why they rated each one with a particular score(s) until there was a general consensus on the four papers.

A fifth paper was then distributed. Each evaluator was asked to score this paper on the basis of their decisions and discussions of the first four papers. After rating, there was another short discussion of "why." And, then a sixth paper was distributed, rated, and discussed. This same procedure was followed until all 11 training papers were graded. Through this process of reading, rating, and discussing, the evaluators arrived at a consensus of standards.

After consensus was achieved, the evaluators scored the 48 sample papers. The sample papers were typed in standard format, and personal identification was removed. The papers were then presented to the evaluators in random order, but the order was the same for each evaluator. Evaluators read as rapidly as possible through the 48 sample papers. Evaluators were asked to read the papers once and to score them appropriately.

The amount of time required for each grading and training session was kept accurately by the researcher. These times were then compared.

The grading method which proved to be most reliable and the most time effective was to be used to score the preinstructional and postinstructional business letter writing tests. Since the grading methods proved to be of equal reliability, the method which took the least amount of time was used to grade the preinstructional and postinstructional business letter writing tests. This time included evaluator training time and the actual grading time of the sample letters.

Reliability of holistic grading. The letters were graded holistically on a four-point scale. This scale is preferred because it takes less

training time and less time to actually use (McColly and Reinstad, 1965:55). While holistic grading is not diagnostic, it can be used to measure growth in writing when a preinstructional and postinstructional writing sample is obtained (Feinberg, 1980:44). The grading of writing assignments is very difficult, but with holistic grading on a four-point scale reliability of .88 can be achieved if certain factors are controlled in the design (McColly, 1970:148-155). Factors to be controlled were:

1. Selection of the writing topics -- students were given a basic business situation, and they were expected to originate a response to that situation.

2. All writing tests were impromptu.

3. Because student performance will vary from topic to topic, one writing sample is not adequate (McColly, 1970:152). Both the pretest and posttest consisted of the writing of two business letters.

4. An adequate rating scale was necessary.

5. Pretests and posttests were graded simultaneously so that contaminating factors would not enter into the scoring.

6. Students were given a sufficient amount of time to complete the writing test. At least 40-45 minutes are necessary for a 200-word essay (McColly, 1970:155). Since business letters are often less than 100 words and are written for a specific situation, students were given 25 minutes to write one letter.

7. This study made use of trained evaluators who had extensive background in English usage and in the grading of business writing tests.

8. Bias was eliminated by coding students' papers, and by retyping those papers.

Training of the evaluators for holistic grading. Prior to meeting to evaluate the preinstructional and postinstructional sample papers, the

evaluators met and practiced grading letters holistically. First, they became familiar with the scale. The holistic scale used was (Myers, 1966:43):

1. Obviously below a reasonable standard
2. Not sufficient promise or competence to be considered in the upper half
3. Clearly competent, promise of effective performance
4. Superior; not perfect but very good; effective

The evaluators discussed the three categories of letters -- routine inquiries, routine responses, and negative responses. They decided on the application of the scale to these letters. They began with the training letters as previously outlined. After the training session, the sample letters were graded.

All evaluators had a solid foundation in English usage fundamentals. They completed Barton's Language Skills Test. There were three evaluators and one supervisor. The evaluators were from the part-time faculty of Eastern Montana College.

Reliability of analytical grading. Analytical grading of the sample letters was done by the Letter Evaluation Guide (see Appendix, p. 178). This same evaluation guide was used by Schlattman in 1976 and Pickard in 1972. Factors controlled were the same as for holistic grading (see Chapter 3, p. 78).

Training of the evaluators for holistic grading. Prior to the actual grading of the sample letters, there was a training session similar to that used in holistic grading.

Rating of the Business Letter Writing Test

The actual grading of preinstructional and postinstructional business letter writing tests was done by holistic grading. Before the session began, the evaluators again experienced a training session. During this training session they arrived at a consensus of the grading scale criteria used. They practiced until they reached a consensus as they did in previous training sessions.

The evaluators graded all letters in one session. The grading began at 8:20 a.m. with a short training session. The actual grading started at 8:38 a.m. and continued until the evaluators were finished. There was at least a five minute break each hour with a long break every other hour. Because of disagreement, it was necessary to stop the evaluators once to retrain them. Previously scored papers were not regraded. Table 2 shows the grading times for each evaluator.

Table 2

Grading Time

Evaluator	Total Minutes
1	182
2	186
3	210

Each letter was graded by two evaluators. The letters were sorted by situation, with each set graded completely before advancing to the next set. Each set was shuffled before each evaluator scored them. A third rating was done by the supervisor only when there was a discrepancy between the two scores given by the evaluators. Since holistic

grading was used, those papers on which scores were more than one point different required a third reading. The supervisor then scored these papers; this score was used for the purposes of this study. There were 26 of these papers. If analytical grading had been used, those papers on which scores differed by more than 40 points would have required a third reading. These papers would have been scored by the supervisor. This score then would have been used for the purposes of this study.

It was the supervisor's responsibility to check the consensus of scores among the evaluators. This was checked each hour. If the evaluators differed consistently, they were stopped and retrained until they agreed upon the standards for each of the ranks. This was required once during the evaluation session. Before proceeding, trial letters were graded to make sure that they were in agreement.

In order to avoid evaluator fatigue, the evaluators took frequent breaks. At least one five-minute break per hour was required.

Statistical Treatment of Data

The Kuder-Richardson formula $r = \frac{K}{K-1} \left[1 - \frac{\Sigma\sigma i^2}{Pi^2} \right]$ was used to compare the reliability of holistic with analytical grading methods.

K represents the number of independent readings of the letters (in this case, 3), P^2 is the variance of the student scores from a particular evaluator, $\Sigma\sigma i^2$ is the form of the letter variance for all letters and Pi^2 is the variance of the sums of the rating from all evaluators (Ebel, 1972:419).

The Pearson product-moment correlation coefficient was used to test hypotheses 11 and 12. The significance of r was tested with a t test.

Two-way analysis of variance was utilized for testing the hypotheses which involved one independent variable. These were hypotheses 1-10 and 13-17.

When a predifference was found through analysis of variance, analysis of co-variance was used to equate the groups on the variates in question.

Summary

This study attempted to provide business communications professors with additional information on the results of introducing remedial English usage instruction into the basic business communications classroom. A second purpose of this study was to determine the reliability of using holistic grading for judging student achievement in business letter writing.

This chapter includes the procedures used for this study. It has described the population, the procedures, the hypotheses tested, the criterion measures, and the statistical analysis of the data.

CHAPTER 4

RESULTS AND FINDINGS

This study produced data concerning the effects of introducing remedial English usage into a collegiate business communications course. It also provided data which compared the reliability of holistic grading with the reliability of analytical grading. The results are presented under three major headings: (1) Population Description, (2) Statistical Hypotheses -- Three vs. Four Days of Instruction, (3) Statistical Hypotheses -- Males vs. Females, (4) Statistical Hypotheses -- Majors vs. Non-Majors, (5) Statistical Hypotheses -- Correlations, (6) Additional Statistical Analyses, and (7) General Question.

Population Description

The population of this study consisted of the students enrolled in business communications at Eastern Montana College and Montana State University during Winter Quarter 1983. There were three sections at each school, one control group and two experimental. Only those students who completed the entire pretest and posttest battery were considered. Table 3 illustrates the number of students in the sample.

It should be noted that there was a large difference in the number of students who began the pretest battery in Section 02 at EMC and in the number of students who completed the posttest battery in this same section. The researcher has no explanation for this occurrence.

Table 3

Sample Size

	Number Starting Pretest	Number Completing Pretest & Posttest Battery
MSU Section		
01 Control	33	30
02 Experimental	36	30
03 Experimental	26	24
Total MSU cases	95	84
EMC Section		
01 Control	23	21
02 Experimental	30	16
03 Experimental	30	24
Total EMC cases	83	61
Total Sample	178	145

The means of the group were comparable to the other sections involved in this study.

Statistical Hypotheses --
Three vs. Four Days of Instruction

Null Hypotheses 1, 2, and 3

1. There was no significant interaction between the number of days of instruction students would receive and treatment on the pretest of Barton's Language Skills Test.

2. There was no significant difference in English fundamentals achievement between the control group means and the experimental group means on the pretest of Barton's Language Skills Test.

3. There was no significant difference between the means of those students who received three days of instruction per week and those students who received four days of instruction per week on the pretest of Barton's Language Skills Test.

There was no significant interaction between number of days students attended class and treatment. There was also no significant difference between group means of those who received three days of instruction and those students who received four days of instruction (see Table 4).

Table 4

Two-Way Analysis of Variance
Total Pretest -- Barton's Language Skills Test
3 vs. 4 Days Per Week of Instruction

Source	Sum of Squares	Degrees of Freedom	Square	F	Tail Probability
3 vs. 4 Days	71.29580	1	71.29580	.86	.3561
Treatment	1.78251	1	1.78251	.02	.8838
# of Days x Treatment	37.48071	1	37.48071	.45	.5031
Error	11728.14643	141	83.17834		

Based on the analysis of variance the following decisions were made: Retain null nypotheses 1, 2, and 3.

The groups were not statistically different in their fundamental knowledge of English when they entered business communications. There was no significant difference between the control or experimental groups or between those groups that would receive three days of instruction and those who would receive four days of instruction.

To further check this equality, analysis of variance was computed on each of the parts of the pretest of Barton's Language Skills Test. This analysis appears in Table 5.

There was significant interaction between number of days of instruction students received and treatment on two parts of the pretest:

Table 5
Two-Way Analysis of Variance
Barton's Language Skills Pretest, Parts I-VI
3 vs. 4 Days of Instruction

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Pretest I (Grammar)					
3 vs. 4 Days	1.33176	1	1.33176	.10	.4405
Treatment	7.61859	1	7.61869	.60	.7468
# of Days x Treatment	52.63208	1	52.63208	4.13	.0439*
Error	1795.03810	141	12.73077		
Pretest II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
3 vs. 4 Days	.24977	1	.24977	.11	.7456
Treatment	.93061	1	.93061	.39	.5314
# of Days x Treatment	5.32877	1	5.32877	2.25	.1355
Error	333.38664	141	2.36444		
Pretest III (Business Writing Principles)					
3 vs. 4 Days	5.64312	1	5.64312	1.89	.1717
Treatment	.74620	1	.74620	.25	.6812
# of Days x Treatment	18.19147	1	18.19147	6.08	.0148*
Error	421.67619	141	2.99061		
Pretest IV (Capitalization and Punctuation)					
3 vs. 4 Days	7.64147	1	7.64147	.52	.4714
Treatment	28.23658	1	28.23658	1.93	.1673
# of Days x Treatment	4.59436	1	4.59436	.31	.5764
Error	2066.28347	141	14.65449		
Part V (Spelling)					
3 vs. 4 Days	3.00425	1	3.00425	1.58	.2113
Treatment	.04145	1	.04145	.02	.8830
# of Days x Treatment	.05632	1	.05632	.03	.8637
Error	268.62738	141			
Part VI (Miscellaneous)					
3 vs. 4 Days	11.44687	1	11.44687	6.06	.0150*
Treatment	1.24496	1	1.24496	.66	.4183
# of Days x Treatment	2.42328	1	2.42348	1.28	.2593
Error	266.37619	141	1.88919		

Part I, Grammar and Part III, Business Writing Principles. On Part I the control group at MSU had a high mean score of 14.93 and the experimental group had a mean score of 13.17. However, at EMC the experimental group mean was 14.65 and the control group mean was 13.86. On Part III the experimental group mean was high at EMC, and the control group mean was high at MSU. On Parts II and IV there was no significant difference between the groups.

On Parts II and IV, there was no significant difference between the group means for those who received three days of instruction and those who received four days of instruction. On these same parts, there was also no significant difference between the control group means and the experimental group means. However, on Part VI it was found that the group who received four days instruction scored significantly higher than those students who received instruction three days per week.

Null Hypotheses 4, 5, and 6:

4. There was no significant interaction between the number of days of instruction students received and treatment on the posttest of Barton's Language Skills Test.

5. There was no significant difference between the control and experimental group means on the posttest of Barton's Language Skills Test.

6. There was no significant difference between the means of those students who received three days of instruction per week and those students who received four days of instruction per week on the posttest of Barton's Language Skills Test.

There was no significant interaction between the number of days of instruction that students received and treatment. There was also no significant difference in achievement between those students who received four days of instruction. There was, however, a significant difference between the control and experimental group means (see Table 6).

