AN EXPERIMENTAL STUDY OF COLLEGIATE BUSINESS STUDENTS' ATTITUDES AND WRITING SKILLS RESULTING FROM INDIVIDUALLY PRESCRIBED REMEDIAL TREATMENTS

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CHAPTER I

INTRODUCTION

Communication instructors have been most concerned about their capacities to assist college students in their written communication courses. They were particularly concerned about the rising enrollments and the large classes which continued to impede student-teacher rapport and the attention and assessment provided for all students.

Compounding this concern was the insistence from business educators, liberal educators, and business executives that the learning of generalizations such as analytical assessment, critical thinking, inference awareness and problem solving abilities must also be emphasized. The insistence that basic English knowledge and broad understandings of the principles of writing be developed as essential objectives of the business communication courses was also complexing.

These conflicts resulted in burgeoning content so that regardless of their efforts, the instructors were not able to present all of the content they felt important or the total content demanded by their critics.

In an effort to provide more in-class time for developing these broad concepts and principles, business teachers have questioned whether or not the more routine rules and concepts could be taught and assessed outside the regular classroom.

The purpose of this study was to test the assumption that an individually prescribed remedial program, consisting of treatments completed outside the regular classroom, would teach, reinforce, and aid business letter writing skills, improve student's attitudes about the need to study business communication, and increase student's knowledge of basic English fundamentals.

Statement of the Problem

The principal problem of the study was to determine whether selected and prescribed activities caused significant improvement in collegiate students' attitudes concerning the need for instruction and training in business writing.

Student differences, communication styles, and writing skills were compared and analyzed statistically through controlled pre-tests, post-tests and criterion measurements. A bi-polar attitude instrument measured whether or not significant differences of attitude existed between the groups.

Initial learning was measured by the Writing Skills Test--Form B. Initial attitude values were measured by the pre-test and the Bi-polar Semantic Differential Survey Test. Change in writing competencies was measured by the Writing Skills Test--Form A. Change in attitude values was measured by the post-test of the Bi-polar Semantic Differential Survey Test.

The independent variable was the prescribed learning treatments completed out of class by members of the experimental group. The dependent variables were the post-test scores and the jurors' criterion measurement scores.

Null Hypotheses

(1) There will be no significant difference or change in writing skills as measured by the Skills Writing Test between students who received prescribed learning treatments or students who have not received prescribed learning treatments.

(2) There will be no significant change in attitude about the need for training in collegiate Business Writing, as measured by the Bi-polar Semantic Differential Attitude Test, between students who received prescribed learning treatments or students who have not received prescribed learning treatments.

(3) There will be no significant change in writing abilities, as graded and ranked by expert jurors, between students who received learning treatments and students who have not received learning treatments.

(4) There will be no significant differences on selected influences contributing to the data as measured by related correlation co-efficients between students who received prescribed learning treatments or students who have not received prescribed learning treatments.

Individual differences of the students in the groups being compared will be controlled by pre-test scores. Learning and change will be measured by interim criterion measurements and post-test scores, respectively.

Importance and Need of the Study

Increasingly large classes and heavy grading loads prevent frequent discussions between the students and the business communication instructor. Too often the instructor's feedback to students consists of brief oral suggestions or corrections noted on written assignments

returned to students.

Corrective counseling concerning faulty reasoning, grammatical mistakes, or poorly worded portions of the writing exercises may receive brief in-class examination, but in-depth discussions and reviews for all students are not practical.

In view of the increasing interest in student-teacher rapport, as well as the growing need to assist all students in larger classes, other teaching methods and other supplemental learning techniques should be tested.

Several programs designed to increase in-class teaching effectiveness have been utilized. Written and taped programmed units of instruction, computer assisted communication programs, management simulation communication programs, audio-assisted programs of communication, and closed-circuit television-aided instruction have been devised and tested. Other studies comparing methods of group instruction have also been completed.

This study encouraged the identification of effective individual and group teaching methods as well as the identification of successful learning treatments. Individually directed assistance from the instructors may be more beneficial to the students and may assist their learning through meeting their particular needs when specific problems impede their writing.

Efforts to aid students' performance and to assess their opinions may also permit curriculum revisions and content change.

Delimitations

The study was delimited to a convenience or handy population. The sample consisted of those students who enrolled in the Written

Communication course, General Administration 3113, during the 1972-73 spring semester at Oklahoma State University. An information and classification card (Appendix A, page 114) were collected and analyzed for participating in the study. No attempt was made to classify or organize students according to their departments or their discipline majors, but students' majors and disciplines were identified so that the composition of the groups could be understood. Data was collected and analyzed for only those participants who completed the three units involved in the study.

Limitations

To control and manipulate the independent and the potentially intervening sub-variables involved in the study, the following assumptions or conditions were noted:

(1) Students enrolling in GENAD 3113 had completed the necessary years in school and the necessary prerequisite courses.

(2) Study participants were selected from a handy or convenience sample. Assignment to the experimental group was handled according to a random registration process.

(3) Supplemental and remedial sources were not controlled as separate instructional aids, but were listed as the "collection of resource materials."

(4) Influence of the teacher while consulting with individuals during treatment sessions was not considered as an element of the formal instruction during a specific class period.

(5) An interest and attitude inventory was completed through the use of a questionnaire. Selected polar adjectives may cause varying semantic opinions.

(6) Student's personality and motivation were unique to each individual. No attempt was made to assess these influences.

(7) The control group met in the morning (a.m.) and the experimental group met in the afternoon (p.m.). The influence of "time of day" was an unknown limitation in the study.

Basic Assumptions

The following are basic assumptions of the study:

(1) The findings of a similar study including a larger sample would yield results comparable to the findings of this study.

(2) The students enrolled in the Business Writing courses at Oklahoma State University during the spring semester of 1973 are representative of students who will enroll in Business Writing courses at Oklahoma State University in the future.

Definition of Terms

Feedback. The term feedback denoted the two-way element of consequence and response. It also identified intentional and unintentional overt behaviors of listeners or readers which served to modify action or reaction. Through visible and verbal meanings, feedback permitted a second consideration.

In this study writing performance and assessment of that writing performance were encouraged. Depending upon the direction of the feedback, the writing exercise would be accepted or adjusted and repeated.

Business communication course. This term was synonymous with the term "business writing course." The two were used interchangeably throughout the study. Both terms referred to courses in business communication which typically involved training in business letter writing and business report writing. Occasionally these courses have been separated into two emphases. However, letter writing and short report writing were combined into one course during this study. Two groups of students were studied. The control group was taught with a lecture emphasis. The experimental group was also taught by the lecture method,

but other prescribed learning activities were used as well.

Lecture emphasis. This teaching emphasis referred to the methods commonly accepted by business communication instructors. Such methods included in-class demonstrations, discussions, case analyses, and question and answer techniques. The presentations also included other means of instruction such as the use of the overhead projector, in-class viewing of movies, and taped instructions.

Experimental emphasis. This emphasis referred to a versatile approach to teaching the basic written communication course. It involved most of the usual methods and techniques of teaching described as the lecture emphasis, but it also included in-class demonstrations, discussions, lectures, case analyses and the use of visual supplements.

The experimental emphasis also incorporated the use of selected materials which were prescribed and used out of the classroom. These individually prescribed, remedially structured, programmed treatments were administered to members in the experimental class. The treatments were completed outside the regular communication class. Members of the control group did not receive the treatments, but all other assignments and in-class activities were organized identically.

A review of related literature and research is contained in Chapter II. The development of the communication discipline, a summary of its history, a summary of the research being conducted today, an analysis of selected learning and teaching methods, and a review of selected experimental studies are also contained in Chapter II.

CHAPTER II

A REVIEW OF SELECTED RELATED RESEARCH AND LITERATURE

The related research and literature were studied with four purposes: (1) to review data portraying the development and history of business communication in American businesses and colleges, (2) to review findings concerning the need for oral and written instruction for successful employment, (3) to assess the problems inherent in business writing and to explore the theories concerning the need for changed or improved instructional approaches, learning techniques, and assisted learning methods, and (4) to appraise research and literature comparing innovations involving course content, and examining action research being completed through empirically controlled studies.

The History and Development of Business Communication

Courses in business writing were instituted shortly after the early American schools of business were established in the latter part of the seventeenth century. Programs continued to develop as the need for better business writing became evident to businessmen and to members of the business school faculties (Gerfen, 1961).

The collegiate role of leadership in business began around 1915, the same year that the first American collegiate business communication textbook was published.

Discipline specialization and departmentalization affected business communication. Increased governmental activities, the wars, and the economic depression affected communication. Education and available news media caused an awareness that not only changed the capabilities of writers, but also the concentration and interest of readers.

Innovations in equipment and office systems have affected communication. The popularity of the electric typewriter, the availability and cost of copying and duplicating machines, and the speed and capacities of the electronic data and word processing systems have also affected business letter writing.

Soblik (1970) indicated how the principles of writing and the language of business adapts and changes with each emerging technological era. Early textbook authors emphasized business theories and practices as prerequisite knowledge to good business writing. These early business principles have changed little, but the subject matter of business letters has changed.

As early as 1915, many businessmen used a form paragraph system to provide for their routine correspondence. In the 1920s, businessmen changed their philosophy and found it better to handle correspondence on the basis of each situation rather than to use a stereotyped form paragraph for all circumstances.

By 1940, the concepts of humanistic and scientific management were influencing business communication. The idea of business as a service with its associated "you attitude," friendly tones, reader benefits,

attention getting beginnings, and action-oriented summaries was prominent.

These developments brought about the use of attention, interest, conviction, and action-styled outlines which changed persuasive and selling oriented writing. Shortly following this influence, "talk" writing became popular as did the "appeals" styled to the psychological or conscious-subconscious drives. The inductive and deductive theories of business persuasion and business writing also became influential in business communication.

Wise (1969) indicated that as the years passed and as formal education became available to more people, correspondence and business English books had to change; but that even today, there remains a tendency to carry over the old, sometimes ineffective, earlier patterns and styles in current textbooks.

Background Concerning Writing Instruction

From the beginning, business writing courses have been criticized. Although the present trend in business writing is toward a more realistic and concise writing style, one of the major criticisms of business and communication instruction has been the emphasis on superficial or seemingly elementary, mechanical techniques rather than on the message of a letter's content.

Additional criticism comes from the principal groups responsible for teaching writing skills, the faculty members in both the English and business colleges. English departments have traditionally viewed business writing courses as something to be tolerated and taught as service courses, but they did not see them as enlightening or academically

respectable. Business school faculty members have not doubted the need for communication skills as essential tools of business success, but groups have definitely questioned the need to teach writing skills and communication techniques as part of the collegiate School of Business curriculum.

In their report, Gordon and Howell (1959) were critical of business letter writing courses. They indicated that there were no facts that proved that courses in business English and letter writing as such had a place in the university curriculum. This was a direct challenge to the acceptability of business writing courses at the collegiate level.