Table 6
Two-Way Analysis of Variance
Total Posttest -- Barton's Language Skills Test
3 Days vs. 4 Days

Source	Sum of Squares	Degree of Freedom	Mean Square	F	Tail Probability
3 vs. 4 Days	159.19747	1	159.19747	1.85	.1765
Treatment	1081.32712	1	1081.32712	12.53	.0005*
# of Days x Treatment	123.45209	1	123.45209	1.43	.2336
Error	12165.33108	141	86.27894		

Decisions made were: Retain null hypotheses 4 and 6; reject null hypothesis 5.

Those students who received instruction in English fundamentals did significantly better on the posttest of Barton's Language Skills Test regardless of the number of days per week the class met. It should be noted that for the grammar unit all students completed the same number of basic lessons regardless of how many days per week the class met. However, those students who attended class three days per week had instruction spread over eight weeks; those who attended classes four days per week had instruction spread over six weeks. In addition, students who met four times per week completed one extra review assignment during the grammar unit.

To further analyze this significant difference, analysis of variance were computed on the parts of this posttest. These analyses appear in Table 7.

Interaction was found between the number of days students received instruction and Part VI of the posttest of Barton's Language Skills Test.

Table 7
Two-Way Analysis of Variance
Barton's Language Skills Posttest, Parts I-VI
3 Days vs. 4 Days

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Posttest I (Grammar)					
3 vs. 4 Days	13.33541	1	13.33541	1.06	.3061
Treatment	105.37934	1	105.37934	8.34	.0045*
# of Days x Treatment	28.20073	1	28.20073	2.23	.1375
Error	1781.85608	141	12.63728		
Posttest II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
3 vs. 4 Days	.89692	1	.89692	.26	.6101
Treatment	3.23061	1	3.23061	.94	.3337
# of Days x Treatment	4.19979	1	4.19979	1.22	.2706
Error	484.17619	141	3.43387		
Posttest III (Business Writing Principles)					
3 vs. 4 Days	6.02891	1	6.02891	2.48	.1174
Treatment	1.87375	1	1.87375	.77	.3812
# of Days x Treatment	.69841	1	.69841	.29	.5926
Error	342.42738	141	2.42856		
Posttest IV (Capitalization and Punctuation)					
3 vs. 4 Days	23.25081	1	23.25081	1.65	.2011
Treatment	250.55580	1	250.55580	17.78	.0000*
# of Days x Treatment	.11159	1	.11159	.01	.9292
Error	1987.47976	141	14.09560		
Posttest V (Spelling)					
3 vs. 4 Days	2.26149	1	2.26149	1.23	.2691
Treatment	2.60682	1	2.60682	1.47	.2268
# of Days x Treatment	4.35330	1	4.35330	2.37	.1260
Error	259.97500	141	1.83741		
Posttest VI (Miscellaneous)					
3 vs. 4 Days	.58155	1	.58155	.54	.4654
Treatment	3.90993	1	3.90993	3.60	.0597*
# of Days x Treatment	4.69292	1	4.69293	4.32	.0394*
Error	153.01905	141	1.08524		

A significant difference was not found on any of the parts between those sections which met three days per week and those sections which met four days per week.

However, a significant difference was found between the control group means and the experimental group means on the following parts: Part I, Grammar; Part IV, Capitalization and Punctuation; and Part VI, Miscellaneous. On each of these subtests the experimental group scored significantly higher than the control group.

Since the group which received instruction four days per week scored significantly higher on Part VI of the pretest when they entered business communications, analysis of co-variance was used to equate the groups on the co-variate of this pretest. No significant difference was found between the adjusted means of the groups on the posttest (see Table 8).

Table 8
Analysis of Co-Variance
Barton's Language Skills Posttest, Part VI
3 vs. 4 Days

Days	Unadjusted Mean	Adjusted Mean	F
3 days	4.8452	4.8774	
4 days	5.0984	5.0541	.9816

Null Hypotheses 7, 8, and 9:

7. There was no significant interaction between the number of days per week students attended classes and treatment on the gain total achieved between the pretest and posttest of Barton's Language Skills Test.

8. There was no significant difference between the control and experimental group means on the gain total achievement between the pretest and posttest of Barton's Language Skills Test.

9. There was no significant difference between the mean gain total of those students who attended classes three days per week and the mean gain total of those students who attended four days per week for the pretest and posttest of Barton's Language Skills Test.

No significant interaction was found between the number of days students attended classes and treatment. A significant difference was found between the experimental group mean gain and the control group mean gain, with the experimental group gaining significantly more than the control group. A significant difference was also found in the mean gain total between those students who attended classes three days per week and those students attending classes four days. The major difference was between the two control groups -- the control group which attended three days per week gained 6.5 points while the group attending four days per week gained only 1.90 points (see Table 9).

Table 9
Gain Total
Barton's Language Skills Test
3 vs. 4 Days

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
3 vs. 4 Days	443.56705	1	443.56705	10.41	.0016*
Treatment	995.30350	1	995.30350	23.35	.0000*
# of Days x Treatment	24.88763	1	24.88763	.58	.4461
Error	6010.55767	141	42.62807		

Based on the analysis of variance the following decisions were made: Retain hypothesis 7; reject hypotheses 8 and 9.

Those students who received instruction in English fundamentals had a significantly higher gain total on Barton's Language Skills Test than those students who did not receive the instruction. The number of days per week the experimental group attended classes made no significant difference in this gain total. However, those students in the control group which attended three days per week had a much higher gain score than those students in the control group which attended classes four days per week.

Null Hypotheses 10, 11, and 12:

10. There was no significant interaction between the number of days per week the students would attend classes and the treatment on the business letter writing pretest.

11. There was no significant difference between the experimental and control group means on the business letter writing pretest.

12. There was no significant difference between the means of those students who received three days of instruction per week and those students who received four days of instruction per week on the business letter writing pretest.

There was no significant interaction between the number of days students attended class and treatment. There was also no significant difference between the control and experimental group means. Further, there was no significant difference between the experimental and control group means of those students who received three days of instruction and for those students who received four days of instruction (see Table 10).

Based on the analysis of variance the following decisions were made: Retain hypotheses 10, 11, and 12.

Table 10
Two-Way Analysis of Variance
Business Letter Writing Pretest
3 vs. 4 Days

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
3 vs. 4 Days	5.41911	1	5.51911	1.41	.2379
Treatment	1.71607	1	1.71607	.44	.5088
Treatment x 3 vs. 4 Days	12.50006	1	12.50006	3.20	.0760
Error	551.54656	141	3.91168		

There was no significant statistical difference among the groups in their ability to write business letters when they entered business communications. They were basically equal in their ability to write a business letter.

Null Hypotheses 13, 14, and 15:

13. There was no significant interaction between the number of days per week students attended classes and treatment on the business letter writing posttest.

14. There was no significant difference between the control group means and the experimental group means on the business letter writing posttest.

15. There was no significant difference between the group means of those students who attended classes three days per week and those students who attended classes four days per week.

No significant interaction was found between the number of days students attended classes and treatment. No significant difference was found between the control and experimental means. Further, no significant difference was found between the control and experimental groups means of those students who attended classes three days per week and those students who attended classes four days per week (see Table 11).

Table 11
Two-Way Analysis of Variance
Business Letter Writing Posttest
3 vs. 4 Days

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
3 vs. 4 Days	4.89320	1	4.89320	1.02	.3148
Treatment	1.60591	1	1.60591	.33	.5642
3 vs. 4 Days x Treatment	17.51976	1	16.51976	3.64	.0583
Error	677.99101	141	4.80845		

Based on the analysis of variance the following decisions were made: Retain hypotheses 13, 14, and 15.

While the experimental group mean was significantly higher than the control group mean on the posttest of Barton's Language Skills Test, the experimental group mean was not significantly higher than the control group mean on the business letter writing posttest (see Tables 6 and 11). The control group mean for those who attended three days per week was 8.63, the experimental group, 9.14. However, the experimental group mean for those who attended four days per week was 8.80, the control group, 9.76. In addition, the group mean for those classes which attended three days per week were not significantly different than those classes which attended four days per week on the business letter writing posttest (see Table 11). Those who attended four days per week had a mean of 9.13 and those who attended three days per week had a mean of 9.03.

Null Hypotheses 16, 17, and 18:

16. There was no significant interaction between the number of days per week students attended classes and treatment on the mid-term examination.

17. There was no significant difference between the control group means and the experimental group means on the mid-term examination.

18. There was no significant difference between the group mean of those students who attended classes three days per week and the group mean of those students who attended classes four days per week on the mid-term examination.

There was no significant interaction between the number of days students attended classes and treatment. There was no significant difference in the experimental and control group means. There was also no significant difference between the group means of those students who attended classes three days per week and those students who attended classes four days per week (see Table 12).

Table 12
Two-Way Analysis of Variance
Mid-Term Examination
3 vs. 4 Days

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
3 vs. 4 Days	67.68932	1	67.68932	.77	.3818
Treatment	167.35068	1	167.35068	1.90	.1699
3 vs. 4 Days x Treatment	181.61068	1	181.61068	2.07	.1529
Error	12300.37987	141	12399.37989		

Based on the analysis of variance the following decisions were made: Retain hypotheses 16, 17, and 18.

The students in the experimental group who received less instruction in business communications principles, did equally as well on mid-term examination as those students in the control group who received more instruction in these principles. There was no significant difference in achievement between those groups who received the least

instruction in business communications and the groups which received the most instruction in business communications. A possible explanation for this achievement is that the mid-term examination questions were based entirely on the information in the textbook, Basic Business Communications. Students in the experimental groups were expected to cover more of this material outside of class than the control groups. This suggests that more time in business communications can be spent on areas where students show significant deficiencies or needs (e.g., English fundaments, nonverbal communications, or interview techniques, or listening skills). This also indicates that including the grammar unit had no adverse effect on student mastery of the basic business communications principles covered in the textbook as measured by the mid-term examination.

Null Hypotheses 19, 20, and 21:

19. There was no significant interaction between the number of days students attended classes and treatment on the final examination.

20. There was no significant difference between the control and experimental group means on the final examination.

21. There was no significant difference between the group mean of those students who attended classes three days per week and the group mean of those who attended classes four days per week.

There was significant interaction between the number of days students attended classes and the treatment. The experimental group which attended four days per week was interacting with treatment (see Table 13).

Based on the analysis of variance hypothesis 19 was rejected. No decision was made on hypotheses 20 and 21.

Table 13
Two-Way Analysis of Variance
Final Examination
3 vs. 4 Days

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
3 vs. 4 Days	415.80984	1	415.80984	5.57	.0196*
Treatment	34.50768	1	34.50768	.46	.4976
# of Days x Treatment	465.66092	1	465.66092	6.24	.0136*
Error	10522.09735	141	10522.09735		

The experimental group which attended classes four days per week had the highest mean score at 81.70 on the final examination while the mean of the experimental group which attended classes three days per week was 74.29. However, the mean of the control which attended classes four days per week was slightly lower at 76.85 than the mean of the control group which attended classes three days per week which was 77.07.

Statistical Hypotheses --
Males vs. Females

Null Hypotheses 22 and 23:

22. There was no significant interaction between sex and treatment on the pretest of Barton's Language Skills Test.

23. There was no significant difference between male and female achievement on the pretest of Barton's Language Skills Test.

There was no significant interaction between sex and treatment in student achievement on Barton's Language Skills Test which was given as a pretest. There was a significant difference in achievement between males and females regardless of which group -- experimental or control (see Table 14).

Table 14
Hypotheses 22 and 23
Two-Way Analysis of Variance
Barton's Language Skills Pretest
Males vs. Females

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	1160.66920	1	1160.66920	16.08	.0001*
Sex x Treatment	142.71127	1	142.71121	1.98	.1619
Error	10177.45160	141	72.18051		

Based on the analysis of the variance the following decisions were made: Retain null hypothesis 22; reject null hypothesis 23.

Females had a significantly better knowledge of English fundamentals than males when they entered the business communications course.

To further analyze the pretest data, analysis of variance was computed for each of the pretest parts. This analysis appears in Table 15.

There was no significant interaction between sex and treatment on any of the parts of Barton's Language Skills Test given as a pretest. There was also no difference between teaching methods. However, there was a significant difference between males and females. Female achievement was significantly better on the following parts: Part I, Grammar; Part II, Business Writing Principles; Part IV, Capitalization and Punctuation; and Part VI, Miscellaneous.

Female students entered business communications with a formal knowledge of English fundamentals which is significantly higher than male formal knowledge of English fundamentals. Particularly, female knowledge is significantly higher in the following areas: grammar, business writing principles, capitalization and punctuation, and miscellaneous (see Table 15).

Table 15
Two-Way Analysis of Variance
Summary Table
Barton's Language Skills Pretest, Parts I-VI
Males vs. Females

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Pretest I (Grammar)					
Sex	108.26905	1	108.16905	8.96	.0003*
Sex x Treatment	11.99564	1	11.99564	.99	.3208
Error	1703.63724	141	12.08253		
Pretest II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Sex	3.68463	1	3.68463	2.41	.1228
Sex x Treatment	.40942	1	.40942	.17	.6776
Error	332.56415	141	2.35861		
Pretest III (Business Writing Principles)					
Sex	61.69521	1	61.69521	23.65	.0000*
Sex x Treatment	.80097	1	.80097	.31	.5803
Error	367.74692	141	2.60813		
Pretest IV (Capitalization and Punctuation)					
Sex	77.69773	1	77.69773	5.64	.0189*
Sex x Treatment	23.88788	1	23.88788	1.73	.1901
Error	1943.25990	141	1.88570		
Part V (Spelling)					
Sex	2.62744	1	2.62744	1.39	.2398
Sex x Treatment	1.48447	1	1.48447	.79	.3766
Error	265.88396	141	1.88570		
Part VI (Miscellaneous)					
Sex	8.93357	1	8.93357	4.74	.0313*
Sex x Treatment	.70891	1	.70891	.38	.5408
Error	265.86132	141	1.8854		

Null Hypotheses 24 and 25:

24. There was no significant interaction between sex and treatment on the posttest of Barton's Language Skills Test.

25. There was no significant difference between male and female achievement on the posttest of Barton's Language Skills Test.

There was no significant interaction between sex and treatment. There was a significant difference between males and females regardless of the group classification (see Table 16).

Based on the analysis of variance the following decisions were made: Retain null hypothesis 24 and reject null hypothesis 25.

Female students scored higher on the posttest than male students, with women in the experimental group doing the best.

Table 16
Two-Way Analysis of Variance
Barton's Language Skills Posttest
Males vs. Females

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	867.73377	1	867.73377	11.05	.0011*
Sex x Treatment	724.42660	1	124.42660	1.58	.2102
Error	11073.42438	141	78.53492		

To further analyze the posttest data, analysis of variance was computed for each of the parts of the posttest. This analyses appears in Table 17.

There was no significant interaction between sex and treatment on any of the parts of Barton's Language Skills Test given as a posttest. Significant differences were found between males and females in the control and experimental groups. Females in the experimental group

Table 17
Summary Table
Two-Way Analysis of Variance
Barton's Language Skills Posttest, Parts I-VI
Males vs. Females

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Posttest I (Grammar)					
Sex	216.84183	1	216.84183	20.35	.0000*
Sex x Treatment	23.77994	1	23.77994	2.23	.1374
Error	1502.23982	141	10.65418		
Posttest II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Sex	.01796	1	.01796	.01	.9421
Sex x Treatment	9.35982	1	9.35892	2.76	.0988
Error	477.90661	141	3.38941		
Posttest III (Business Writing Principles)					
Sex	1.48203	1	1.48203	.60	.4398
Sex x Treatment	.63512	1	.63512	.26	.6129
Error	348.20661	141	2.46955		
Posttest IV (Capitalization and Punctuation)					
Sex	96.24322	1	96.24322	7.16	.0084*
Sex x Treatment	1.62889	1	1.62889	.12	.7283
Error	1896.09480	141	13.44748		
Posttest V (spelling)					
Sex	14.13711	1	14.13711	8.02	.0053*
Sex x Treatment	.00226	1	.00226	.00	.9715
Error	248.59661	141	1.76310		
Posttest VI (Miscellaneous)					
Sex	.03608	1	.03608	.03	.8582
Sex x Treatment	1.20608	1	1.20608	1.07	.3023
Error	158.68237	141	1.12541		

did significantly better on Parts I, Grammar; Part VI, Capitalization and Punctuation; and Part V, Spelling.

Because female students scored significantly higher on the pretest of Barton's Language Skills Test, analysis of the co-variance was used to attempt to equate the groups on this variable. The co-variance was computed for each of the parts of the pretest on which the female students scored significantly higher than the male students. These parts were Part I, Grammar; Part III, Business Writing Principles; Part IV, Capitalization and Punctuation; and Part VI, Miscellaneous.

Even when equated on the basis of the pretest, the female students did significantly better than the male students on Part I, Grammar and Part V, Spelling. However, on Parts III and IV, the difference in achievement was attributed to the pre-difference between the groups. This analysis appears in Table 18.

Based on the analysis of variance and co-variance female students achieved significantly higher scores in the areas of grammar and spelling.

Null Hypotheses 26 and 27:

26. There was no significant interaction between sex and treatment on the gain total achieved between the pretest and posttest of Barton's Language Skills Test.

27. There was no significant difference between male and female achievement on the gain total between the pretest and posttest of Barton's Language Skills Test.

There was no significant interaction between sex and treatment on the gain total. There was also no significant difference in gain total achievement between males and females (see Table 19).

Table 18
Analysis of Co-variance
Barton's Language Skills Posttest
Parts I, III, IV, and VI
Males vs. Females

	Unadjusted Mean	Adjusted Mean	F
Part I (Grammar)	15.95		
Males	14.66	15.15	
Females	17.54	16.93	13.799*
Part III (Business Writing Principles)	8.72		
Males	8.60	8.77	
Females	8.86	8.66	0.142
Part IV (Capitalization and Punctuation)	19.85		
Males	19.03	19.54	
Females	20.86	20.23	1.722
Part VI (Miscellaneous)			
Males	4.94	4.24	
Females	4.92	4.13	.417

Table 19
Two-Way Analysis of Variance
Gain Total -- Barton's Language Skills Test
Males vs. Females

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	21.26385	1	21.26385	.47	.4958
Sex x Treatment	.62649	1	.62649	.01	.9069
Error	6429.60391	141	45.60003		

Based on the analysis of variance, the following decisions were made: Retain hypotheses 26 and 27.

Gain total for Barton's Language Skills Test is not affected by sex. However, gain total was affected by the experimental treatment for both males and females. Those students in the experimental groups did better regardless of sex. Males in the experimental group had the largest gain total.

Null Hypotheses 28 and 29:

28. There was no significant difference between sex and treatment on the business letter writing pretest.

29. There was no significant difference between male and female achievement on the business letter writing pretest.

There was no significant interaction between sex and treatment. However, there was a significant difference in achievement between males and females on the business letter writing pretest (see Table 20).

Table 20
Two-Way Analysis of Variance
Business Letter Writing Pretest
Males vs. Females

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	19.80852	1	19.80852	5.20	.0241*
Sex x Treatment	2.24591	1	2.24591	.59	.4439
Error	537.16751	141	3.80970		

Based on the analysis of variance, the following decisions were made: Retain hypothesis 28, reject hypothesis 27.

Female students entered business communications with a significantly better writing skill than male students. Further examination of the mean scores revealed that the females in the experimental group at EMC had a low score of 6.25 while the females in the control group at EMC had a score of 7.63. The females in the experimental groups at MSU had a mean of 7.43 and females in the control group had a 7.21. The male students in the experimental group had a 6.3, the experimental mean, 6.0. At MSU the males in the experimental group had a mean of 6.88, the experimental mean, 6.37. So, while the females in the total population did score significnatly better, female achievement at EMC was not significantly different.

Null Hypotheses 30 and 31:

30. There was no significant interaction between sex and treatment on the business letter writing posttest.

31. There was no significant difference between male and female achievement on the business letter writing posttest.

There was no significant interaction between sex and treatment. There was also no significant difference between the means of the male students and the means of the female students (see Table 21).

Based on the analysis of variance the following decisions were made: Retain hypotheses 28 and 29.

Even though male students entered business communications with a significantly lower business writing ability than female students, the male students do achieve an equal writing skill after completion of business communications (see Table 21). Female students did not achieve a significantly higher writing ability on the business letter

Table 21
Two-Way Analysis of Variance
Business Letter Writing Posttest
Males vs. Females

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	4.98192	1	4.98192	1.05	.3062
Sex x Treatment	17.04438	1	17.04438	3.61	.0596
Error	666.15269	141	4.72449		

writing posttest. However, women in the experimental group did have the highest group mean.

Because female students scored significantly higher on the business letter writing pretest, analysis of co-variance was used to equate the groups on this variable. This analysis confirmed the results of the analysis of variance. After adjusting for the predifference, the difference between the male and female achievement was still not significantly different. This analysis appears in Table 22.

Null Hypotheses 32 and 33:

32. There was no significant interaction between sex and treatment on the mid-term examination.

33. There was no significant difference in achievement between males and females on the mid-term examination.

Table 22
Analysis of Co-variance
Business Letter Writing Posttest
Males vs. Females

	Unadjusted Mean	Adjusted Mean	F
Males	8.76	8.93	
Females	9.37	9.16	.452

No significant interaction was found between sex and treatment. A significant difference was found between males and females (see Table 23).

Table 23
Two-Way Analysis of Variance
Mid-Term Examination
Males vs. Females

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	562.18678	1	562.18678	6.76	.0103*
Sex x Treatment	95.51675	1	95.51675	1.15	.2856
Error	11722.53909	141	83.13858		

Based on the analysis of variances the following decisions were made: Retain hypothesis 32, reject hypothesis 33.

Female achievement was significantly better than male achievement on the mid-term examination. This significance was not influenced by group class -- experimental or control. No matter which group was involved, the females in that group did better than the males in that group.

Null Hypotheses 34 and 35:

34. There was no significant interaction between sex and treatment on the final examination.

35. There was no significant difference in achievement between males and females on the final examination.

There was no significant interaction between sex and treatment. There was no significant difference in achievement between males and females (see Table 24).

Based on the analysis of variance the following decisions were made: Retain hypotheses 34 and 35.

Table 24
Two-Way Analysis of Variance
Final Examination
Males vs. Females

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	234.07224	1	234.07224	2.87	.0922
Sex x Treatment	10.50265	1	10.50265	.13	.7200
Error	11480.17264	141	11480.17264		

Female achievement was not significantly better than male achievement on the final examination.

To further analyze the data related to male vs. female achievement analyses of variance were computed for each school separately on all of the variables. The data appears for Eastern Montana College in Tables 25 through 34. It appears for Montana State University in Tables 35 through 44.

Table 25
Two-Way Analysis of Variance
Barton's Language Skills Pretest
Males vs. Females
EMC

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	298.50716	1	298.50716	3.81	.0560
Sex x Treatment	194.71100	1	194.71100	2.48	.1206
Error	4470.47920	57	78.42946		

In the total population, females did significantly better than males on the pretest of Barton's Language Skills Test. However, at EMC females did not do significantly better than males on the total pretest. At EMC, females did do significantly better than males on Part I, Business Writing Principles. Significant interaction was found on Part IV, Capitalization and Punctuation with the males in the control group and the females in the experimental group. Table 26 shows the analyses of variance for the parts of this pretest for EMC. In the total population females did significantly better on Part I, Grammar; Part II, Business Writing Principles; Part IV, Capitalization and Punctuation; and Part V, Miscellaneous.

Female students at EMC did not score significantly higher than males on the posttest of Barton's Language Skills Test. However, females in the total population did score significantly higher than males on this test. At EMC females scored significantly higher than male students on Part V, Spelling. Tables 27 and 28 show the analyses of variances for the posttest of Barton's Language Skills Test. In the total population females did significantly better on Parts I, Grammar; Part IV, Capitalization and Punctuation; and Part V, Spelling.

Since female students at EMC scored significantly higher than male students on Part III, Business Writing Principles of the pretest of Barton's Language Skills Test, analysis of co-variance was used to equate the groups on this variable. The analysis of co-variance confirmed the results of the analysis of variance. After adjusting for the predifference, the difference between the means of males and females was still not significantly different. This analysis appears in Table 29.