However, the American Management Association (1967) reported that today's managers were quickly discovering that their large organizations were either enhanced or limited to the extent of the effectiveness of the communication structure and the communications permitted within the organization. As a result, in the late sixties, many companies were taking over the function of training their own personnel. The companies either sponsored courses in writing and speaking or their representatives worked closely with local schools and colleges in order to provide the necessary course work.

Hickman (1973) noted that according to his studies communication may be the <u>most</u> important feature in organization. He noted that all businesses must be concerned with information processing.

Almaney (1971) stated that written business communication is a yearly multi-billion dollar business in the United States. Business firms' heavy reliance on the business letter in communicating with their customers may suggest that this medium is quite effective or at least satisfactory in accomplishing the communicator's objective.

Businessmen have not yet clearly indicated their desires regarding the specific communication competencies needed in graduates of business curricula, stated Hansen, (1971).

In pointing out the discrepancy between the massive use of communication skills in business correspondence and its status as an accepted subject in college programs, White (1966) indicated that much of the artificial atmosphere exists because the teachers of business or technical writing cannot provide a good writing environment.

White (1966) insists that management must plan and play an active role in teaching businessmen how to get better writing from their personnel. He suggested that management's common notion that someone else should tell their employees how and even what to write is wrong. Management wonders why colleges and universities cannot teach their students how to write. But when someone else asks in return what an organization does to eliminate the writing faults of college graduates, a manager invariably points to the courses for writers listed in his manuals.

For every obstacle management places before the writer, it fails to give him the help he needs. Why? Management either does not know enough about or does not pay attention to the process of writing.

Educators too must accept responsibility for success or lack of success in their programs' graduates, since educators determine the objectives and content of college subjects in their course outlines and syllabi. Logically, the identification and inference of educators' philosophies are reflected in the resulting objectives. These theories and special competencies often provide the main guidelines in their plan of instruction. Are these guidelines in agreement with the stated writing priorities?

Hansen (1971) believed that businessmen had not been able to convey their needs to educators. He designed a questionnaire which utilized the Q-Sort Forced Choice system for ranking selections and judgments and non-parametric Chi Square and Kendall's tau statistics to compare the replies of both businessmen and educators.

A random selection from 500 businessmen and 523 business communication teachers was taken from the list of Fortune magazine's five hundred most prominent business organizations in the United States and from the list of 573 members of the American Business Communication Association. Questionnaires were sent to two hundred executives and to 223 business educators. Of the 423 persons involved in the study, 55 per cent of the businessmen responded, and 57 per cent of the business communication teachers responded.

Thirty-nine business communication related statements were classified into sections involving problem solving skills, mechanics and grammar, human relations, writing styles and techniques, and speaking and listening skills. Significant amounts of agreement between the teachers and the businessmen were indicated throughout the study.

The concepts which businessmen and educators believed should be included in business writing instruction, practice, and evaluation were:

--develop the ability to collect, analyze and interpret data;

--encourage an awareness of the role of listening;

--encourage the functional style of writing;

--increase the ability to reason from data;

--increase the ability to organize the outline data;

--encourage objectivity in understanding and interpreting data;

--teach specific hard-to-write styles of letters including credit letters, adjustment letters and sales letters;

--improve the ability to distinguish among fact, inference and opinion;

--introduce students to conference techniques in presenting oral reports;

--familiarize students with and give practice in securing primary data through various research methods;

--teach the principles and techniques of writing effective application letters and resumes;

--improve facility in oral presentation of report data;

--encourage the use of acceptable letter format and appearance;

--give students some understanding of current trends and ideas in report writing and other types of business communication.

In the skills problem solving classification, eleven statements were considered significant. Educators ranked two statements, "Employ case problems as a method of writing," and "Relate business practice, problem-solving methods, and management philosophy taught in other courses to writing letters, memos, and reports," as more important than did the businessmen.

In the mechanics and grammar classification, educators felt that the concepts "Encourage the use of acceptable letter format and appearance," and "Help overcome student weaknesses in the principles of grammar and usage," as more important than the businessmen.

In the human relations classification, both groups felt that all concepts were important, but the educators ranked these concepts as more important than did the businessmen.

The statements classified in the writing styles and techniques section showed the greatest variance. Of eight statements presented, only three resulted with statistically significant differences. These statements dealt with the writing practice and use of the functional style of writing.

Classifications of speaking and listening skills resulted in marked differences in the rankings. Businessmen consistently ranked the three statements of this category much higher than did the educators.

Hansen's study (1971) provides results which may be surprising to both businessmen and business communicators. It generalizes several important instructional concepts. It suggests the importance of developing broad assessment and analytical abilities to accompany specific functional writing skills and talents.

According to the Wise Study (1969), educators recognize that effective business communication requires the writer to have a clear understanding of business operations, a specialized business vocabulary, a knowledge of merchandising, and an ability to use appropriate words to convey messages.

Even though Gordon and Howell (1959) were critical of existing collegiate business writing courses, they too confirmed the need for continuing the teaching of communicative skills. In summarizing data they received from businessmen, they described the abilities these businessmen said they desired in their prospective employees.

> . . . we want colleges to 'sharpen analytical abilities,' 'stimulate imagination,' 'develop human relation skills,' but particularly, 'to develop skill in verbal communications and abilities to write and speak effectively.'
>
> . . . of all the areas concerning student competence, the one concerning educators and employers alike is that of written communication.

Their comments added much to the old debate concerning the contribution of business writing courses to the goals of a broad and liberal education. The generalists believed that communication instruction was too confining and narrow. The business instructors felt that some specialty was needed but that the overall contributions of writing

courses presented positive facets to the behavioral and socializing goals of a liberal education.

Many aims and definitions of communication have been contributed. Nelboy (1961) writes that the primary aim of business communication is to convey the message with a minimum of friction between the written page and the reader's mind. Gelfand (1970) adds that efficient communication utilizes the channels which the recipients prefer.

Training may then mean facilitating the flow of symbols and signs between sources. If this flow can be generated and sent and feedback interpreted, then the training is liberating to students because it has helped them secure satisfaction in their work, in their education, and in their personal lives.

However, Schramm (1956) believed that the chief reason for studying the communication process is more self oriented. Training, he states, permits writers to be able to predict what effect the message content will have on their readers. Hence, the ability to know or infer about unknown events on the basis of the known is essential to human interaction as well.

Adnan (1971) agrees that this was the primary mistake most frequently found in business writing's philosophy. He feels that rather than place the emphasis on the mechanical elements of writing, emphasis should be placed on the complex components, the factors governing those components, and the interaction among the unidentified components within the messages. Therefore, in order to analyze communication, one must isolate and attempt to identify components of the topic or the model. Capacity to select and apply components to other circumstances further

enhances the self and permits a person to become a reasoning being who is self-sufficient and emotionally secure.

Partly because of their vocational emphases and their lack of the generalizing processes, undergraduate schools of business have been subjected to considerable criticism. As a result, many curriculum changes have been made. These changes were designed to oblige the liberalist and the uncertain business administrators. From a purely vocational emphasis, the curriculum has progressed to much broader programs which emphasize the humanities and behavioral sciences.

Soblik (1969) traced the progress of business writing and noted that as instructors began teaching letter writing, they recognized that students were terribly deficient in their command and use of the basic English language fundamentals--especially in such areas as grammar, punctuation, and spelling. Consequently, grammatical and punctuation reviews dominated the basic communication courses. This reversion to English composition, coupled with the specialized nature of the collegiate business writing courses, resulted in the Pierson report charges (1959) and the Gordon and Howell (1959) implications. These controversies had the following results: a number of universities discontinued their business writing departments, research declined drastically, and investigative projects receded to an all time low during the decade of the 1960s.

Communication skills were said to be important; yet neither executives nor educators were able to identify the specialties they felt were most needed. Student apathy added additional dimensions to the problem. Cox (1971) mentioned that most college students did not realize there was a need for effective writing skills. He stated that

little impetus existed toward formal communication beyond the minimal requirements.

The Need for Business Writing Training

Executives reported that their prospective employees were weak in analytical and communicative abilities. In a survey conducted by the Harvard Business Review (1968), businessmen were asked what they felt were the most serious deficiencies in their college graduate employees. "Lack of communication abilities and skills of understanding" were the first weaknesses they mentioned.

On the other hand, executives reported that many of the difficulties they personally were experiencing in business letter writing also existed in their report and technical writing. Minteer (1969) analyzed one hundred reports and interviewed forty executives. She reported that executives felt that their lack of knowledge about format and their lack of previous writing experience was the paramount deficiency. These executives also agreed that they had a common deficiency in their knowledge of grammar, spelling, and punctuation. Most of the executives suggested that they needed experience in presenting technical information to readers, that they found it difficult to keep their writing brief and concise, and that they were not able to choose accurate or precise words. They also felt that their facts were not organized logically and they were not able to predetermine what approach would result in maximum benefits from their various readers.

In an additional study which was designed to measure what seventy-two business supervisors felt were effective methods of communication, Level (1972) hypothesized ten situational problems. The

choices of communication methods used to judge these problems included written communication, oral communication, written methods followed by oral methods, and oral methods followed by written methods. The supervisors responsible for making the forced-choice selections indicated that climate, conditions, pressure, and action determined the most effective method of communication. Most supervisors preferred to use oral communication, but the study's results indicated that overall, both oral and written communication must be effectively combined.

The Bennett Report (1971) indicated that attention needed to be given to teaching techniques of oral communication. His study concluded that oral communication skills seemed slightly more important to business success than written skills.

To determine to what extent students of business were incorporating their writing training, Weeks (1967) surveyed business majors from four large universities; University of Texas, University of Washington, Georgia Institute of Technology, and Michigan State University. He asked which courses had been of most value to them since their graduation. The business writing courses rated second only to accounting. Graduates from one school rated their business writing courses as most important.

Managing executives from General Electric (1957) indicated that their English and communication courses had been the most useful in their training.

Rather than ask working college graduates what their opinions about their collegiate training were, Simonds (1961) decided to ask businessmen what skills they recalled using during the past year. He questioned 240 executives scattered across the country. Over half of

these men indicated that the course they used most frequently was their business letter writing course. A course in human relations in business was second, and a course in English composition was third.

To see what effect the many adverse pressures were having on business writing programs, the Murphy and Peck (1962) study was completed. Their report indicated that significant numbers of schools retained their programs and that schools of business throughout the nation were offering courses in business writing. Over half of the 223 colleges and universities surveyed required all of their business majors to take a basic course in business writing that included business letter writing. In addition, thirty-one per cent of the schools required the course of selected business majors, while fourteen per cent of the schools offered the course only as an elective.

Despite the uncertainty of course content, despite the various instructional approaches, despite the pressures from the 1959 foundation reports, and despite the apparent lack in college graduates' writing abilities, most executives and business instructors feel that training in basic writing skills must remain a part of the collegiate business programs.