Table 26
Summary Table
Two-Way Analysis of Variance
Barton's Language Skills Pretests, Parts I-VI
Males vs. Females
EMC

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Part I (Grammar)					
Sex	17.47759	1	17.47759	1.48	.2286
Sex x Treatment	23.13929	1	23.13929	1.96	.1668
Error	672.60854	57	11.80015		
Part II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Sex	.95977	1	.95977	.37	.5463
Sex x Treatment	4.34378	1	4.34378	1.67	.2019
Error	148.54417	57	2.60604		
Part III (Business Writing Principles)					
Sex	20.18290	1	20.18290	7.59	.0079*
Sex x Treatment	1.46371	1	1.46371	.55	.4611
Error	151.52393	57	2.65831		
Part IV (Capitalization and Punctuation)					
Sex	18.51636	1	18.51636	1.08	.3026
Sex x Treatment	59.32584	1	69.32584	4.05	.0489*
Error	975.36816	57	17.11172		
Part V (Spelling)					
Sex	8.79718	1	8.79718	3.97	.0510
Sex x Treatment	.52858	1	.52858	.24	.6270
Error	126.17467	57	2.21359		
Part VI (Miscellaneous)					
Sex	.12635	1	.12635	.09	.7704
Sex x Treatment	.60102	1	.60102	.41	.5249
Error	83.71351	57	1.46866		

Table 27
Two-Way Analysis of Variance
Barton's Language Skills Posttest
Males vs. Females
EMC

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	267.47954	1	267.47954	2.99	.0892
Sex x Treatment	90.87694		90.87694	1.02	.3178
Error	5099.84242	57	89.47092		

Female students at EMC did not score significantly higher than males on the posttest of Barton's Language Skills Test. However, females in the total population did score significantly higher than males on this test. At EMC females scored significantly higher than male students on Part V, Spelling. Tables 27 and 28 show the analyses of variances for the posttest of Barton's Language Skills Test. In the total population females did significantly better on Parts I, Grammar; Part IV, Capitalization and Punctuation; and Part V, Spelling.

Since female students at EMC scored significantly higher than male students on Part III, Business Writing Principles of the pretest of Barton's Language Skills Test, analysis of co-variance was used to equate the groups on this variable. The analysis of co-variance confirmed the results of the analysis of variance. After adjusting for the predifference, the difference between the means of males and females was still not significantly different. This analysis appears in Table 29.

Table 28
Summary Table
Two-Way Analysis of Variance
Barton's Language Skills Posttest, Parts I-VI
Males vs. Females
EMC

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Part I (Grammar)					
Sex	44.33409	1	44.33409	3.90	.0533
Sex x Treatment	17.42668	1	17.42668	1.53	.2210
Error	648.61416	57	11.37920		
Part II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Sex	.12019	1	.12019	.04	.8471
Sex x Treatment	.00535	1	.00535	.00	.9675
Error	182.52053	57	3.20211		
Part III (Business Writing Principles)					
Sex	1.56095	1	1.56095	.54	.4671
Sex x Treatment	7.58281	1	7.58281	2.60	.1121
Error	166.00552	57	2.91238		
Part IV (Capitalization and Punctuation)					
Sex	37.49617	1	37.49617	2.33	.1321
Sex x Treatment	3.44242	1	3.44242	.21	.6452
Error	915.82659	57	16.06713		
Part V (Spelling)					
Sex	12.29217	1	12.29217	7.35	.0089*
Sex x Treatment	.00602	1	.00602	.00	.9524
Error	95.36698	57	1.67310		
Part VI (Miscellaneous)					
Sex	.69841	1	.69841	.70	.4078
Sex x treatment	.35836	1	.35836	.36	.5526
Error	57.24034	57	1.00422		

Table 29
Analysis of Co-variance
Barton's Language Skills Posttest
Part III
Males vs. Females
EMC

	Unadjusted Mean	Adjusted Mean	F
Males	8.18	8.28	
Females	8.78	8.65	.660

As in the total population, there was no significant difference in the gain total achieved between female and male students at Eastern Montana College. There was also no interaction between sex and treatment (see Table 30).

Table 30
Two-Way Analysis of Variance
Barton's Language Skills Test - Gain Total
Males vs. Females
EMC

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	.85111	1	.85111	.03	.8730
Sex x Treatment	19.54479	1	19.54479	.59	.4449
Error	1882.81473	57	33.03184		

Unlike the total population at Eastern, female students did not do significantly better than male students on the business letter writing pretest (see Table 31).

At Eastern there was no significant different in achievement between males and females on the Business Letter Writing posttest. This was also true for the total population (see Table 32).

Table 31
Two-Way Analysis of Variance
Business Letter Writing Pretest
Males vs. Females
EMC

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	7.93274	1	7.93274	1.67	.2013
Sex x Treatment	3.63638	1	3.63638	.77	.3851
Error	270.58772	57	4.74715		

Table 32
Two-Way Analysis of Variance
Business Letter Writing Posttest
EMC

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Mean Probability
Sex	11.58695	1	11.58695	2.04	.1585
Sex x Treatment	.28652	1	.28652	.05	.8230
Error	323.43754	57	5.67434		

Unlike the total population, at Eastern the female student achievement was not significantly better than male achievement on the mid-term examination (see Table 33).

Table 33
Two-Way Analysis of Variance
Mid-Term Examination
Males vs. Females
EMC

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	75.33096	1	75.33096	1.67	.2013
Sex x Treatment	26.84224	1	26.84224	.77	.3851
Error	6518.46886	57	114.35910		

In the total population female achievement was not significantly better than male on the final examination. There was no significant difference between male and female achievement on this examination at EMC (see Table 34).

Table 34
Two-Way Analysis of Variance
Final Examination
Males vs. Females
EMC

source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	4.63371	1	4.63371	.07	.7924
Sex x Treatment	134.51967	1	134.51967	2.03	.1597
Error	3777.10709	57	66.26504		

Table 35
Two-Way Analysis of Variance
Total Pretest--Barton's Language Skills Test
Males vs. Females
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	871.84621	1	871.84621	12.69	.0006*
Sex x treatment	12.30775	1	12.30775	.18	.6731
Error	5494.47857	80	68.68098		

There was no significant interaction between sex and treatment at MSU on the pretest of Barton's Language Skills Test. Although, female students did score significantly higher on this pretest than male students. This was also true of the total population. On parts of the pretest, female students at MSU scored significantly higher on Part I, Grammar; Part III, Business Writing Principles; Part IV, Capitalization and Punctuation; and Part VI, Miscellaneous. In the total population female students scored significantly higher than male students on these same parts (see Table 35 and 36).

Table 36
Two-Way Analysis of Variance
Barton's Language Skills Pretest, Parts I-VI
Males vs. Females
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Part I (Grammar)					
Sex	89.53120	1	89.53120	7.47	.0077*
Sex x Treatment	.50556	1	.50556	.04	.8378
Error	959.42500	80	11.99281		
Part II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Sex	4.55556	1	4.55556	2.06	.1555
Sex x Treatment	.20655	1	.20655	.09	.7609
Error	177.29107	80	2.21614		
Part III (Business Writing Principles)					
Sex	48.84800	1	48.84800	21.13	.0000
Sex x Treatment	3.50185	1	3.50185	1.51	.2221
Error	184.97679	80	2.31221		
Part IV (Capitalization and Punctuation)					
Sex	57.30391	1	57.30391	5.06	.0272*
Sex x Treatment	.56459	1	.56459	.05	.8238
Error	905.28631	80	11.31608		
Part V (Spelling)					
Sex	.21978	1	.21978	.14	.7132
Sex x Treatment	1.03175	1	1.03175	.64	.4266
Error	129.23214	80	1.61540		
Part VI (Miscellaneous)					
Sex	14.74800	1	14.74800	7.15	.0091*
Sex x Treatment	.04287	1	.04287	.02	.8858
Error	165.07679	80	2.06346		

Table 37
Two-Way Analysis of Variance
Total Posttest -- Barton's Language Skills Test
Males vs. Females
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	545.67196	1	545.67196	7.57	.0074*
Sex x Treatment	62.23607	1	62.23607	.86	.3557
Error	5769.68214	80	72.12103		

At MSU on the total posttest of Barton's Language Skills Test, female students scored significantly higher than male students regardless of the group -- experimental or control. Female students also scored significantly higher on Part I, Grammar and Part IV, Capitalization and Punctuation. A significant interaction was found on Part II, Sentence Structure, Word Choice, Emphasis, and Paragraphs. The males in the control group had a mean of 6.5 and the females in the experimental group had a mean of 6.6 while the males in the experimental group and females in the control group had the same mean of 5.6 (see Table 38).

Because female students at MSU scored significantly higher on the pretest of Barton's Language Skills Test, analysis of co-variance was used to equate the groups on this variable. Co-variance was computed for each of the parts of the pretest on which the female students scored significantly higher. These parts were Part I, Grammar; Part IV, Capitalization and Punctuation; and Part VI, Miscellaneous.

On Part I, even after the groups were equated for the prediffer-ences, females still scored significantly higher than male students. On Parts III and VI the difference between the means was caused by the pre-difference between these groups. This appears in Table 39.

Table 38
Summary Table
Two-Way Analysis of Variance
Barton;s Language Skills Posttest, Parts I-VI
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Part I (Grammar)					
Sex	171.21541	1	171.21541	16.77	.0001*
Sex x Treatment	11.53450	1	11.53430	1.13	.2910
Error	816.72381	80	10.20905		
Part II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Sex	.13486	1	.13486	.04	.8454
Sex x Treatment	16.95537	1	16.95537	4.81	.0312*
Error	282.03929	80	3.52549		
Part III (Business Writing Principles)					
Sex	.15879	1	.15879	.08	.7803
Sex x Treatment	1.35537	1	1.35537	.67	.4159
Error	162.13929	80	2.02674		
Part IV (Capitalization and Punctuation)					
Sex	55.27181	1	55.27181	4.63	.0344*
Sex x Treatment	.19489	1	.19489	.02	.8986
Error	954.59464	80	11.93243		
Part V (Spelling)					
Sex	3.06325	1	3.06325	1.68	.1991
Sex x Treatment	.01197	1	.01197	.01	.9357
Error	146.17500	80	1.82719		
Part VI (Miscellaneous)					
Sex	.10514	1	.10514	.09	.7651
Sex x Treatment	.97694	1	.97694	.84	.3636
Error	93.59464	80	1.16993		

Table 39
Analysis of Co-variance
Barton's Language Skills Posttest
Parts I, IV, VI
MSU

	Unadjusted Mean	Adjusted Mean	F
Part I (Grammar)			
Males	14.65	15.18	
Females	17.84	17.22	10.988*
Part III (Business Writing Principles)			
Males	8.91	9.17	
Females	8.92	8.62	2.709
Part VI (Miscellaneous)			
Males	4.78	4.85	
Females	4.92	4.85	.001

As in the total population, at MSU no significant interaction was found between sex and treatment. In addition, there was no significant difference in gain total achievement between males and females (see Table 40).

At MSU there was no significant interaction between sex and treatment. In addition, there was no significant difference between male and female achievement on the business letter writing pretest. It should be remembered that a significant difference between male and female achievement was found for the total population (see Table 41).

Table 40
Two-Way Analysis of Variance
Gain Total -- Barton's Language Skills Test
Males vs. Females
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	38.03706	1	38.03706	.75	.3890
Sex x Treatment	19.19091	1	19.19091	.38	.5401
Error	4056.03216	80	50.70040		

Table 41
Two-Way Analysis of Variance
Business Letter Writing Pretest
Males vs. Females
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Sex	9.31749	1	9.31749	2.96	.0894
Sex x Treatment	.39726	1	.39726	.13	.7235
Error	252.10357	80	3.15129		

At MSU a significant interaction was found between sex and treatment. Females in the experimental group had a mean of 9.79 while males in the experimental group had a mean of only 8.63. Females in the control group had a mean of only 8.14 and males had a mean of 9.06. This significant interaction was not found in the total population (see Table 42).

Table 42
Two-Way Analysis of Variance
Business Letter Writing Posttest
Males vs. Females
MSU

Source	Sum of Squares	Degree of Freedom	Mean Square	F	Tail Probability
Sex	.27269	1	.27269	.07	.7933
Sex x treatment	20.66728	1	20.66728	5.24	.0247*
Error	315.57679	80	3.94471		

No significant interaction was found between sex and treatment. However, a significant difference was found between male and female achievement in the mid-term examination with female students scoring significantly higher regardless of which group -- experimental or control. This same significant difference was found in the total population (see Table 43).

Table 43
Two-Way Analysis of Variance
Mid-Term Examination
Males vs. Females
MSU

Source	Sum of Squares	Degree of Freedom	Mean Square	F	Tail Probability
Sex	505.55345	1	505.55345	8.18	.0054*
Sex x Treatment	95.03493	1	95.03494	1.54	.2186
Error	4944.7408	80	61.80926		

At MSU, no significant interaction was found between sex and treatment. There was, also, no significant difference between male and female achievement on the final examination. These findings were the same for the total population (see Table 44).

Table 44
Two-Way Analysis of Variance
Final Examination
Males vs. Females
MSU

Source	Sum of Squares	Degree of Freedom	Mean Square	F	Tail Probability
Sex	283.69345	1	283.69345	3.61	.0161
Sex x Treatment	36.60513	1	36.60513	.47	.4968
Error	6283.59762	80	78.54497		

Statistical Hypotheses -- Majors vs. Non-Majors

Null Hypotheses 36 and 37:

36. There was no significant interaction between major and treatment on the pretest of Barton's Language Skills Test.

37. There was no significant difference in achievement between majors and non-majors on the pretest of Barton's Language Skills Test.

There was no significant interaction between major and treatment. However, there was a significant difference in achievement between majors and non-majors. Business majors entered business communications courses with a significantly better foundation in English fundamentals than non-business majors (see Table 45).

Based on the analysis of variance the following decisions were made: Retain hypothesis 36; reject hypothesis 37.

Table 45
Two-Way Analysis of Variance
Total Pretest -- Barton's Language Skills Test
Majors vs. Non-Majors

Source	Sum of Squares	Degree of Freedom	Mean Square	F	Tail Probability
Major	333.97655	1	333.907655	4.09	.0451*
Major x Treatment	32.20188	1	32.20188	.39	.5311
Error	11519.18778	141	81.69637		

To further analyze the English fundamental pretest data, analysis of variance was computed for each of the pretest parts. This analysis appears in Table 46.

There was no interaction between major and treatment on any of the parts of the English fundamentals pretest. There was a significant difference between majors and non-majors in the control and experimental group on Part IV, Capitalization and Punctuation. The mean of the majors (17.11) in the control group score was much higher than the mean of the non-majors (13.14) in the control group. Majors as a whole did significantly better on Parts IV, Capitalization and Punctuation, and Part VI, Miscellaneous.

Null Hypotheses 38 and 39:

38. There was no significant interaction between majors and treatment on the posttest of Barton's Language Skills Test.

39. There was no significant difference in achievement between majors and non-majors on the posttest of Barton's Language Skills Test.

Table 46
Summary Table
Barton's Language Skills Pretest, Parts I-VI
Majors vs. Non-Majors

Source	Sum of Squares	Degree of Freedom	Mean Square	F	Tail Probability
Pretest I (Grammar)					
Major	27.05587	1	26.05587	2.15	.1444
Major x Treatment	2.99249	1	2.99249	.23	.6318
Error	1829.85870	141	12.97772		
Pretest II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Major	.00003	1	.00003	.00	.9970
Major x Treatment	5.46936	1	5.46936	2.32	.1300
Error	332.40464	141	2.35748		
Pretest III (Business Writing Principles)					
Major	.16229	1	.16229	.05	.8201
Major x Treatment	.13131	1	.13131	.04	.8379
Error	440.99048	141	3.13759		
Pretest IV (Capitalization and Punctuation)					
Major	94.96246	1	94.96246	6.74	.0104*
Major x Treatment	17.16465	1	17.16465	1.22	.2716
Error	1986.29706	141	14.08787		
Part V (Spelling)					
Major	.58220	1	.58220	.31	.5810
Major x Treatment	3.33317	1	3.33317	1.75	.1878
Error	268.29706	141	1.90282		
Part VI (Miscellaneous)					
Major	8.34337	1	8.34337	4.38	.0381*
Major x Treatment	.45847	1	.45847	.24	.6245
Error	268.56316	141	1.90470		

There was no significant interaction between major and treatment as measured by a posttest of Barton's Language Skills Test. There was also no significant difference between achievement between majors and non-majors (see Table 47).

Based on the analysis of variance the following decisions were made: Retain hypothesis 38 and 39.

Table 47
Two-Way Analysis of Variance
Total Posttest -- Barton's Language Skills Test
Majors vs. Non-Majors

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	122.40919	1	122.40919	1.42	.2360
Major x Treatment	1.53386	1	1.43386	.02	.8977
Error	12183.27056	141	86.40616		

Those students in the experimental groups did significantly better on this test, with majors in the experimental group doing the best. While majors enter business communications with a significantly better foundation in English fundamentals, they did not achieve higher scores on the posttest than non-majors.

To further analyze the posttest data for Barton's Language Skills Test analyses of variances were computed for each of the parts. This information appears in Table 48.

There was no significant interaction between majors and treatment on any parts of the posttest.

Table 48
Summary Table
Two-Way Analysis of Variance
Barton's Language Skills Posttest, Parts I-VI
Majors vs. Non-Majors

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Part I (Grammar)					
Major	17.36394	1	17.36394	.137	.2436
Major x Treatment	.25374	1	.25374	.02	.8876
Error	1785.88772	141	12.66587		
Part II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Major	1.47232	1	1.47232	.43	.5134
Major x Treatment	.75949	1	.75945	.22	.6387
Error	483.57814	141	3.42963		
Part III (Business Writing Principles)					
Major	.07353	1	.07353	.03	.8637
Major x Treatment	.23312	1	.23312	.09	.7599
Error	350.52791	141	2.48601		
Part IV (Capitalization and Punctuation)					
Major	1.91032	1	1.91032	.13	.7145
Major x Treatment	1.29488	1	1.29488	.09	.7633
Error	2004.95029	141	14.21951		
Part V (Spelling)					
Major	.00346	1	.00346	.00	.9657
Major x Treatment	.87292	1	.87292	.47	.4951
Error	263.09489	141	1.86592		
Part VI (Miscellaneous)					
Major	15.77123	1	15.77123	15.71	.001*
Major x Treatment	.74689	1	.74689	.74	.3899
Error	141.55112	141	1.00391		

Majors did significantly better on Part VI, Miscellaneous, which included definitions, use of numbers, and writing and grammar principles. There was no significant difference in achievement between majors and non-majors on any other parts.

Since majors scored significantly higher on the pretest of Barton's Language Skills Test than non-majors, analyses of co-variance were computed to equate the groups on this variable. The analyses of co-variance confirmed the results of the analyses of variance. After adjusting for the predifference, majors still scored significantly higher on Part VI than non-majors. After the adjustment for the predifference on Part IV, there was no significant difference between majors and non-majors. This analysis appears in Table 49.

Table 49
Analysis of Co-variance
Barton's Language Skills Posttest
Parts IV and VI
Major vs. Non-Major

	Unadjusted Mean	Adjusted Mean	F
Part IV (Capitalization and Punctuation			
Majors	19.9160	19.6914	
Non-Majors	19.5769	20.6046	1.7817
Part VI (Miscellaneous)			
Majors	5.1008	5.0849	
Non-Majors	4.2692	4.3421	11.0883*

Null Hypotheses 40 and 41:

40. There was no significant interaction between major and treatment on the gain total achieved between pretest and posttest of Barton's Language Skills Test.

41. There was no significant difference between major and non-major achievement on the gain total between the pretest and posttest of Barton's Language Skills Test.

There was no significant interaction between major and treatment. There was also no significant difference in the gain total achievement between majors and non-majors (see Table 50).

Based on the analysis of variance the following decisions were made: Retain hypotheses 40 and 41.

Table 50
Two-Way Analysis of Variance
Gain Total -- Barton's Language Skills Test
Majors vs. Non-Majors

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	52.00078	1	52.00078	1.15	.2860
Major x Treatment	47.22591	1	47.22591	1.04	.3092
Error	6392.19794	141	45.33474		

Non-majors in the experimental group had the highest gain score, although this difference was not significant.

Null Hypotheses 42 and 43:

42. There was no significant interaction between major and treatment on the business letter writing pretest.

43. There was no significant difference between major and non-major achievement on the business letter writing pretest.

There was no significant interaction between major and treatment. There was no significant difference between major and non-major achievement on the business letter writing pretest (see Table 51).

Based on the analysis of variance, the following decisions were made: Retain hypotheses 42 and 43.

Majors and non-majors entered the business communications courses with equal writing ability as measured by the business letter writing prest.

Table 51
Two-Way Analysis of Variance
Business Letter Writing Pretest
Majors vs. Non-Majors

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	4.03906	1	4.03906	1.02	.3144
Major x Treatment	6.66448	1	6.66448	1.68	.1968
Error	558.71816	141	3.96254		

Null Hypotheses 44 and 45:

44. There was no significant interaction between major and treatment on the business letter writing posttest.

45. There was no significant difference between major and non-major achievement on the business letter writing posttest.

There was no significant interaction between major and treatment. There was also no significant difference in achievement between majors and non-majors (see Table 52).

Based on the analysis of variance the following decisions were made: Retain hypotheses 44 and 45.

Table 52
Two-Way Analysis of Variance
Business Letter Writing Posttest
Majors vs. Non-Majors

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	3.70449	1	3.70449	.75	.3867
Major x Treatment	.94742	1	.94742	.19	.6613
Error	692.79248	141	4.91342		

Majors did not score significantly better on the final posttest of English fundamentals, Barton's Language Skills Test, nor did they do significantly better on the posttest of business letter writing (see Tables 47 and 52). Majors regardless of group did better, but not significantly better on the writing posttest.

Null Hypotheses 46 and 47:

46. There was no significant interaction between major and treatment on the mid-term examination.

47. There was no significant difference between major and non-major achievement on the mid-term examination.

There was no significant interaction between major and treatment. There was no significant difference in achievement on the mid-term examination between majors and non-majors (see Table 53).

Based on the analysis of variance the following decisions were made: Retain null hypotheses 46 and 47.

Major and non-major achievement on the mid-term examination which covered the theory of business communications was not significantly different.

Table 53
Two-Way Analysis of Variance
Mid-Term Examination
Majors vs. Non-Majors

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	242.34021	1	242.34021	2.77	.0980
Major x Treatment	11.23265	1	11.23265	.13	.7204
Error	12317.48884	141	87.35808		

Null Hypotheses 48 and 49:

48. There was no significant interaction between major and treatment on the final examination.

49. There was no significant difference between major and non-major achievement on the final examination.

There was no significant interaction between major and treatment. There was no significant difference in student achievement between majors and non-majors (see Table 54).

Based on the analysis of variance the following decisions were made: Retain hypotheses 48 and 49.

There was no significant difference in student achievement between majors and non-majors. This was not affected by group classification -- control or experimental.

Since EMC had so few non-majors, analyses of variance for the major vs. non-major data were only computed for the total population and for the sub-population at MSU. This section presents the data for the population at MSU in Tables 55-63.

Table 54
Two-Way Analysis of Variance
Final Examination
Majors vs. Non-Majors

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	214.06291	1	214.06291	2.71	.1021
Major x Treatment	79.20812	1	79.20812	1.00	.3186
Error	11149.95793	141	79.07772		

Table 55
Two-Way Analysis of Variance
Total Pretest -- Barton's Language Skills Test
Majors vs. Non-Majors
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	176.21276	1	176.21276	2.23	.1390
Major x Treatment	5.36971	1	5.36971	.07	.7949
Error	6311.54378	80	78.89430		

Table 56
Two-Way Analysis of Variance
Barton's Language Skills Pretest, Parts I-VI
Majors vs. Non-Majors
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Part I (Grammar)					
Major	17.02527	1	17.02527	1.30	.2569
Major x Treatment	4.83211	1	4.83211	.37	.5446
Error	1044.34109	80	13.05426		
Part II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Major	.92450	1	.92450	.43	.5131
Major x	10.86682	1	10.86682	5.07	.0270*
Error	171.34109	80	2.14176		
Part III (Business Writing Principles)					
Major	.54742	1	.54742	.18	.6750
Major x Treatment	.64400	1	.64400	.21	.6493
Error	247.33907	80	3.09174		
Part IV (Capitalization)					
Major	34.26356	1	34.26356	2.96	.0893
Major x Treatment	2.16899	1	2.16899	.19	.6664
Error	926.74013	80	11.58425		
Part V (Spelling)					
Major	1.18639	1	1.18639	.74	.3911
Major x Treatment	2.57070	1	2.57070	1.61	.2080
Error	127.64879	80	1.59561		
Part VI (Miscellaneous)					
Major	5.89157	1	5.89157	2.68	.1054
Major x Treatment	1.30404	1	1.30404	.59	.4433
Error	175.71356	80	2.19642		

At MSU no significant interaction was found between major and treatment on the pretest of Barton's Language Skills Test. There was also no significant difference in achievement between majors and non-majors. However, in the total population major achievement was significantly better than non-major achievement on this same test.

Further analysis of the pretest data revealed that there was significant interaction between major and treatment on Part II of the pretest at MSU. Otherwise, there was no significant difference between majors and non-majors achievement on the parts of the pretest. In the total population majors did significantly better on Parts IV, Capitalization and Punctuation and VI, Miscellaneous.