Business Writing Today

In a recently completed study, Bullard (1971) surveyed seventy-nine business communication authorities. These authorities agreed that the chief weaknesses in their business communication courses were the lack of time, too many students, and too much subject matter.

In an effort to correct these major weaknesses, the instructors at the University of Houston have selected the following primary

objectives for their business communication courses: (1) real world relevance, (2) program coordination, (3) inter-disciplinary cooperation, (4) continued research, and (5) individualized student attention.

Stead (1971) also reported the need for diagnostic placement and writing evaluations at the beginning and throughout the business writing courses.

Colleges and universities across the nation are conducting research and experimentation involving varied instructional approaches and learning supplements which include both programmed materials, teaching machines, and reinforcement and teaching laboratories.

Computer-aided individualized instruction as well as individualized instruction in the classroom is also evident. Courses containing programs of simulation, case analyses, and management by small group interaction with performance objectives operate as well. Closed circuit television teaching and taped units of instruction are also being used. Courses in which traditional in-class methods are combined with prescribed learning activities are also becoming more evident.

Teaching philosophies have been altered, and practical job utilization is receiving more emphasis and attention. Executives are requiring that college graduates not only be able to collect and analyze data, but also that they have the ability to synthesize and infer problems related to their data. Particularly important, writers must be able to organize and write coherently so that there is a systematic introduction, presentation, and summary of facts, utilizing both logical and psychological order.

According to Minteer (1969) writers must not only be conversant with scientific analyses, but they must be capable of applying the segments of English fundamentals, a vocabulary and prose repertory which fits the reader's knowledge, and a consideration for the reader's point of view.

Sigband (1965) was one of the early proponents of the conceptual philosphy of business communication. He stated that business instruction must be broad and it must be theoretical rather than limited or secluded to letters or resumes.

Important too in the development of the analytical approach to learning writing skills is the creation of language tools or the capacity for simplifying structure, selecting specific content, and focusing messages (Punke, 1971).

Cox (1967) summarized elements of the theorist's writing philosophy. He suggested that students cannot become truly proficient in one or two short courses, so teachers should concentrate on making them very critical of the business communications they see and hear and of the ones they compose themselves.

The role of the college instructor is also that of adapting. Teachers are no longer permitted to remain aloof and removed from their students--meeting students only for required lectures. Interaction, rapport, and involvement assist many of the student-oriented techniques of teaching in use.

Although the status and rewards of a college degree are still influential, declining enrollment figures indicate that the college degree is no longer the only route for career preparation or for financial or upward social status and culture mobility.

Unemployment, job upgrading, and automation are also evidences of a rapidly changing economy. They are also evidences of a rapidly changing technology. Today the educator's role is to initially provide technicians for businesses, but it is secondly to retrain or help workers adapt to the existing, as well as the developing, labor markets. On-the-job use of business writing skills is inevitable reports Voyles (1965). Even though new workers may not be responsible immediately for writing, the writing skills are considered at the time of employment and during their early days on the job.

Hailstone, Roberts and Steinbruegee (1955) surveyed personnel managers. These managers stated that according to their experiences in job placement, English, mathematics and business letter writing were the course preparations most needed for initial employment.

Today employers are more selective. As an example, Sears Roebuck and Company interviewed 6,000 college graduates for 411 positions in 1972-73. Of that number, 250 received job offers. Ninety-five per cent of those offered positions accepted.

Until now many educators have ignored the job market, but today their own positions and their department's budgets are becoming threatened by the decreases in student credit hours, and there is a resulting decrease in both appropriations and tuition. Programs previously unconcerned about employment and placement began to solicit and publish job information. In some cases there has either been an increase in the effectiveness of university or college placement services or placement and job finding services have been organized within specific departments and colleges.

Educators have also relied on the law of supply and demand and they have felt that position vacancies would help balance the number of students enrolled in their programs. The applicants, at the present time, exceed the positions.

Nonetheless, educators in speech communications recently became most concerned when their enrollments dipped to unexpected lows. They determined that speech communicators should definitely study their subject content. They later recommended that course content gradually be changed toward vocationally oriented programs which would prepare their graduates specifically for employment rather than for instructional programs.

After studying 183 business and government agencies, Taylor and Buchanan (1973) learned that three-fourths of the companies they had selected had designed and were conducting their own communication training programs. The firms and agencies would prefer that their employees receive their training in schools, but in defense of efficiency they had initiated their own courses.

The study also indicated that both spokesmen from business and industry, who identified career opportunities and the need for speech communication competencies, consented that their potential employees must have the ability to communicate through a broad spectrum of management, sales, and technical occupations.

Plymire (1970) warned that business writing courses would have to vocationalize in order to provide their graduates with job-oriented competencies. He suggested that many of the old skills and formats were applicable and true at the present time but that proven skills

and formats should become selected subjects and be taught primarily so that students achieved proficiency and could use them in jobs.

Other skills were recommended. Radio band communication was identified as a new and vital segment of communication training. The need for teaching anticommunication, statistical reporting, and technical and statistical vocabularies was also suggested.

Taylor and Buchanan (1973) and Plymire (1970) concluded that communication and writing majors needed to be prepared in collegiate programs. This preparation should include skills which would permit them to participate in employee, customer, and public relations; personnel, management, and sales development; and internal and external publications.

Today business writing courses must be designed and taught with ultimate job positions in mind. Other studies confirm that the conceptual analyses approach must also be included. Pierson (1959), Kephart, McNulty, and McGrath (1963) all indicated that oral, written, and spoken understanding is essential to working with people.

Although faculty members, researchers, and businessmen may not agree on the specifics of business communications, they agree that basic writing skills assist college graduates in their jobs.

The Business Communication Teacher

Regardless of the instructional approaches, the supplemental teaching methods, or the learning techniques applied in business writing courses, the abilities of the instructor and the quality of the teaching are fundamental to much of the success or failure in the classroom.

Instructors possessing background and experience and a desire to teach also need perceptual scholarship.

A "good" teacher is capable of using inquiry methods efficiently, he demonstrates his ability to set up conditions of learning, and he is able to identify significant and salient problems within his subject.

Teachers also create the classroom atmosphere. The atmosphere will be as stilted or as comfortable as the teacher permits. Instructional permissiveness or discipline depend on the teacher's basic philosophy. However, there are advantages as well as disadvantages to the student-centered classroom as well as the teacher-centered classroom concepts.

Traditionally, college classroom professors have been the autonomous voices and directors of learning in their classes. Little interaction was encouraged or deemed constructive. Time and the relaxing of the formality of the classroom have altered the teacher's image. In their present image, business communication teachers still retain their usual responsibility and authority for the classroom processes. However, they are now referred to as the learning expeditors, the learning motivators, and the learning directors. It is their responsibility and function to process information, determine how to teach, select the mode and channels for communication, guide the learner as he applies knowledge, and evaluate the achievement of the learner.

Education today emphasizes student involvement as well as student and teacher directed learning. No one person is responsible for deciding what is to be taught or how knowledge is identified. Curriculum planners composed of interested and expert representatives function to identify goals which represent environmental, religious, ethnic, and vocational needs.

Romano (1967) projected that course coordinators will eventually become responsible for collecting and directing inter-disciplinary knowledge into real life circumstances, but, he noted, the earliest changes to be expected in business communication instruction is the teacher's function as the communicator.

Pettit (1971) stated that the most neglected area of research concerned investigations regarding teaching methods for presenting content and area specialties. Detailed experimentation with a number of methods and comparisons of results, he felt, must be completed in order to provide business communicators with improved techniques.

Recent studies have been completed by Level (1972), Inman (1972), Campbell (1972) and Williams (1973). Their results generalize to the best or most significantly successful method of teaching business communication skills. Learning is achieved and writing skills are developed. However, the degrees of learning and the amounts of writing skills vary. Each method is unique to the objectives and the emphasis of the individual teacher and to the specific course.

Business communication course content and subject matter is too broad to record in its entirety; however, Wise (1969) reported that current course content included the theory of written transactions, psychological motivation, human relations, and English punctuation and grammatical correctness.

Specific writing assignments involved special types of letters, reports, memoranda, manuals, brochures, advertising, news stories, and news releases.

Oral communication content included interviewing techniques, conference planning and reporting, and organizing and delivering business speeches.

In a more current summary, Williams (1973) listed subject matter and course content to include the studying of basic communication theory, the study of language as a tool of management, the use of perceptions and powers of observation, and the application of decision making situations in case problems. Interpersonal relationships, motivation, group processes, leadership techniques, semantics, and composition were taught. Letter and report writing techniques were also included.

Content will never be fully standardized in business communication classes. Nor should it be; however, the American Business Communication Association feels that classifications and general standards can be recommended. In 1972 they appointed an ad hoc committee to study and publish their conclusions as content standards. The committee projected that their findings would be available for release in 1973-1974.

Learning Methods Used In Business Writing Courses

The instructional or learning methods included in an approach to teaching business writing may be influenced by the professor's interpretation of how learning occurs. Elements of many of the existing theories have proven effective and have been labeled as true theories or principles of learning. However, no one theory can be universally or accurately applied to all levels of knowledge.

Inquiry is the term that has been selected to represent such a galaxy of theories. It may not be the best term, but it is acceptable to learning specialists because it meets so many of what they are convinced are desirable conditions of learning.

Included in these concepts and theories are the principles of behavioral performance, psychological behavior, knowledge of results,

reinforcement, association and conditioning, guided and unguided discovery, non-directed discovery, group dynamics, and problem analyses.

Ultimately the acquisition of skill depends on an integration of many of these and other conditions of inquiry. Successful teaching in business writing and students' skill development will also depend on the teacher's capacity to stimulate thinking, impart fact, assess understanding, provide channels for feedback, evaluate performance, and then reward or provide remedial teaching or additional data.

The theories and conditions of learning become components of the various approaches to teaching business writing. Many of the approaches, however, are dependent on selected teaching tools or teaching methods.

The lecture method is likely the most common method in use. It is the oldest. The lecture method has been openly criticized. Its primary falacy is that the lecture method assumed that all students possess the same background and basic intelligence and that all members of the class learn and progress at the same rate throughout the instructional period. The lecture method can result in a closed or one-way or teacher-dominated teaching method.

However, it may be a two-way student-teacher oriented teaching method. It has been identified as the deductive approach to learning. Problems may be identified and analyzed and the nature of the relevant facts noted but not "taught." After the students have discovered the relevant facts for themselves, the lecture method helps them organize the information in a way that makes it susceptible to interpretation. Lectures demonstrate how one generalizes.

The Harvard case method and other related problem solving methods have also been approved and used by many business teachers. Hatch (1961)

reported that twelve studies completed early in the 1960s included developmental discussions, work-study, and independent study in their broad classification of learning methods.

The conference method permitted discussions and group interaction. It encouraged the exchange of ideas and personalized the learning to the individuals involved. Teachers, however, questioned learning effectiveness in large groups. Several learning psychologists believed that class size had the unfortunate effect of intimidating the insecure student.

The laboratory method became established during the teaching machines era and the independent study era. Research done to date indicated that learning occurred because students not only verbalized the concepts, but they actually manipulated the information and received reinforcement.

Simulation methods of learning have also been successful. Simulation permitted teachers to appraise real life circumstances. Students learned best by projecting themselves into roles. Huffman (1970) noted that case problems, recordings of simulated meetings, and instructions for extra-class assignments seemed realistic to students and could be viewed as a part of business operations. Criticism of the simulation method involved the teacher's capacity to establish conditions and circumstances as they existed in real business life.

The inquiry training method emphasized developing confidence and the ability to question or postulate knowledge. One of the key factors of inquiry training was the freedom allowed learners to suggest their own theories, to test their concepts, and then to solve their problems or at least make inferences to other methods.

No single learning method brings the best results. A compilation of several is common, not only because it gives variety to teaching, but also because the combination of various methods has particular advantages. These advantages must be identified and used when the task objective demands a selected performance.

System Approaches to Teaching Communications

The theories of learning, the conditions of learning, and the methods of learning become elements of the various approaches selected as instructional methods in business writing courses. Many of these approaches have similar components, but each contains one or more elements unique to its name and to its approach.

The Functional Approach is one of the most frequently used approaches in teaching business communication. Soblik (1969) indicated that it is also called the Communication Approach, the Reader-Center Approach and the Psychological Approach.

The approach, despite the title, contains a broad and generalized conceptual framework which is developed through the students' composing letters. The approach takes a student from the communicative event through steps of encoding, transmission, reception, and decoding, to interpretation and response. It is heavily weighted with conditioning theories, and it also incorporates elements of psychology. The reader-centered objective is to get action, and the psychological objective is to anticipate reader reaction.

The Traditional Approach has also been identified as the Technical Approach. It contains many of the concepts found in the functional and communication approaches to teaching business writing, but it particularly

emphasizes in-class and out-of-class writing. Harder (1961) also indicated that this approach has often been termed the Writing Approach. He feels that it must remain such because letters represent the primary inter-business communication at present.

According to Campbell (1973) the General Rhetoric Approach was designed at her college to meet the remedial needs of a number of their students. The approach parallels the writing approach. Throughout the semester, the students were involved in writing sentences, writing outlines, writing sample business paragraphs, and eventually, writing business correspondence.

Gordon and Howell's (1959) recommendation of an Analytical-Management-Clinical Approach is innovational and corresponds with their recommendations concerning business letter writing. This approach is a combination of other approaches. It is organized around a broad and basic foundation of communication principles and techniques. It emphasizes a letter writing element, but it also suggests that the habits and skills of successful business administrators should be studied and imitated. It is definitely related to the behavioral sciences and would include amounts of psychology and analytical reasoning.

Administrative behavior, job objectives, and results measured against worker's and management's goals, were major premises of the Management/Objective Approach suggested by Ross (1971). The approach sponsored small group meetings and a large amount of peer interaction. Initial letter writing was emphasized, but evaluation consisted of both small group self-evaluation and a teacher-student oral evaluation. Strengths and weaknesses were discussed in group meetings, but the actual rewriting of business letters was not emphasized.

Douglas (1972) explained the Clinical Approach. It is closely related to the management-analyses-clinical approach and the management/objective approach. Writing of a succession of papers and business letters was recommended. Each written exercise was thoroughly analyzed both in class and through private conferences with the instructor. The major criticism of the clinical approach was that individual assessment and critiques involved enormous amounts of time.

The Procedural Approach discussed by Rudolph (1972) attempted to adjust method emphasis. It was felt that the writing, or the technical elements, were over-emphasized in the traditional or technical approaches. The procedural viewpoint included techniques used in the group dynamic method of learning. It also included role assignment and management simulation, but its major emphasis was relevance and practical, action-oriented writing.

The High Rational Approach is unusual but sound in many of its suggested methods. This approach presented forms of truth, logic, description, definition, classification, analysis, argumentation, persuasion, as well as rhetoric of exposition and the pursuit of narration. It did not rehash the principles of grammar, punctuation, basic letter styles or formats. The approach selected classical examples and studied unique styles of writing. From these models, students inferred correct writing principles and eventually applied them to their own writing projects.

The Language-Experience Approach and the Structured Linguistic Approach are related in a number of their techniques and methods. Ross (1971) explained that the language-experience approach emphasized logic, pre-trial, editing, and rewriting of most in-class exercises.

The structured-linquistic approach used approximately the same conceptual routines, but it also included major emphasis on preparatory English as interpreted through the linguistic pattern.

According to Tada (1971), the Inter-Disciplinary Approach to business communication training was sponsored by several universities. The major objective of this approach included an integrated writing emphasis conducted in several disciplines. The communication instructor was primarily responsible for teaching the course. He established the concepts and exposed the students to the theories and foundations of writing. Writing assignments were accepted from other courses and the English experts assisted in the evaluation and grading. Vardaman (1965) noted that the approach had many advantages but that a chief disadvantage was finding talented and consistent graders.

The Correlated or Integrated Approach was similar to the inter-disciplinary approach. Writing was still emphasized, but this approach taught or reinforced business letter writing skills in either typewriting or shorthand classes. Team teaching was an important ingredient to this approach, and its major strength was that it permitted writing foundations to be strengthened and developed along with the other secretarial and shorthand transcription skills. It required too that communication courses be taught in the typewriting classroom.

Several other authors identified teaching approaches according to the "sequence of message action" in letter styles. Soblik (1969) noted that the Chronological Approach or the time order approach had once been considered the most logical approach to letter writing. The time order approach was specifically recommended for narration oriented letters. At one time, the narration or sequence letter was used solely for sales

letters and advertising copy, but it has been used more recently for the informational type letter.

The Deductive and Inductive Approaches to teaching writing skills are also sequence styled approaches. These approaches referred to a letter's content which included summarizing generalization, followed by fact inferences, or the reverse, fact inferences moving to a concluding generalization. These approaches are used primarily in description, explanation, or argumentation oriented writing.

The Climatic Approach was especially designed around letters which were composed to show result to cause, cause to result, predicament to remedy, and parallel development of comparison or contrast.

The Space Order Approach is related and emphasized the familiar to unfamiliar or the order of most important to least important.

Subject organization and content presentation basically remain unchanged. However, the teaching philosophies and learning theories evidenced in the classroom instruction have been influenced by both the instructional methods incorporated during the course as well as the course approach or the combination of course approaches used during the semester.

Supplemental Learning Methods and Learning Tools Used in Business Writing Courses

There are a number of supplemental tools or learning methods currently applied to business communication courses which have been designed to upgrade both the teacher's effectiveness as well as the student's performance quality. Some findings gave evidence of change in some instances, but other studies gave no evidence of statistically significant

important in teaching effectiveness or in student's achievement.

Individualized instruction, or as it may be titled, individually prescribed instruction, was first introduced to American education in many of Dewey's concepts. The IPI approach, as demonstrated through teaching machines, became prominent as a result of the research and writings completed by B. F. Skinner. Thorndike agreed but suggested that written "programs" or texts would permit students to learn effectively through self-directed programs. Thorndike also expressed need for feedback. He explained the principles of reinforcement and knowledge of results in his work.

O'Donnel and Lavaroni (1970) stated that educators had recognized the inescapable evidence of individual differences among human beings in the 1920s but that it had been only within the last decade that individuality had been encouraged or nurtured.

Individualized approaches in education contain five basic elements: the five conditions, purposeful pacing, alternative means for learning, self-evaluation, decision-making activities and purposive interaction. These approaches are explained as follows:

Modification of time and an awareness that each student learns at a different rate is paramount to this philosophy. Purposeful pacing permits the individual to accept as much as he can handle. The recognition that all students do not learn all subjects through the use of a central learning method or by a particular learning tool makes it important that alternative means of learning are provided.

Theoretically in an IPI structure the teacher provides or permits variations of both communication input and communication output. This permits multiple moments for (input) reception or for (output)

explanations or performances. Several self-evaluation processes, including several assessments and evaluations at specifically required times, are necessary. Performance objectives are essential to the course content, but important, too, is the fact that established objectives permit the teachers to identify their purposes. It also assists the students in translating and recognizing these purposes in performance terms. Decision-making and choices of alternatives become an additional, yet essential, element in an individualized approach. Of most importance however, is the purposive interaction IPI creates. Grouping has provided a means of control, but in the individualized classroom groups form only when interaction and ideas can be compared, contrasted, analyzed, or explained. The size, composition, and purposes of the group must change continuously. The possibilities for subgroups formed for specific purposes are endless. Individualized instruction then becomes a flexible and adaptable method or tool of education and it can be as promising or as constrained as the teachers or pupils permit.

Claxton (1971) stated that individualized instruction frequently involved the use of programmed materials, job instruction sheets, and project plans. Small portable teaching machines have also adopted the IPI concept. Although they have been placed in a number of classroom centers and training laboratories, they proved too expensive to sell directly to the home consumer market.

Computer assisted individualized instruction and computer directed individualized instruction engaged the talents of programmer-educators and the unusual capacities of the computer. Silver (1970) explained that the computer provided a means of mass individualized communication unimaginable in other times. He suggested that in instances the

computer should be used as a diagnostic instrument, but he said that in other instances it could also direct remedial assignments and prescribe other learning routes.

Research completed by Hatch (1967) indicated that their students, through independent study, learned as least as much independently as their other students learned in regular classrooms.

The individualized instruction plan includes diagnostic modules, teaching modules, assessment modules, and LAP (Learning Activities Project) modules. Programmed learning contains many of these modules, but it emphasizes the teaching-reinforcement section of the teaching module. The IPI is basically a structure for content presentation. Programmed units also contain many of the same elements; in fact, the two are inter-dependent in operation, but they will be discussed separately.

The American Psychological Association (1964) determined that knowledge which could be classified as argumentative, behavioristic, or conceptual would best fit the design for programmed materials. As a result of research completed, Ivarie (1968) made decisions concerning the physical organization and printed page format for programs. He determined that either the covert styled programs or the overt styled programs were educationally sound. Neither produced marked learning differences. He also suggested that the vertical linear page format be accepted as the most functional design for printed programs.

When possible programs should be correlated with other classroom work. In these instances, the class may substitute a program for some other work. Or it may be used as a remedial lesson or as an independent study for selected students (Hahn, 1972).

In some instances the programmed materials were used during class only, in other cases as homework or as extra-class work, and in still other cases, as part of a combination of instructional methods. Various levels of success have been achieved with the use of programmed instruction. Some of the advantages of using these materials were:

1. Each student could progress at the rate most appropriate for him.

2. When a student must miss a class that is taught by some traditional method, he can use programmed instruction to catch up.

3. The student who needs remedial instruction can get this instruction by using programmed textbooks or teaching machines.