Table 57
Two-Way Analysis of Variance
Barton's Language Skills Posttest, Parts I-VI
Majors vs. Non-Majors
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	27.54510	1	27.54510	.34	.5612
Major x Treatment	7.87508	1	7.87508	.10	.7559
Error	6472.22368	80	80.90280		

Table 58
Summary Table
Two-Way Analysis of Variance
Barton's Language Skills Posttest, Parts I-VI
Majors vs. Non-Majors
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Part I (Grammar)					
Major	4.67405	1	4.67405	.37	.5473
Major x Treatment	4.14823	1	4.14823	.32	.5707
Error	1023.77733	80	12.79722		
Part II (Sentence Structure, Word Choice, Emphasis, Paragraphs)					
Major	.18074	1	.18074	.05	.8266
Major x Treatment	.97753	1	.97753	.26	.6107
Error	299.30668	80	3.74133		
Part III (Business Writing Principles)					
Major	.00408	1	.00408	.00	.9643
Major x Treatment	1.41253	1	1.41253	.70	.4056
Error	161.64398	80	2.02055		
Part IV (Capitalization and Punctuation)					
Major	.24847	1	.24847	.02	.8891
Major x Treatment	.47785	1	.47785	.04	.8467
Error	1016.36437	80	12.70455		
Part V (Spelling)					
Major	.00429	1	.00429	.00	.9617
Major x Treatment	1.12703	1	1.12703	.61	.4376
Error	148.16422	80	1.85205		
Part VI (Miscellaneous)					
Major	9.97340	1	9.97340	9.45	.0029*
Major x Treatment	1.07601	1	1.07601	1.02	.3157
Error	84.43522	80	1.05544		

At MSU there was no significant interaction between major and treatment on the total posttest of Barton's Language Skills Test or on any of the parts of this posttest. There was also no significant difference between major and non-major achievement on the total posttest. Majors, however, did score significantly higher on Part VI, Miscellaneous. These results were also true for the total population.

No significant interaction was found between major and treatment at MSU. In addition, there was no significant difference between major and non-major achievement. These results were the same for the entire population.

Table 59
Two-Way Analysis of Variance
Gain Total -- Barton's Language Skills Test
Majors vs. Non-Majors
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	64.41946	1	64.41946	1.28	.2619
Major x Treatment	26.25045	1	26.25045	.52	.4728
Error	4036.16220	80	50.45203		

At MSU no significant interaction was found between major and treatment as measured by the business letter writing pretest. There was also no significant difference in achievement between majors and non-majors on this test. These results were also true of the total population.

Table 60
Two-Way Analysis of Variance
Business Letter Writing Pretest
Majors vs. Non-Majors
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	5.23501	1	5.23501	1.64	.2033
Major x Treatment	8.46371	1	8.46371	2.66	.1069
Error	254.59514	80	3.18244		

At MSU no significant interaction was found between major and treatment as measured by the posttest of business letter writing. In addition, there was no significant difference in achievement between majors and non-majors. These results were also true for the total population.

Table 61
Two-Way Analysis of Variance
Business Letter Writing Posttest
Majors vs. Non-Majors
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	.01527	1	.01527	.03	.8575
Major x Treatment	.31574	1	.31574	1.45	.2322
Error	339.21964	80	4.24025		

At MSU there was no significant interaction between major and treatment as measured by the mid-term examination. On this same test there was no significant difference between major and non-major achievement. These results were also true of the total population.

Table 62
Two-Way Analysis of Variance
Mid-Term Examination
Majors vs. Non-Majors
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	48.57395	1	48.57395	.68	.4105
Major x Treatment	2.01996	1	2.01996	.03	.8664
Error	5675.85931	80	70.94824		

At MSU there was no significant interaction between major and treatment on the final examination. There was no significant difference on the final examination between major and non-major achievement. These results also were true of the total population.

Table 63
Two-Way Analysis of Variance
Final Examination
Majors vs. Non-Majors
MSU

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	Tail Probability
Major	2.58923	1	2.58923	.03	.8575
Major x Treatment	115.58990	1	115.58990	1.45	.2322
Error	6379.55162	80	79.7440		

Statistical Hypotheses -- Correlations

Null Hypothesis 50:

50. There was no significant correlation between G.P.A. and student achievement on the pretest of Barton's Language Skills Test.

There was a significant positive correlation between G.P.A. and student achievement on the pretest of Barton's Language Skills Test. However, when this relationship was examined for each participating school, it was found that there was a significant positive correlation between G.P.A. and major at EMC, but not at MSU.

Based on the statistical analysis the following decision was made: Reject hypothesis 50.

The significance of the correlation between G.P.A. and achievement on this pretest at EMC was of a sufficient magnitude that it influenced the correlation for the total population even though only 61 out of the total 145 were from EMC (see Table 64).

Table 64
G.P.A. to Barton Pretest

	Total Sample	MSU	EMC
G.P.A. to Barton Pretest	r = .36373 t = 4.67* (.001) n = 145	r = .20749 t = 1.92 n = 84	r = .55375 t = 5.11* (.001) n = 61

Null Hypothesis 51:

51. There was no significant correlation between G.P.A. and student achievement on the posttest of Barton's Language Skills Test.

There was a significant positive correlation between G.P.A. and student achievement on the posttest of Barton's Language Skills Test. This relationship was true for the total sample and also for both of the participating schools.

Based on the statistical analysis the following decision was made: Reject hypothesis 51.

This significant positive correlation shows that students who entered business communications with a higher G.P.A. also obtained the higher scores on the posttest of Barton's Language Skills Test. This relationship, while not as strong at MSU, was present in the total sample.

Table 65
G.P.A. to Barton Posttest

	Total Sample	MSU	EMC
G.P.A. to Barton Posttest	r = .39656 t = 5.17* (.001) n = 145	r = .29318 t = 2.78* (.01) n = 84	r = .54121 t = 4.94* (.001) n = 61

Null Hypothesis 52:

52. There was no significant correlation between G.P.A. and student achievement on the business letter writing pretest.

There was no significant correlation between G.P.A. and student achievement on the business letter writing pretest. This was true for the total sample and for both of the participating schools.

Based on the statistical analyses the following decision was made: Retain hypothesis 52.

Table 66
G.P.A. to Writing Test

	Total Sample	MSU	EMC
G.P.A. to Writing Test	r = .14929 t = 1.81 n = 144	r = .11178 t = 1.01 n = 83	r = .19863 t = 1.56 n = 61

When students entered business communications, their achievement on the business letter writing pretest was not correlated with their G.P.A.

Null Hypothesis 53:

53. There was no significant correlation between G.P.A. and student achievement on the business letter writing posttest.

There was a significant positive correlation between G.P.A. and student achievement on the business letter writing posttest. However, when this relationship was examined at each of the participating schools, it was found that there was a significant positive correlation between G.P.A. and student achievement on the business writing posttest for those students at EMC but this same correlation was not significant at MSU.

Based on the statistical analysis the following decision was made: Reject hypothesis 53.

The significance of the correlation between G.P.A. and student achievement at EMC, on the business writing posttest was of sufficient magnitude that it influenced the correlation for the total population even though only 61 out of the total 145 were from EMC.

Table 67
G.P.A. to Writing Posttest

	Total Sample	MSU	EMC
G.P.A. to Writing Posttest	r = .20363 t = 2.478* (.02) n = 144	r = .09133 t = .82 n = 83	r = .33043 t = 2.69* (.01) n = 61

Additional Statistical Analyses

To further examine the relationship between student achievement in formal English fundamentals and writing ability additional correlations were computed between the following variables:

1. Student achievement on the pretest of Barton's Language Skills Test and student achievement on the business letter writing pretest.

2. Student achievement on the pretest of Barton's Language Skills Test and student achievement on the business letter writing posttest.

3. Student achievement on the posttest of Barton's Language Skills Test and student achievement on the business letter writing posttest.

4. Student achievement on the posttest of Barton's Language Skills Test and student achievement on the business letter writing posttest.

These correlations appear in Table 68.

Significant positive correlations were found in each case for the total sample population, and these were also present at each of the participating schools.

Table 68
Additional Correlations

	Total Sample	MSU	EMC
Pretest Barton to Writing Pretest	r = .48503 t = 6.63 (.001) n = 145	r = .57990 t = 6.45* (.001) n = 84	r = .40623 t = 3.41* (.01) n = 61
Pretest Barton to Writing Posttest	r = .47577 t = 6.47* (.001) n = 145	r = .50211 t = 5.25* (.001) n = 84	r = .44650 t = 3.83* (.001) n = 61
Posttest Barton to Writing Pretest	r = .40101 t = 5.23* (.001) n = 145	r = .42544 t = 4.26* (.001) n = 84	r = .37235 t = 3.08* (.01) n = 61
Posttest Barton to Writing Posttest	r = .35403 t = 4.53* (.001) n = 145	r = .43473 t = 4.37* (.001) n = 84	r = .28083 t = 2.25* (.02) n = 61

General Questions

One general question was answered in this study: Which grading method is more reliable in evaluating business letter writing -- analytical or holistic grading?

This question was answered by conducting two consecutive grading sessions. First, a stratified random sample of 48 papers was selected from 580 business writing pretests and posttests. A separate session was conducted for each grading method. After each training session, instructors were asked to grade the 48 sample papers as quickly as possible. The holistic grading session was conducted first. The analytical grading session was conducted immediately following the holistic session. To judge the reliability of these writing tests a Kudor-Richardson formula was used. This formula was:

$$r = \frac{K}{K-1} \left[1 - \frac{\Sigma\sigma i^2}{Pi^2} \right]$$

K represents the number of independent readings of the letters (in this case,3) P^2 is the variance of the student scores from a particular evaluator, $\Sigma\sigma i^2$ is the form of the letter variance for all letters and $_{Pi}2$ is the variance of the sums of the rating from all evaluators (Ebel, 1972):419).

The calculated r's for the 48 sample papers were:

Holistic grading r = .759

Analytical grading r = .787

In addition to calculating the r's for each grading method, accurate time was kept for each method. These calculations included time for the training session and the time it actually took to grade the 48 papers by each method. This information appears in Table 69.

Table 69
Holistic vs. Analytical Grading
Time Data

	Training Time	Grading Time for the 48 Sample Papers
Holistic Grading		
Evaluator #1	23 minutes	25 minutes
Evaluator #2	23 minutes	23 minutes
Evaluator #3	23 minutes	26 minutes
Analytical Grading		
Evaluator #1	84 minutes	172 minutes
Evaluator #2	84 minutes	169 minutes
Evaluator #3	84 minutes	146 minutes

The instruction and training time for analytical grading took 84 minutes. The actual grading of the sample papers by analytical grading took an average of 162.33 minutes for a total average time of 246.33. The instruction and training session for holistic grading took 23 minutes. The actual grading of the sample papers by holistic grading took an average of 24.66 minutes, for a total average of 47.66 minutes. Analytical grading took 5.27 times as long as holistic grading to complete the training session and to grade the 48 sample papers.

Because the magnitude of the difference between the two r's was so small and because the magnitude of the difference in the time it took to use the grading methods was so great, it was decided to use holistic grading to score the preinstructional and postinstructional business letter writing tests for this study.

Summary

The researcher first evaluated the reliability of holistic grading vs. analytical grading when used to judge business letter writing. Based on the statistical analysis and the amount of time required to complete the grading methods, holistic grading was used to grade the preinstructional and postinstructional letters for this study. It was determined to use holistic grading because the magnitude of the difference between the r's was so small and the magnitude of the difference between the time was so great.

Those students who received instruction in English fundamentals did significantly better in achievement on the posttest of Barton's Language Skills Test. Those students who received instruction in Ligh fundamentals had a significantly higher gain score between the

pretest and posttest of Barton's Language Skills Test than those students who did not receive this instruction. However, no significant difference was found between the control and experimental groups means on the business letter writing posttest. It appears that including the remedial English usage unit did not have a significant affect on student achievement in the traditional coursework of business communications.

Women enter business communications with a significantly better knowledge of English fundamentals than male students. Female achievement on the posttest of English fundamentals was also significantly better than male achievement. In addition, female achievement on the business letter writing pretest was significantly higher than male achievement. However, on the business letter writing posttest, there was no significant difference between male and female achievement.

Majors entered business communications with a significantly better knowledge of English fundamentals than non-majors. There was no significant difference between major and non-major achievement on the business letter writing pretest, the business letter writing posttest, or the posttest of Barton's Language Skills Test.