4. The student and the teacher are motivated by this method.

Nevertheless, programmed materials have been criticized because students typically regulated their own pace much too slowly for the course calendar. This is a contradiction reported Ivarie (1968). Nearly all research findings agreed that programmed instruction taught information at least as fast as other techniques and just as thoroughly.

Hahn (1972) indicated that a study completed at Arizona State University found that there was no significant effect on ultimate learning or achievement when comparing programmed English instruction in collegiate Business Communication courses. Courses involving the lecture-discussion approach, the overt response programmed instructional approach, the covert response programmed instruction approach proved that the lecture-discussion approach required more time but that overall results were not different.

Hahn (1972) compared two book tools in an experimental study. The results were unusual in that the regular traditionally styled basic

grammar text proved more effective than the selected programmed textbook.

In a programmed business communication textbook, Hay (1964) encouraged his students to buy programmed units to complement the regular course instruction. Students with deficiencies were assisted through specifically programmed materials. In a subsequent study, classes using programmed instruction achieved significantly (.01) higher in post-test scores than did the classes in the control group who did not use programmed texts. Students also achieved final exam scores that were twenty per cent higher than the control group's scores.

Barksdale (1971) recommended that programmed approaches to learning should not be adopted unless (1) they had a valid, precise and complete statement of objectives, (2) the innovational approach could prove markedly superior to the conventional classroom procedures, and (3) their programs could be constructed with open-end elements, but definitely geared to the average student. Cost and facilities required for the instructional approaches must also become important considerations.

Results prove that programmed materials can either assist or provide, in some instances, no assistance to learning. Programs must be selected and used with discrimination. They should not be guises for lessening teacher duties or responsibilities. They are meant to free the instructor from the routine duties of the classroom so that the teacher can use his time creatively and assist students with their specific needs. Programs are designed to present knowledge and appraise learning for all students, regardless of their needs.

Case studies and case analyses are additional tools that are used frequently as supplemental learning methods. The case-study method is

not a "new" tool, but has been receiving increased attention in business communication courses. As a rule, case analyses are not used as the sole approach to teaching business communication classes but are becoming increasingly popular as a supplemental method.

Cases are only as effective in business communication courses as those who attempt to analyze their teaching points. The case approach encourages students to think and to project themselves into other people's circumstances, but preparing the students to analyze critically will also encourage them to become more confident. They may at least be able to come to a conclusion and make a decision, remembering that conditions and attitudes may affect the same problem in another situation. The ability to solve problems and attain confidence are especially desirable characteristics in the field of education for a businessman.

Hatch (1967) reaffirms his belief in the problem solving approach and judged the work he completed as successful. Wise (1969) summarized the 1964 guide provided by the American Business Communication Association Report Committee concerning preparing and using cases in business communication courses.

They concluded that cases should require students to analyze and organize information and ideas; draw inferences and conclusions; perform computations and reason with facts; use previously acquired knowledge; and be aware of historical, political, and economic facts. Each case should also clearly indicate the roles of the readers and the writers, but particular care should be taken so that analyses and conclusions should not be provided.

To determine which case approach to use in the business writing class the teacher must match one of three case styles to the specific

purposes of the exercise. The appraisal case describes practices used for evaluation and permits the students to make inferences from the facts. The springboard case presents a situation which may then be followed by the questions relative to correct action and procedures. The problem-solving case presents a problem and then requests ideas or potential solutions.

The performance objective for case study is to provide descriptions and information, but students must be permitted to reach their own conclusions after they have researched the problem and analyzed the data.

In-class writing exercises and group writing exercises are other supplemental tools which may be used for assisted learning projects. The use of group-writing projects has been advocated primarily as a business report writing assignment, but it may also be organized around decision styled business letters or analytical reports.

It is not uncommon in actual business situations for individuals with technical specialties to be assigned to write specialized segments of a project. Then a committee meets with a writing coordinator and assembles all of the segments of the data into a coherent and logical report.

Knapper (1961) explained the advantages of group-writing assignments as follows: Students participate and see the need for cooperation, they are able to observe others involved in the composition process, and they experience negotiation and interchange.

Unfortunately numerous small groups become difficult to control when they become restless. Group writing should be used occasionally when persuasion principles or attitude study are involved.

Using selected readings in business communication courses can serve as a meaningful supplemental technique. Selected readings not only

permit the students to survey the opinions and styles of respected leaders, but it also permits them to discover the various approaches and theories of communication experts.

Selected readings also permit students to delve into related business attitudes. There is no better way to survey business practices than to read explanations written by the recognized leaders in their specialties.

Other supplementary methods exist. Some of them are term papers, business games, periodical literature surveys, work-study, and development discussions.

Related Studies

A number of studies involving the various components of business letter writing and business communication have been completed. Elements within several of these studies are somewhat related to the proposed study. During the investigation of related literature, no study containing identical hypotheses has been discovered. No study involving prescribed remedial activities has been completed in business communication in the State of Oklahoma.

The applicable components of related studies have been identified and summarized as follows:

Instructor Interest and Personal Guidance Aid Effective Writing. Using the United States Armed Forces Institute's General Education Development test (GED), Virgil Harder (1962) tested two business communication classes in the summer and fall of 1961. The test was administered during the second and the next-to-last class period of each semester, and mean class improvements were compared using the t- test to assess

significance. The sample sizes were small (eighteen and twenty-one students, respectively), so the findings are questionable, but the Fall 1961 class showed greater improvement at a .02 level of significance. This class had been taught semantics and general organization patterns; the summer class had been taught specific organizational patterns.

From a practical standpoint, the improvement was too slight in certain relevant categories to be meaningful. Harder concluded that writing skills cannot be improved until definite goals are set and reliable test methods are available. But intuitively he felt that the more guided writing a student does the more his writing improves. The student himself, Harder suggested, must be evaluated and appropriately advised.

Wolf and Mongan (1968) assessed the Buxton study which had been completed at the University of Alberta.

Multiple Assessments and Feedback Aid in Teaching Effective Writing. In 1956-57, Earl Buxton tried to determine the method of instruction that most improved written composition. A sample of 257 students was divided into a control group, a writing group, and a revision group. The three groups were pre-tested and post-tested for the school year. The writing group received only a paragraph of generous comment at the end of their papers before they were permitted to make changes; the revision group received the benefits of thorough marking, grading, and commentary before rewriting was required. On the basis of t-tests, the revision group achieved significant improvement in writing clarity over the other two groups and a gain, though not significant, over its own pre-test scores in the essay category. Apparently thorough grading and detailed comment can help improve the

writing of college freshmen. Buxton believes that essay tests probably also measure changes that objective tests do not measure.

Linguistic Competency Aids Effective Writing. Research at the University of Houston indicated that deficiencies were found to exist in the linguistic mechanics of communication students. The recurring problems of linguistic mechanics included spelling, punctuation, form, and problems of organization including coherence and style.

Special programmed texts and reinforcement materials were completed. These aids were used in learning laboratories and encouraged effective writing through linguistic competency. Thomas R. Mongan and Morris P. Wolf (1968) also reported that studies completed at the Naval Officer Candidates School in Rhode Island, at the Murray State College in Kentucky, and at the University of Houston reinforced the need for linguistic foundations.

Small Group Analysis, Teacher Evaluation, and Student Interaction Aid Effective Writing. Kenton E. Ross (1970) completed a survey at Oklahoma State University. The project coupled the language-experience approach of business reading and writing with a management by objective philosophy. The experimental group became management goal oriented. Such orientation involved a concept of jointly identifying writing performance goals, making achievement-result comparisons, and encouraging self-pacing. Relationships between temporal, topical, causal and spatial organizational techniques were also incorporated.

The experimental group was divided into subgroups which met in regular class meetings but which were also divided into small interaction groups as proofreading and revision teams. Groups met for the original conceptual discussions, but during the remaining weekly

sessions the classes met in four groups. Students assessed each other's letters, then revisions of the writing assignments were again checked.

The procedures consisted of operational blocks as follows:

(1) conceptualization

(2) class discussions with sample illustrations

(3) revision of the original drafts

(4) individual consultations with the instructors

(5) group analysis of projects

(6) final revision

(7) student-instructor evaluations and conferences

Grades were determined on a joint teacher-student summary of the written exercises. Coherence and logic were reviewed. The final grades were awarded according to how well ideas were conveyed in writing and how much the individual's writing effectiveness had improved.

A pre-test to measure student attitudes was followed in sixteen weeks by a post-test opinionnaire. Results of the survey indicated that students had enjoyed (1) their small group interaction, (2) peers proof-reading and criticizing their drafts, (3) having opportunities to change and restructure assignments, and (4) having individual sessions with the instructor.

Results of the questionnaire also indicated that students ranked the communication course as their second choice of fourteen basic business courses. Only business law provided a greater feeling of accomplishment. Rewriting privileges and small group critique assistance on the final drafts were rated as the most preferred essential in-class activities.

Business Writing Courses at O.S.U.

Oklahoma State University has endeavored to maintain a good communication program throughout the years. However, despite a number of safeguards, optimal writing skills are not developed for all students in the present courses.

Gifted teachers have experimented with a number of innovations which have been designed to upgrade the quality of instruction in the three courses and to improve the student's writing abilities. Successful integration of simulation and role identification techniques as well as a management by objectives approach proved successful to a limited extent.

Unlike Harvard, the University of Wisconsin and other large schools, Oklahoma State University has retained freshman composition courses in the collegiate program. However, at Oklahoma State University, selected English rhetoric and composition courses no longer meet five days a week. In some instances, the programmed approach permits as few as two days contact each week. Also, in some instances, credit hours have been reduced. Students may apply for waivers or "advanced standing" status and receive exemptions.

The Freshman English courses at Oklahoma State University are noted for their overall effectiveness. In fact, their system has achieved a reputation for excellence. Kohler (1966) reported on the achievement freshmen English students made during a program-assisted approach to reinforce basic English grammar at Oklahoma State University, but despite the training students received during their freshman and sophomore courses, many of the students enrolling in the three courses

in business communication continue to lack these grammar and English fundamentals.

Although the existing business communication courses were basically designed for business majors, students' success and a good reputation for the business writing courses became known. This acceptance caused the business writing courses to become popular service courses as well. Several departments in the College of Business Administration now require that students complete one or more of the courses, and at least four other departments strongly suggest that students elect the basic business communication course. The students enrolled in the existing classes come from the departments within the School of Business: the accounting majors, the business administration majors, the economics majors, and the business education and administrative services majors.

The Department of Administrative Services and Business Education sponsors both a two-year and a four-year program. Some safeguards are structured in regard to writing preparation through a prerequisite system. Students achieving grades of C or below in composition courses are required to complete the basic Business English course. Other College of Business majors proceed through their schedules until they enroll in the advanced letter, report, and theory of communication courses in their junior and senior years. In some cases, students in the two-year program enroll in these upper division courses during the last semester of their sophomore year.

Enrollment from the departments of technology, agriculture design, agricultural economics, technical, and industrial engineering, provide approximately fifty per cent of the enrollment in the business writing classes.

Regardless of an effort to contain class size, course sections have grown larger. Present class size permits some use of the traditional or communication assessments of writing, but the increasing numbers have made it difficult to provide close, careful, and clinical analysis of writing.

Theories and generalizations about the purpose and role of writing in communication are established. The teachers of the courses also feel that some exposure to problem solving as well as attitude-assessment and human-relation techniques are needed.

Students have not mastered the basic grammatical and English concepts, however, this is the problem: How can a student's business letters and short analytical reports be graded constructively when the content and real intent of the writing is obscured by grammatical and punctuational structure?

Business teachers know that executives want thinking and questioning capacities developed in their potential employees. They also realize that the business writing courses have traditionally evolved into freshman composition repeats, yet the reality of the situation is this: although a small number of students have excellent English preparations, the majority of those enrolled in the communication classes are deficient in various fundamentals. These deficiencies plague them throughout the semester.

Supplementing business writing instruction outside the classroom with selected prescribed activities or with prescribed programmed units has been discussed by business communicators for several years. The need for supplemental methods was stated again by Tada in 1972 as a result of extensive followup.

Tada (1972) reported that the business graduates in accounting and business management from Brigham Young University, who completed their programs during the years 1961 through 1969, requested that grammar techniques for collecting data, punctuation, and writing styles be emphasized in more than a general manner--specifically, with some detailed treatment. The graduates also suggested that selected major letters and report writing items be emphasized almost twice as much as they were.

In research concerning the procedural approach to teaching business writing, Rudolph (1972) asked: "Can the technical elements required for writing courses be utilized out of class as in-class works with the theoretical and procedural aspects of communication courses?"

The Hatch (1967), the Hay-Pinkerton Study (1964), the Stead Studies (1971) and the Kohler Study (1966) proved that programmed approaches to present basic English principles were as successful or more successful learning tools than the old method and that they should be utilized as supplemental learning methods in business writing courses.

Remedial grammar played an important role in the study completed by Lawrence (1969). She decided that the most successful approach to teaching business writing was innovative learning activities interspersed with lectures, background reading, selected teaching machines, selected learning facilities, and remedial grammar. These greatly assisted the college-level course in written and oral communication.

Pettit (1971) stated that remedial techniques for students of business communication are needed to develop and refine remedial teaching methods. Some studies involving extra work in lab sessions,

programmed LAP units, tapes on basic grammar, and composition are in progress or have been completed.

But the concept of programming certain parts of the business writing content areas needs additional research. By programming certain parts of business courses, more time can be spent with other teaching methods in order to emphasize theory and other aspects such as attitudes, persuasion, and critical analysis which do not lend themselves easily to programmed instruction.

A design to provide for individual differences, to provide short term training for persons needing training outside the regular program, and to provide more in-class time to teach concepts of communication was completed.

Summary

Through studies concerning the usefulness of the business communication course, and from data gathered from business executives and college graduates who have completed business communication courses, research has shown that some training in business English and communication principles is essential to employment and to attaining success on the job.

Both educators and businessmen agree that an understanding of business operations, a specialized business vocabulary, a knowledge of sales and research, and an ability to assess attitudes and messages, is useful in the communicative processes, particularly written communication processes.

The literature and research analyzed indicated that business English has been criticized because it lacked relevance to the broadening

and liberating philosophies defined as abilities of analyzing problems, thinking critically, and synthesizing facts in business writing. Despite these criticisms and other criticisms from the foundation reports in 1959, business communication courses are securely established in most universities and colleges. Businessmen and educators have concluded that business communication courses are essential to collegiate programs.

Information and facts received from executives and communication teachers have provided summations of what both groups believe is essential course content in business writing courses, although specific tenets or lists of standardized subject matter have not been identified. There are evidences of change in curricula as well as adaptations in many of the approaches to teaching business communications courses.

Present methods of instruction and existing theories of learning have been studied. Approaches to course organization and selection of tools to assist learning were also reviewed. The literature revealed that there was an increasing emphasis on the inquiry philosophy of education in business courses. Teachers also generally agreed that specific theories of learning cannot be segregated and identified, but that an understanding of the philosophies and the psychological implications to learning permits instructors to adapt specific methods to meet specific objectives. In adapting and tooling knowledge, teachers are referred to as learning expeditors, learning motivators, and learning directors.

The research also indicated that numerous approaches exist for teaching business writing communication. Each contributes unique components or an original combination of existing components to an approach specially designed to improve students' writing abilities.

These abilities will result from carefully selected goals and objectives and will be measured with specifically required performances under prescribed conditions.

The lecture method of teaching remains the one most frequently used, but simulation methods, case and problem solving methods, conference methods, laboratory and other methods are being scheduled throughout the course to add variety and emphasis to selected units.

Group oriented instruction has also been under attack as being inadequate for the needs of today's students. The individually prescribed instruction model includes diagnostic modules, teaching modules, assessment modules, testing modules, and LAP modules. Programmed methods contain many of these modules, but they emphasize needs and knowledge of results in their teaching and assessment modules.

Individually prescribed instruction has generated innovative approaches in business communication courses. These approaches and methods encourage purposeful pacing, alternative means for learning, self-evaluation, decision-making activities, and interaction. Each element has been designed and applied in approaches for teaching business communication classes.

With the increased interest in programmed instruction, other tools and supplemental learning methods are also being explored. Problem analysis, in-class writing, selected readings, term papers, business games, work-study, development discussion, laboratory practice and use of unique classroom facilities are discussed in the research.

The literature revealed that ultimately all instruction is designed to help students learn and to assist them in demonstrating their knowledge. Ideally, all students may progress at their own rate appropriate

to their immediate objectives. Students who fail to learn are permitted to try again. The students continue through study and self-assessment until an acceptable level of knowledge is demonstrated under specified conditions.

Several studies were reviewed and facts from their content appear throughout the review. However, selected studies were analyzed and reported in detail because they established the conceptual framework for the experimental study. A study reported by Wolf and Mongan (1968) suggested that English fundamentals and linguistic competency aid the teaching of effective writing. The Harder Study (1962) indicated that instructor interest and personal guidance aid in teaching effective writing. The Buxton Study (1963) revealed that feedback and multiple assessments also aid in teaching effective writing. Student interaction, teacher evaluation, and small group analyses also promoted the teaching of business writing according to the Ross Study, (1971).

The procedures designed to test the hypothesis of the study, the knowledge of basic English, the degrees of existing writing skills, the existing attitudes and opinions about business writing, the diagnostic techniques and the prescribed treatments are described in the following chapter.

CHAPTER III

EXPERIMENTAL DESIGN AND PROCEDURES

The experimental design and procedures chapter was organized as follows: introduction, selection and description of sample, statistical design, instruments used, criterion measurements, textbooks used, teaching procedures, testing procedures, data preparation and evaluation, and summary.

Introduction

A pilot study was completed during the 1971-1972 fall semester in the Administrative Services and Business Education Department at Oklahoma State University. A computer-assisted summary confirmed the usefulness of the selected examinations. Procedural changes concerning the use of the prescribed treatments were approved and adapted for use in the experimental study.

The population for this study consisted of a convenience or handy sample and was comprised of seventy-seven students who enrolled in two sections of the course, Written Communication (GENAD 3113), at Oklahoma State University during the spring semester of 1973.

Selection and Description of Sample

Students who registered for Written Communication, GENAD 3113, Section 1, (1972-1973) were randomly assigned as the control group.

The course met on Tuesdays and Thursdays in the morning for sixty minutes for fifteen weeks. Participants in the control group received instruction which utilized the existing course objectives and teaching emphases. These emphases included lectures, in-class demonstrations, discussions, case analyses, and question and answer techniques. Selected educational films and supplemental out-of-class readings were also assigned. A short, informal report served as a research and writing application in the course.

Letter writing assignments included both inductive and deductive writing theories. The letter writing assignments were also completed in and out of class. Feedback of achievement and writing efficiency were communicated to the students in the form of notations and comments on their written assignments.

Students who registered for the Written Communication. GENAD 3113, Section 2, (1972-1973) were randomly selected as the experimental group. Formal in-class instruction for the experimental group also consisted of two sixty minute sessions which met for fifteen weeks. The experimental group also received instruction which utilized lectures, in-class demonstrations, discussions, case analyses, and question and answer segments. Identical in-class letter writing assignments were selected and were completed. A short, informal report was also completed. Required readings and selected educational films were also used in the experimental group. Feedback consisted of written comments on the assignments returned to the students.

At the beginning of each class period, a distribution procedure was used to disseminate and collect letters in both groups as well as the prescribed treatments in the experimental group. The prescribed

treatments were composed of (remedial oriented) programmed reviews which taught and explained basic principles of grammar, punctuation, spelling, paragraph sequences, and sentence and paragraph organization.

Experimental Design

To avoid confounding the variables or contaminating or biasing other intervening variables, both groups of students were taught by the researcher during the semester using identical procedures for each class with equivalent activities planned for each group.

The researcher followed detailed lesson plans for each class period during the study to insure that each of the groups received equal treatment. The experimental variable between the experimental and the control group was the prescribed out-of-class treatment covering writing principles, grammatical fundamentals, and punctuation foundations.

The dependent variables between the experimental and control samples measured knowledge of writing principles, knowledge of grammar and punctuation principles, and knowledge of writing organization. An additional dependent variable equated students' opinions and attitudes about business writing.

West (1967) pointed out on page 286 that random assignment of "experimental participants to treatments is superior to matching students." He also explained that random assignment of treatments to classes would result in random assignment of students to treatments.

According to Johnson (1969) students' knowledge of their participation in an experiment endangers the reliability of the results obtained. To prevent any confounding, students in both groups were told that the courses would be taught somewhat differently than in previous

semesters; however, no differences were explained or identified.

Students were allowed to enroll in any of the available sections of the course; however, there is a possibility that some variables were not controlled or considered when the acknowledged limitations of the study were announced. However, the assumptions of the design of the study included the control associated with random enrollment of the students in the classes and the random assignment of treatment to the classes, rather than the matching of the students for all the variables.

Before-After Designs

The statistical test applied was the analysis of variance. A student's t-test also assessed the degree of change between pre-tests and post-tests. Correlation matricies were completed on a 10 by 10 grid and a series of one-way analysis of variance comparisons were made on selected correlates. A Point Weighted Standardization was completed for Juror's Criterion Measurement Scores and the adjusted scores were used during the comparisons of the data.

Runyon and Haber (1967) recommended that the direct difference method, commonly called the student's t-ratio, be used in studies with before-after designs. This statistic determined whether or not change had occurred between two measurements.

Popham (1967) explained that one-way analysis of variance interpreted mean score change or variances within or between the variables involved in the research. On page 186, he emphasized the need for meeting two basic assumptions when using the one-way or the single-classification analysis of variance. Assumption I stated that the subgroup categories must be randomly drawn while Assumption II stated

that the variances within these subgroups must be homogeneous. Pophan further explained that even though fairly significant departures from these strict assumptions may exist, the analysis of variance yields meaningful interpretations because of the statistic's "robust" qualities. The AOV was particularly suggested for difficult behavioral science studies where approximate random sampling may have occurred in the study.