Based on the research, the researcher cannot conclude that the inclusion of remedial English through the traditional method enhances a student's ability to write an effective business letter.

CHAPTER 5

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter summarizes the study "A Study to Determine the Affect of Introducing Remedial English Usage Instruction in Collegiate Business Communications." The study was conducted during Winter 1983 at Montana State University and Eastern Montana College. This chapter also presents conclusions drawn from the analysis of data collected in the study and makes recommendations for further study and for action suggested by the data.

Summary

The principal problem of this study was to compare student achievement in business letter writing and traditional coursework in a business communications course following an outline excluding remedial English usage instruction with student achievement in a business communications course following an outline including remedial English usage instruction.

The second problem of this study was to compare the reliability of holistic grading with analytical grading when used to evaluate student achievement in business letter writing. For the purpose of this study the related literature was reviewed in Chapter 2 under the following main topics: Writing Skills in the Business World, Remedial English Usage Instruction -- The Dilemma, What Should be Included in Remedial English Usage, Traditional vs. Linguistic Approach to English Usage,

Measured Improvement in English Usage, Current Research in Remedial English Instruction in Business Communications, and Research Related to Remedial English Usage Instruction in Business Communications.

The inclusion of remedial English instruction has been a highly controversial subject for business communications professors for decades. It appears that students are becoming weaker in the area of English usage and that this problem can no longer be ignored. Business communications professors can no longer take the attitude that the students should have mastered these basics before entering the college classrooms. They have not. In order to be prepared for the business world, students must be equipped with the required communication skills. Business executives believe that English usage skills are among the most important skills that a student can bring to the marketplace.

Research has not proven one method of instruction in remedial English usage as being superior. But, research does tend to point out the fact that students may benefit from some type of instruction in English usage. The method chosen depends on many variables. A few of these variables are teacher preference, time available, budgets, equipment available, and student needs. The literature suggests that further research is needed to aid instructors in deciding whether they should include remedial English instruction in the business communications classroom.

A complete description of the methods used to conduct this study is included in Chapter 3. This chapter presents the methods under these topics: Population Description, Hypotheses to be Tested, Study Procedures, Description and Evaluation of Tests Used, Analytical vs. Holistic

Grading of Business Letters, Rating of the Business Letter Writing Tests, and Statistical Treatment of Data.

The chapter includes the procedures for this study. It described the population, the procedures, the hypothesis tested, the criterion measures, and the statistical analysis of the data.

Arrangements were made through the Chairperson of the Department of Business Education and Office Administration at Eastern Montana College and the Head of the Department of Business, Office and Distributive Education at Montana State University for conducting this study in the business communications classes taught in those departments Winter Quarter 1983.

Students were given Barton's Language Skills Test for college students in business communications as a pretest. The pretest also included the writing of two business letters. These tests were given the second, third and fourth days of instruction. Students who did not complete the entire pretest were eliminated from the study.

In addition, students were asked to fill out a short personal data form to gather information on sex and major. They also filled out a consent form so the researcher could obtain student G.P.A.'s from the respective schools. This information was used to determine the correlation between G.P.A. and student achievement.

Control groups received no formal instruction in remedial English fundamentals. The experimental group received instruction in remedial English fundamentals instruction by the lecture-discussion method. This group also completed daily assignments on the principles presented, and they were tested over these principles.

After both groups completed the business letter writing unit, they took the postinstructional tests. These tests consisted of Barton's Language Skills Test and the writing of two business letters. In addition, student achievement was compared on the mid-term and final examinations. This was necessary to determine the affect the teaching of the English fundamentals had on student achievement in the basic content of the business communications course.

The reliability of holistic and analytical grading was compared. The sample letters were scored by the holistic grading method by trained readers. Then these letters were scored analytically by the same trained readers. The reliability of these methods was determined by using Kuder-Richardson's formula.

In addition, the Pearson Correlation Coefficient was used to determine if G.P.A. correlated with student achievement on the criterion measures. The significance of r was tested by the t test.

Two-way analysis of variance was used to statistically compare student achievement of the groups which received remedial English usage instruction with those students who did not receive this instruction.

The data collected during this study is presented in Chapter 4. Students who received instruction in English usage scored significantly higher on the posttest of Barton's Language Skills Test. They also had a significantly higher gain total between the preinstructional and postinstructional administration of this test. They did not however, score significantly higher on the business letter writing posttest.

Female students enter business communications with significantly better English usage skills and writing skills than male students.

However, female students did not score significantly higher on the business letter writing posttest.

Majors entered business communications with a significantly better knowledge of fundamental English usage. They did not, however, score significantly better on the posttest of Barton's Language Skills Test, business letter writing pretest or the business letter writing posttest. In addition, the inclusion of the remedial English usage unit did not adversely affect student achievement in the traditional coursework of business communications.

Conclusions

The researcher has reached the following conclusions based on an analysis of data collected in this study.

The findings of this study indicate that formal instruction in remedial English usage does not significantly affect a student's ability to write a business letter. However, this instruction does significantly increase student formal knowledge of English usage.

The findings of this study also support the use of holistic grading for the judging of student achievement in business letter writing.

Three vs. four days of instruction. The conclusions related to these hypotheses are:

1. The groups (experimental and control) were equal in fundamental knowledge of English fundamentals when they began business communications. The groups that received instruction three days per week were equal in this knowledge to those students who received instruction four days per week. However, when the pretest was examined by each of its

parts, significant interaction was found between the number of days of instruction students received and treatment on two parts of the pretest: Part I, Grammar and Part III, Business Letter Writing Principles. The groups were equal on Parts II and IV. However, on Part VI the group which received instruction four days per week scored significantly higher than those students who received three days of instruction.

2. Those students who received instruction in English fundamentals scored significantly higher on the posttest of Barton's Language Skills Test regardless of the number of days of instruction. No difference was expected between those students who attended three days and those who attended four days per week since the students completed the same grammar unit regardless of how many days they attended class. This finding that students can increase their formal knowledge of English fundamentals through remedial instruction was also found by Ivarie, 1968; Manship, 1974; Tesch, 1977; and Schlattman, 1976.

Further examination of the parts of this posttest revealed that those students who received instruction in English fundamentals did significantly better on Part I, Grammar and Part IV, Capitalization and Punctuation. This significant difference in achievement on Part IV is important since Warner in 1979 found that the largest number of errors made by students in writing occurred in punctuation. Warner also reported that the high error rate in punctuation first resulted from students not knowing rules of punctuation, and then second not being able to apply these rules. At least from this evidence, the researcher can conclude that instruction in formal remedial English usage increased the students formal knowledge of the rules of punctuation. It appears

that instruction in English fundamentals contributes significantly to a student's knowledge of formal English fundamentals.

3. The experimental group gained significantly more in formal knowledge of English usage than the control group. This was a result of the remedial English instruction. This is evidenced by the significantly higher gain total for this group between the preinstructional and postinstructional tests of Barton's Language Skills Test. This finding was also reached by Ivarie in 1968. In addition, those students who attended class three days per week had a significantly higher gain score than those who received instruction four days per week. The major difference was between the gain scores for the two control groups -- the control group which attended four days per week gained only 1.90 points. The number of days per week that the experimental groups attended class did not affect the gain total achieved by the students. Both groups, control and experimental, gained a significant number of points between the preinstructional and postinstructional tests of Barton's Language Skills Test.

4. The two groups, control and experimental, were statistically equal in their ability to write a business letter when they entered business communications. In addition those students who received instruction three days per week were equal to those students who received instruction four days per week.

5. Even though the experimental group achievement was significantly better on Barton's Language Skills Test, this group did not achieve significantly more on the business letter writing posttest. Based on this finding the researcher could not conclude that remedial

instruction in English usage improved the student's ability to write business letters. This finding supports Haynes (1978) when she reports that in the field of English research supports the idea that grammar instruction is of little or no use in improving writing. However, this finding of the groups could be attributed to the fact that business letters are often short. They also can be very effective without the use of complex sentence structures. Students may have simply written around these structures. Thus both groups appeared to have equal ability in the use of the English language when used to write business letters.

In addition, it should be noted that while student achievement in the experimental groups was significantly better than student achievement in the control groups on the Barton's Language Skills Test, the mean for the experimental group in this test does not appear to be very high. Specifically, at MSU the experimental group mean was 61.74 or 72.64 percent and at EMC the experimental group mean was 61.48 or 72.33 percent. It should be noted that norm scores have not been developed for this test. However, the students who were included in Barton's study completed the test without remedial English instruction. These students had a mean score of 52.0202 or 61.24 percent (1981:89).

While English usage fundamentals may still contribute significantly to business letter writing achievement, it could be that presentation of these fundamentals by the traditional method of instruction in business communications simply does not increase student knowledge enough so that achievement in business letter writing is affected. It could also be that there simply is not enough time devoted to these

principles in business communications in order to influence a student's knowledge of these principles so that business letter writing skills are influenced.

6. The inclusion of remedial English usage did not adversely affect student achievement in the traditional coursework of business communications. There was no significant difference in student achievement on the mid-term examination between the control and experimental groups at either school. In fact, on the final examination the experimental group which received four days of instruction, had the highest group mean with a score of 81.70. "The study of grammar doesn't have to be a negative experience" (Cornwell 1980:306-307).

Males vs. females. This section presents the conclusions related to the hypotheses which addressed male vs. female achievement. These hypotheses were analyzed for the total population and for each of the sub-populations.

1. Female students enter business communications with a significantly better knowledge of English fundamentals than male students. This data was further analyzed by looking at each of the parts of the pretest. Female knowledge is particularly better in the following areas: grammar, business writing principles, capitalization and punctuation, and miscellaneous. This finding was also true of the population at MSU. It was not, however, true at EMC. At EMC while the female students did score higher than the male students, this difference was not significant.

2. Female student achievement for the total population was significantly better than male achievement on the posttest of Barton's

Language Skills Test. Female students did better on the posttest than male students, with women in the experimental group doing the best. Female students did particularly better in the following areas: grammar, capitalization and punctuation, and spelling. This finding was also true at MSU. It was not significant at EMC. Female achievement was again better, but it was not significantly better than male achievement.

3. There was no significant difference in the gain total achievement between males and females. Since male students scored significantly lower on the pretest of Barton's Language Skills Test, it would be expected that their gain score would be significantly higher than the female students. However, it was not. Male gain score was only slightly higher than the female gain score. This finding held true for both of the sub-populations.

4. Female students enter business communications with better writing skill than male students. This finding was not true for either of the sub-populations. Further examination of the mean scores for the groups showed that while female students did score higher in the sub-populations, this difference was not significant.

5. Even though male students entered business communications with a significantly lower business letter writing ability than female students, female student achievement was not significantly better than male achievement on the business letter writing posttest. Females in the experimental group had the lowest mean score on this test. In addition, it also should be noted that male students had a significantly lower formal knowledge of English fundamentals as measured by the posttest

of Barton's Language Skills Test. This finding was true for the sub-population at EMC. However, at MSU a significant interaction was found between sex and treatment as measured by this test. At MSU the females in the experimental group had the highest mean of 9.79 followed by the male students in the control group with a mean of 9.06.

6. Female student achievement was significantly better than male student achievement on the mid-term examination (Chapters 1-6) of the traditional business communications coursework. This includes basic business writing principles and the letter writing unit. This finding was also true for the population at MSU. It was not true, however, for the population at EMC.

7. Males and females had equal knowledge of the business communication principles which were tested on the final examination. This was true at MSU and EMC.

Majors vs. non-majors. This section presents the conclusions related to the hypothesis which addressed major vs. non-major achievement. Since the number of non-majors was so small at EMC, two-way analysis of variance was computed for the total population and MSU only.

1. Business majors enter business communications with a significantly better foundation in English fundamentals than non-business majors. When the pretest was examined by parts it was determined that majors did better than non-majors in the following areas: capitalization and punctuation and miscellaneous. This finding was not, however, true of the population at MSU. At MSU there was no significant difference in achievement. However, business majors did score higher at MSU

regardless of group (experimental or control) than non-majors, but not significantly higher.

2. While majors entered business communications with a significantly better knowledge of English fundamentals, they did not score significantly higher on the posttest of Barton's Language Skills Test. It appears that even though non-majors entered business communications with a weaker foundation in English fundamentals, instruction in this area did improve non-major formal knowledge in the area. In fact, non-major achievement on this test was essentially equal to major achievement regardless of which category -- control or experimental. Furthermore, majors achievement was significantly better in only one area, miscellaneous. These findings were also true for the population at MSU.