Experimental Procedures

Instruments Used

The Standardized Comparative Examination. The test used in this study was Form A and Form B of the Standardized Basic Skills System Writing test, edited by Raynor (1970) and published by McGraw-Hill Book Company.

According to page 7 of the Examiner's Manual, the test measured the student's skills in written communication.

> Each form of the test, A and B, is divided into three parts: Language Mechanics (30 items), Sentence Patterns (26 items), and Paragraph Patterns (15 items). Each part is separately timed. The working time for a test is 15 minutes for each part, or a total of 45 minutes. A separate score is reported for each of the three parts as well as for the entire test.

Form B of the Writing Test was used as the pre-test and Form A was used as the post-test to measure change in writing skills which occurred during the experiment.

Validity was established through content validity. Raynor (1970) further explained on page 27:

> The universe from which the sample of items was selected for inclusion in the MHBSS Writing Test may well be defined as the content of the following three texts which were

> developed by Learning Technology Incorporated for the McGraw-Hill Basic Skills System: Writing Skills I, Writing Skills II, and Paragraph Patterns.
>
> After studying the content of these books, CTB/McGraw-Hill staff members prepared test items . . . . Every effort was made to prepare items that were answerable by those students who have learned rules and techniques for good writing, whether or not they had studied these books.
>
> The items were tested in various sections of the United States on samples of students like those for whom the tests were designed. These items were thoroughly analyzed. Point biserial correlation coefficients were computed between item and part scores, as well as between item and total scores. The distracters were checked for effectiveness and revised or replaced if not effective.

The Kuder-Richardson 20 formula (KR-20) was computed for the reliability of the test, and this reliability was .85 for Form A and .86 for Form B.

The Bi-polar Semantic Differential Method of Attitude Measurement. This instrument was used to equate students' opinions and attitudes toward the concepts: (1) Why study business communications and effective writing; and (2) Why use individually prescribed treatments in written communication.

The forced choice questionnaire was used as a pre-test and as a post-test for both the experimental and the control groups; however, concept two was not completed by the members of the experimental group.

The semantic-differential guide to attitude measurement was originally developed by Osgood, Suci, and Tannenbaum (1957). They believed that through the bi-polar semantic differential, a consistent and reliable quantitative value could be associated with the meaning of a word or a concept.

They wrote that the tool was a combination of controlled association and scaling procedures. They provided their subjects with a concept

to be differentiated and a set of bi-polar adjectival scales against which to do it. The subject's only task was to indicate, for each item (pairing of a concept with a scale), the direction of their association and the intensity of the attitude as marked on a seven-step scale.

Each semantic scale, defined by a pair of polar or opposite-in-meaning adjectives, was assumed to represent a straight line function that passed through the origin or the neutral mode. The scales represented a multidimensional space.

Osgood explained that his multidimensional semantic space and its subsequent differential was the device for scaling with which to locate a point in space representing the meaning of a word or concept. The differential was composed of a series of scales, and the person being tested rated the concept or term on each of the scales. Each scale was composed of a pair of opposite mean (polar adjectives which were then placed on the opposite ends) of a straight line continuum. The continuum was segmented into seven parts, each segment representing a rating intensity whereby the individual reacted to the concepts being considered in relation to the alternative polar terms. The mid point assumed a neutral stance and the deviation from that central to its opposite critical limits were equated and assessed. Direction and degree determined amounts and agreement or disagreement with the meaning of the polar adjectives.

One method for defining a concept within a space was shown by an example from Osgood, Suci, and Tannenbaum (1957): The father is--

Happy ___ : ___ : ___ : o : ___ : ___ : ___ Sad

Hard ___ : o : ___ : ___ : ___ : ___ : ___ Soft

Slow ___ : ___ : ___ : ___ : o : ___ : ___ Fast

Two distinct properties for the concept "father" were signified by the indicated scale ratings: (1) direction from the origin, and (2) distance from the origin, with direction depending upon the polar term chosen and distance indicated by the extremeness of the point checked.

A quantative measure for a word or concept was achieved by assigning a numerical value to each of the seven points on the linear continuum. An example of this numbering technique was shown on page 28 by Osgood, Suci, and Tannenbaum (1957), in the following manner:

-Concept-

Polar term X ___(1): ___(2): ___(3): ___(4): ___(5): ___(6): ___(7) Polar term Y

The segment of the continuum numbered (4) signifies a neutral response toward the concept, the part numbered (1) represents an extreme feeling toward polar term X, and the section numbered (7) represented an extreme feeling toward polar term Y. Thus, several different numerical ratings were obtained by including a series of bi-polar adjective scales under each concept.

Factoral analysis statistics were used to assess the dimensions of meaning measured by the bi-polar differential. In their original research, Osgood, Suci, and Tannenbaum (1957) used the factoral analysis tool in an attempt to identify general measurement factors which could be applied to all data. Their study established three general factors of meaning measured by the semantic differential technique: an evaluative factor, a potency factor, and an activity factor.

Osgood, Suci, and Tannenbaum, (1957) described their findings on page 36 by stating:

> The first factor was clearly identifiable as evaluative by listing scales which had high loadings on them; good-bad, beautiful-ugly, sweet-sour, clean-dirty, tasty-distasteful, valuable-worthless, kind-cruel, pleasant-unpleasant, sweet-bitter, happy-sad, sacred-profane, nice-awful, fragrant-foul, honest-dishonest, and fair-unfair.
>
> The second factor identified itself fairly well as a potency variable: large-small, strong-weak, heavy-light, and thick-thin served to identify its general nature. These scales had the highest and most restricted loadings.
>
> The third factor appeared to be mainly an activity variable in judgement, with some relation to physical sharpness or abruptness as well. The most distinctively loaded scales were fast-slow, active-passive and hot-cold.

Osgood, Suci, and Tannenbaum (1957), concluded that the evaluative factors of the semantic differential scales were index readings of attitude. Fortunately, it is a method of attitude assessment that was easily administered and scored. These researchers determined that attitude was very evaluative in nature and the evaluative factor, therefore, was a measure of an individual's attitude. They determined attitude by using sets of scales which possessed "high loadings" on the evaluative factors.

For scoring purposes, the unfavorable poles of the bi-polar scales were assigned the score "1" while the favorable poles were assigned the score "7". When this method of scoring was used, the sum of all evaluative ratings for all the sets of scales for any one concept or word comprised the attitude score.

A bi-polar attitude survey instrument was devised and administered in the Amyx Study (1972) to collect attitude scores from collegiate accounting students. Amyx indicated that there were three basic elements required in bi-polar summaries, and that the objectives selected must be evaluative in nature, the adjectives in the scales must be bi-polar, and the adjectives must appear to be appropriate and valid for

the related concepts being judged. Amyx (1972) recorded bi-polar selectors from Osgood, Suci, and Tannenbaum's (1957) lists of "high loaded" evaluative scales. These selected adjectives were submitted to a jury of faculty experts and to student groups for their assessment. The tool's effectiveness was confirmed during the pilot study.

Following Amyx's example, a bi-polar semantic differential instrument was also prepared for this study. Fifteen selector adjectives were assigned to each of the concepts being reviewed. The selector adjectives were taken from the Amyx Study (1972), from Osgood's evaluative lists, and from Osgood's factoral loading analyses of the Thesaurus Study which resulted from an analysis of opposite-adjective correlations. Only those selectors with significant correlation were used in the instrument. (Example: good-bad correlated 1.00)

The instrument proved effective when it was used in the pilot study. Validity coefficients of the bi-polar measurement of attitude have been completed by numerous researchers since 1959. The Guttman scale of attitude measurement was compared to the bi-polar measurement. The correlation between the two instruments were highly significant at the .01 level of confidence.

Osgood, Suci, and Tannenbaum (1957) concluded that the instrument measured what it was supposed to measure. They agreed that the technique meets the test of "appearance of reasonableness" in what it intended to measure.

Shaw and Wright (1967) on page 18 indicated that content validity was evaluated by "determining the degree to which the items of the scale sample the content of the attitude domain or the degree to which the

content of the attitude scale corresponded to the content of the attitude system."

Summers (1970) concluded that of the many studies he summarized, the results supported the validity of the semantic differential as a technique for attitude measurement.

Of the several methods available to test for reliability, the test-retest method corresponded most closely to the conceptual idea of reliability. It was a relatively simple procedure to administer stated Shaw and Writing (1967). The attitude scale was administered to the same group of persons at two different times, and the correlation between the two sets of scores was computed. The coefficient, usually the Pearson r, was the reliability estimate. Additionally, the test-retest method for determining reliability has the advantage of holding constant the items used and eliminating unreliability due to differences between items, which would have occurred if equivalent-forms were used.

Reliability of the bi-polar attitude measurement has been established. Summers (1970) reported that the test-retest coefficients for one study of 135 subjects ranged from .87 to .93, with a mean r of .91. Osgood, Suci and Tannenbaum (1957) reported that the results of another study, which related to the test-retest reliability coefficients for the differential, resulted with scores which ranged from .83 to .91. A third study completed by these researchers resulted with the correlation of .85.

Amyx (1972) obtained correlation coefficients which ranged from .75 to .81 using the Pearson r statistic.

A Diagnostic Sheet. This instrument was designed by the researcher. (Appendix B, page 116). It served two functions during the study.

Initial pre-test results were studied and each student's score was recorded on the diagnostic sheet. A carbon copy was returned to the students and served as the feedback method. An additional copy of the results was prepared and attached to each individual's master tally sheet.

This copy was used throughout the study to record the type and nature of all grammatical and punctuation errors, which appeared in each student's letter writing exercises, as well as the teacher-assessed remedial assignment and the researcher-assigned prescribed treatment.

The dates when the assignments were issued were recorded, the correctness of the completed prescribed treatments were recorded, and dates when the prescribed treatments were completed were recorded.

An additional instrument was prepared for use in the study. To assist the jury of experts, suggested techniques for grading letters written by business communication students, were studied. A summary sheet was devised by the researcher and titled the Clarke, Perry, and Murphy Weighted Grading System for Business Correspondence for Use in Grading Selected Business Letters - 1973.

The Weighted Grading Sheet. This instrument classified many of the essential elements of a business letter into three major areas. The three areas selected were content, style, and mechanics. (See Appendix C, page 118). Suggested guides were included in each section and a weighted ratio was also assigned. Of a total possible 100 points, the content area was weighted 5 to 1, the style area was weighted 4 to 1, and the mechanics area was weighted 3 to 1. A total of 42 points was possible for the content area, a total of 33 points was possible for the style area, and the remaining 25 points were possible for the mechanics area.