3. There was no significant difference in gain total achievement on Barton's Language Skills Test between majors and non-majors. However, non-majors in the experimental group did have the highest gain score. This also held true for the population at MSU.

4. Even though majors entered business communications with a significantly better foundation in English fundamentals, majors did not enter business communications with a significantly better business letter writing skill than non-majors. This was also true of the population at MSU.

5. Student achievement on the business letter writing posttest was not affected by major. Major and non-major achievement was essentially equal in this area for the total population and for the population at MSU.

6. Student achievement in the traditional coursework of business communications is not affected by major. This was true of the total population and of the population at MSU.

Correlations. This section presents the conclusions that are based on the hypothesis which addressed correlations in this study.

1. Student achievement on the pretest of Barton's Language Skills Test and G.P.A. were found to have a significantly positive correlation in the total population. In general, as a student's G.P.A. increased so did their score on this pretest. This was true at EMC. However, it was not found to be a significant correlation at MSU. This could be caused by the higher number of non-majors at MSU. It should be remembered that non-majors entered business communications with a significantly weaker foundation in English fundamentals than majors.

2. Student achievement on the posttest of Barton's Language Skills Test and G.P.A. were found to have a significant positive correlation in the total population and in both sub-populations. As a student's G.P.A. increased so did that student's achievement on the Barton's Posttest. This emphasizes the point that students with higher G.P.A.s do better in the remedial English usage unit.

3. When students entered business communications, their achievement on the business letter writing pretest was not correlated with their G.P.A. Regardless of G.P.A., it appears that students enter business communications with equal business letter writing ability. This was also true for both of the sub-populations. This finding is opposite of the correlations found by Wunsch (1980).

4. There was, however, a significant positive correlation found between G.P.A. and student achievement on the business letter writing posttest. Those students who obtained higher G.P.A.s also do better in business letter writing. This positive relationship was true at EMC. It was not, however, true at MSU. This significant correlation reinforces the findings of Wunsch in 1980.

Additional statistical analysis. To further examine the relationship between student achievement in formal English fundamentals and writing ability, additional correlations were computed. This section presents the conclusion made as a result of these correlations.

1. Student achievement on the pretest of Barton's Language Skills Test was correlated with student achievement on the writing pretest and the writing posttest. This was true in the total population and in both of the sub-populations. It can be concluded that students who enter business communications with a better background in English fundamentals scored higher on the business letter writing pretest and posttest. These correlations were also found by Wunsch in 1980.

This finding appears to suggest that instruction in English fundamentals should increase a student's ability to write a business letter. However, based on the two-way analysis of variance, students who did receive the instruction in English fundamentals scored significantly higher on Barton's posttest than those students who did not receive this instruction. But, the experimental group did not score significantly higher on the business letter writing posttest. Based on the findings of this study, the researcher cannot conclude that formal English usage instruction increases a student's ability to write a business letter.

General question. One general question was answered in this study: Which grading method is more reliable in evaluating business letter writing -- analytical or holistic grading? This section presents the results of analyzing this question. This question was answered by conducting two consecutive grading sessions. A total of 48 sample papers were graded in two separate evaluation sessions (one for holistic grading and one for analytical grading).

Because the magnitude of the difference between the two r's was so small and because the magnitude of the difference in the time it took to use the grading methods was so great, the researcher can conclude that holistic grading is best for the judging of business letter writing tests.

For research purposes where hundreds of papers are graded, it is important that these papers be graded in one training session so that contaminating factors do not enter into the readers' evaluations of the letters (McColly, 1970:154). With the time required to complete the grading of business letters analytically, it would be impossible to complete an entire set of research writing tests in one grading session. This could have a significant effect on the reliability of analytical grading.

Based on the statistical analyses and the amount of time it takes to use each of the grading methods, the researcher concludes that holistic grading of business letter writing is better for research purposes.

Recommendations for Further Study

Based on the findings of this study, the researcher recommends the following additional research:

1. While business persons often indicate on survey instruments that students need strong skills in English usage and business communications courses should stress these skills, the English usage skills necessary have not been identified by business. A study should be conducted to determine what English usage skills are actually necessary for success in business.

2. A study should be conducted that researches the attributes of a good writer (this study should specifically look at males vs. females and majors vs. non-business majors) which are needed for business success.

3. Further research should be conducted to determine the type of English usage errors students make in their writing of business letters. This study should compare the errors made by students on the objective test of English fundamentals with the errors actually made in the writing of a business letter.

4. A study should be conducted to determine what affect good writing skills and good English usage skills have on a person's success in business.

5. Since business letters often are short and do not require complex sentence structure, a study should be conducted which researches student achievement in report writing after the students have completed a unit in remedial English usage.

6 A study should be conducted to determine the qualities of a good writer which correlates with achievement on a business letter writing test.

7. In addition, further research should be conducted to determine if other activities contribute more significantly to student achievement in business letter writing. Specifically, the study could investigate the affects of additional writing assignments, the affects of students critiquing actual business writing for English usage, structure, tone, and effectiveness.

8. Based on the findings of this study it cannot be concluded that traditional instruction in English fundamentals improves student achievement in business letter writing. Further research should be conducted which investigates alternative methods of instruction. Specifically, the study could look at the affect of using a small group discussion or the affect of a remedial business English course. (This course could be conducted in connecton with the English department especially if they were already conducting a remedial English program.)

9. This study was limited to those students enrolled in business communications classes at MSU and EMC. This or an improved study should be repeated at other institutions.

10. Since both of the institutions in this study operate on a quarter system, this or an improved study should be replicated at an institution which operates on a semester system to determine if the length of the term influenced the findings.

11. Further study should be conducted into the relationship of holistic vs. analytical grading when used for the grading of business

letters. Based on the findings of this study, it appears that holistic grading is equal in reliability to analytical grading. Because of the time savings obtained when using holistic grading, holistic grading offers business communications professors an opportunity to save an enormous amount of time in the grading of business letters. Specifically, a study should be designed to determine if students receive adequate feedback when holistic grading is used to judge their business letter writing assignments.

12. Since a significant positive correlation was found between student achievement on the posttest of Barton's Language Skills Test and student achievement on the Business Writing Posttest, a study should be conducted to determine the possibility of using Barton's Test as a means of predicting student success in business communications.

Recommendations for Action

Based on the findings of this study the researcher recommends that the following actions be taken:

1. Instructors of business communications at EMC and MSU should seriously consider the benefits to be derived from including remedial English instruction in business communications. Based on the findings of this study, it appears that formal knowledge of English usage fundamentals does not contribute significantly to a student's ability to write a business letter. Time in class may be better spent in other areas where students may have deficiencies (e.g., oral communications, report writing, nonverbal communication, and interview techniques).

2. Because of the great time savings involved in using holistic grading, instructors of business communications should consider using this method of grading when scoring business letter writing assignments.

3. Instructors of business communications should remember that non-majors do enter business communications with significantly weaker English skills than majors. If English fundamentals is included in their courses, particular attention should be paid to these students.

4. Instructors of business communications should remember that female students enter business communications with a better foundation in English usage and in business letter writing. In addition, female student achievement is significantly better in the traditional course-work of business communications in the areas of basic writing principles and business letter writing. Instructors should consider the ratio of males vs. females in the designing of their business communications courses.

5. If instruction in English fundamentals is included in business communications, instructors should consider alternative methods of instruction -- it does not appear that enough time can be devoted to these principles through the traditional method or that the traditional method of instruction increases student knowledge enough to have a significant affect on student achievment in business letter writing.

6. Instructors should alert students to their deficiencies in grammar through a pretest on these principles and to the importance that business persons place on these skills in the business community.

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APPENDICES

APPENDIX A

LETTER EVALUATION GUIDE

LETTER EVALUATION GUIDE

	Unapplicable	Very Poor	Poor	Fair	Good	Excellent	
		1	2	3	4	5	Purpose - Completeness
1.	( )	( )	( )	( )	( )	( )	1. Are all facts provided the reader?
2.	( )	( )	( )	( )	( )	( )	2. Is each issue covered?
3.	( )	( )	( )	( )	( )	( )	3. Are decisions explained?
		( )	( )	( )	( )	( )	Items Rated
		( )	( )	( )	( )	( )	Rated Value
							Tone
1.	( )	( )	( )	( )	( )	( )	1. Does the message sound sincere?
2.	( )	( )	( )	( )	( )	( )	2. Is the letter friendly?
3.	( )	( )	( )	( )	( )	( )	3. Is the letter reader-centered?
4.	( )	( )	( )	( )	( )	( )	4. Does the letter show appreciation of reader's needs?
5.	( )	( )	( )	( )	( )	( )	5. Are negative ideas subordinated to positive attitude?
6.	( )	( )	( )	( )	( )	( )	6. Are courtesy expressions handled sincerely?
7.	( )	( )	( )	( )	( )	( )	7. Are facts known by the reader subordinated?
8.	( )	( )	( )	( )	( )	( )	8. Does the opening statement refer to subject of letter?
9.	( )	( )	( )	( )	( )	( )	9. Does the closing statement have positive appeal? (Statement of action, cordial attitude, etc.?)
		( )	( )	( )	( )	( )	Items Rated
		( )	( )	( )	( )	( )	Rated Value
							Choice of Words
1.	( )	( )	( )	( )	( )	( )	1. Are simple words used in place of big words?
2.	( )	( )	( )	( )	( )	( )	2. Is the reader's language used?
3.	( )	( )	( )	( )	( )	( )	3. Is the word meaning precise?
4.	( )	( )	( )	( )	( )	( )	4. Do the words connote intended meanings?
5.	( )	( )	( )	( )	( )	( )	5. Have unnecessary words been eliminated?
6.	( )	( )	( )	( )	( )	( )	6. Is a fresh, vivid vocabulary used? (concreteness)
7.	( )	( )	( )	( )	( )	( )	7. Are trite, hackneyed expressions eliminated?
8.	( )	( )	( )	( )	( )	( )	8. Is active voice used in place of passive voice?
9.	( )	( )	( )	( )	( )	( )	9. Is conversational English used?
		( )	( )	( )	( )	( )	Items Rated
		( )	( )	( )	( )	( )	Rated Value

LETTER EVALUATION GUIDE (Continued)

	Unapplicable	Very Poor	Poor	Fair	Good	Excellent	
		1	2	3	4	5	English Usage
1.	( )	( )	( )	( )	( )	( )	1. Is parallel sentence structure used?
2.	( )	( )	( )	( )	( )	( )	2. Are paragraphs of appropriate length?
3.	( )	( )	( )	( )	( )	( )	3. Are pronoun references clear?
4.	( )	( )	( )	( )	( )	( )	4. Are modifiers properly placed?
5.	( )	( )	( )	( )	( )	( )	5. Is correct punctuation used?
6.	( )	( )	( )	( )	( )	( )	6. Is proper spelling and capitalization used?
7.	( )	( )	( )	( )	( )	( )	7. Is transition easy from sentence to sentence, paragraph to paragraph?
8.	( )	( )	( )	( )	( )	( )	8. Are the sentences grammatically correct?
		( )	( )	( )	( )	( )	Items Rated
		( )	( )	( )	( )	( )	Rated Value
							Organization
1.	( )	( )	( )	( )	( )	( )	1. Does the letter move quickly to the point?
2.	( )	( )	( )	( )	( )	( )	2. Does one idea logically follow another?
3.	( )	( )	( )	( )	( )	( )	3. Is the information in logical order of presentation?
4.	( )	( )	( )	( )	( )	( )	4. Is repetition minimized?
		( )	( )	( )	( )	( )	Items Rated
		( )	( )	( )	( )	( )	Rated Value
	( )	( )	( )	( )	( )	( )	Items Rated in Column
	( )	( )	( )	( )	( )	( )	Rating Value
	( )	( )	( )	( )	( )	( )	Rated Columnar Totals
					(	)	Gross Score (sum of rated columnar totals)
					(	)	Items Rated
					(	)	Average Score (gross score divided by items rated)

APPENDIX B

PERMISSION LETTER

C
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P
Y

2416 West 16 Street
Grand Island, NE 68801
December 16, 1982

Mrs. Lorrie Steerey
Department of Business Education
and Office Administration
Eastern Montana College
Billings, MT 59041

Dear Mrs. Steerey:

Permission is hereby given for you to use the language usage skills test which I developed in my doctoral dissertation as a testing instrument in your doctoral study.

Sincerely yours,

Janice K. Barton, Ed.D.

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Steerey, L. M.
A study to determine the affect of introducing English...

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