The Student Information Card. Data and opinions were collected from all of the students during the first day of the course through the use of the GENAD 3113--Information Card. (See Appendix A, page 114).

The student's self-appraisal, attitudes, and preferences were needed to assist with the diagnostic placement and also to provide data for causal-relationship comparisons. Statements of the grades students had received in high school and college were requested. Information concerning the students' English background and an estimate of the time they spent in formal English programs were also solicited. Name, year in school, and college majors and minors were identified.

The questionnaire element of the information card also contained six questions with three selector choices contained within each question. The questions involved: (1) the student's reason for enrolling in the course, (2) the student's most preferred method of communicating with his teachers, (3) the student's most preferred method of communicating with his friends, (4) the student's estimate of his writing skill, (5) the student's most preferred spare time activity, and (6) the student's opinion about the need for learning to write effectively.

The major textbook used by both the control and the experimental groups was Communicating Through Letters and Reports. (Menning and Wilkinson, 1967). Supplemental sources used by the experimental group included: Easy Grammar, Wolf and Stead, (1970); Writing Skills I and II, Learning Technology Incorporated, (1970), and Paragraph Patterns, Learning Technology Incorporated, (1970).

Five copies of the supplemental textbook materials used by the experimental group were placed in the closed sections of the Oklahoma State University library. The "checking out" process automatically

provided a record of the amount of time the resources were in the possession of the individual students. Amounts of use were not known.

Teaching and Testing Procedures

The teaching involved in this experimental study began with the fourth class period with an introduction to letter writing. The experiment was started at that time because the students were permitted to add courses during the first two weeks of the semester and it was essential to start the experiment after students could no longer add the courses involved. The experiment was ended on the sixteenth class period or at the beginning of the eleventh week.

On Tuesday of the third week of the semester, the Skills Writing Test Form B and the Bi-polar Attitude Questionnaire were administered to both groups. Time limits and classroom conditions were carefully controlled. By prior arrangement, students absent on a testing day must have made previous arrangements for makeup examinations. Six students were absent, three students from the control group and three students from the experimental group. All six of the students completed the pre-test the following morning and were restricted to the identical time limits and approximate classroom conditions.

The students were told that this test was given for diagnostic purposes and would be used to help determine which areas of grammar and punctuation needed emphasis. Following the pre-test, student's IBM answer sheets were both machine scored and hand scored. The machine score resulted in the total score which was recorded on each individual's master tally sheet. A carbon copy of the initial diagnostic sheet was returned to the students.

Color coded guides were constructed by the researcher and used as key guides for the diagnostic purposes. Original errors, or single errors were ignored, but a repeat error was interpreted as a conceptual or knowledge error. These areas were analyzed and a master plan for directing remedial prescribed treatments for each student was completed. These master guides were referred to frequently throughout the remainder of the study in order to note reoccurring errors as well as non-reoccurring errors.

The Bi-polar Attitude Questionnaire was also completed during this time. It required no more than ten minutes and no less than five minutes to rank the 30 selectors. No time limits were established. A special overlay key was prepared by the researcher, and with the aid of an electronic printing desk calculator, the attitude scores for the concepts involved were totaled and recorded for all students.

During the eighth class period, the first in-class business letter was completed. This was considered as a writing test, therefore, students planning to be absent during the test period were required to make arrangements to write the business letter under controlled conditions. No students were absent from the first in-class writing test.

This criterion measurement was hand written. The hand written copies were submitted to the advanced typewriting classes at Oklahoma State University and were transferred identically to the Clarke, Perry, Murphy Weighted Grading Sheet.

An identification system had been assigned and each business letter was identified by a coded number. No names appeared on the letters. The hand written drafts were proofread and checked twice to be certain that the advanced typewriting students had transferred the letters

identically as they were written. In event that the typists had made corrections unconsciously, the researcher changed the corrected error to its original hand written condition.

Copies of the typed samples of the student's first in-class letter were forwarded to three juror experts for ranking and grading. The jurors were experienced university professors who had taught business communication or business writing courses. The three experts read and graded the criterion measurement letters. Scores were recorded on to the master tally sheet. Members of the jury were classified as experts if they had previously taught the basic business writing courses, and if they had been involved in research or development projects associated with business communication, or if they had published articles or textbooks concerning business writing techniques and instructional methods.

Following the recommendations of the Heydenburk Study (1970), in-class writing letters covering sales letters, claim letters, and collection letters were completed. The second in-class letter was written during the fourteenth class period, and the third in-class letter was written during the nineteenth class period. These hand written copies were re-typed and submitted to the jury in the identical manner in which the first hand written in-class assignment had been completed.

In-class letters were hand written to prevent consultation or help from other people. Dictionaries were available and time limits were carefully controlled. Thirty minutes were permitted for all in-class writing exercises.

As the semester progressed, both the experimental and the control groups were taught the same communication content during the same class periods. Identical supplemental handouts, outside readings, and instructional films were used. The usual presentation routine consisted of

(1) reading assignment, (2) teacher lecture (3) in-class and small group discussion (4) display of sample writing models, (5) review of letters written out-of-class, and (6) in-class letter writing test.

A comprehensive mid-term examination was administered to both the experimental and the control group during the fifteenth class period. There were a total of thirty class periods during the entire semester. The results of the mid-term were recorded on the master tally sheet for final grading purposes, but the scores were not recorded or utilized in the study.

Small group discussions were completed three times during the span of the controlled study. A case problem, concerning disappointing messages, was conducted during the eleventh class period in both the experimental and the control groups. A group dynamics oriented exercise was completed during the sales message unit. It involved grouping for learning procedures, but was organized identically in both groups. Actions and interactions following the initial organization of the small group activities were not controlled and must be accepted as limitations or intervening influences to the study.

A third small group exercise consisted of a conceptual discussion which followed a teaching film. The processes used to structure and establish the discussion were identical, but the resulting discussions were not identical.

Letter assignments to be written out-of-class were completed and collected on the seventh, tenth, and fourteenth class periods by both the experimental group and the control group. A predetermined grading guide was used by the researcher to analyze and grade the out-of-class writing assignments. Generous comments of encouragement and suggestions

for improvement were recorded on the number coded letters and were returned to the students through a number-folder system.

The number folder system consisted of three manila folders containing the student's coded identification number. The folders rotated and organized the two-way movement of materials. A grading proctor, a person proficient in English fundamentals, graded all letters both the letters written in-class and the letters written out-of-class, for grammatical and punctuation correctness. The researcher graded all letters for content, style, action, etc., but also double checked the grammatical and punctuation correctness.

Both positive and negative comments were made on the letters. Both a letter grade and a numbered grade were recorded for content, organization and mechanics. Letters written by students from the control group were graded as identically as possible to the letters written by students in the experimental group. However, the independent variable, the prescription treatment came into direct involvement with the in-class and the out-of-class letters written by students in the experimental group.

Grammatical and punctuation errors were recorded on the experimental student's diagnostic analysis sheet as well as the student's master tally sheet. When an error in a business letter occurred for the first time, it was noticed, recorded, and assessed. When an identical error appeared a second time, then remedial treatments were prescribed and the students were assigned a selected programmed treatment and they completed the program in the Oklahoma State University library.

During the twentieth class period, the Writing Skills Test Form A and the re-test of the Bi-polar Attitude Measurement were administered to both the control group and the experimental group. The post-test was

unannounced so that it would more accurately measure what the students had learned from the prescribed treatments rather than what they could learn from studying just prior to the test. The class meeting in the morning was asked not to announce the test to the later class.

The IBM answer sheets were machine scored and the total results were recorded on the student's master tally sheet. The Bi-polar Attitude Measurement was also coded and the total score was recorded on the student's master tally sheet.

Development of the Programmed Units Used as Prescribed Learning Treatments

Programmed units used as the individually prescribed (remedially-oriented) treatments in the experimental group were developed by Learning Technology Incorporated, a subsidiary of McGraw-Hill Book Company and others developed by Dr. Morris Philip Wolf and Dr. Bette Ann Stead. Prescribed treatments which were conceptually oriented and dealt with sentence structure, paragraph structure, and writing organization were taken from the programs prepared by Learning Technology Incorporated.

Basic grammatical and punctuation reviews were also taken from Writing Skills I, Writing Skills II, and Paragraph Patterns. Detailed grammatical and punctuation concepts were reviewed and prescribed through the programmed book, Easy Grammar. Programmed units covering uses of the comma and general punctuation were prepared from the selected texts. Specific page numbers and learning segments were given to the students. The students recorded their answers, checked with the master text in the library closed reading room, corrected and reassessed any mistakes, and then submitted the programmed unit for grading by the proctor.

Other programmed units were prepared as prescribed treatments in the areas of paragraph patterns, linking words, topic sentences, paragraph structure, complex, compound and simple sentences, and parallelism.

Copies of each of the programmed units were xeroxed and duplicated so that each student had an original program. Where possible, treatments were staggered and scheduled so that students would have as little opportunity as possible to copy another's assignment. Toward the end of the experiment, the number of programmed units decreased, but when the programs were distributed after the initial diagnosis, the instructor was not able to determine whether or not students had combined efforts in completing the programmed units.

Simple programmed units were completed in less than fifteen minutes. Complex programmed units required as much as forty-five minutes to complete.

Data Compiliation

All data were recorded on the student's master tally sheet. Students in the control group were assigned a two-digit code number for identification and students in the experimental group were assigned a three-digit code number.

IBM data preparation sheets were prepared prior to card keypunching. On the data preparation sheets, the following information was recorded for each student: (1) identification of group, (2) Skills pre-test score, skills post-test score, (3) Bi-polar Attitude Measurement pre-test score, concept one; and post-test scores, concept one, (4) Bi-polar Attitude measurement pre-test score, concept two; and post-test score, concept two. The Criterion Measurement scores

collected from the three expert jurors were recorded as the fifth (5) set of data. These scores consisted of nine totals for all students. The sixth (6) set of data consisted of the replies and opinions collected from the class information card.

The numerical data were then keypunched on data cards. Additional data cards were keypunched so that the computer would provide an analysis of variance test. The computer also directed the repunching of the juror's scores after standardizing and weighing the juror's responses.

A preliminary chain printout and verification of the punched cards indicated that no errors had occurred during the keypunching process.

Under the direction of Dr. William W. Warde of the Oklahoma State University Statistics department, tests for significance, one-way analysis of variance, and two matrix grids were completed. An additional one-way analysis of variance run was completed on the correlates that indicated significance. Programs were written, processed, and the data were printed. The data provided by the computer were evaluated by the researcher to determine the results of the experiment. Selected findings are presented in Chapter IV.

Summary

Following the spring registration at Oklahoma State University, students registering for Written Communications (GENAD 3113) were randomly assigned to either the experimental or the control groups. Both groups were taught using identical detailed lesson plans, course handouts, and writing assignments. Class activities coincided daily throughout the study.

The experimental design included the following statistics: The student's t-test, a one-way or single classification analysis of variance, a matrices correlation, (also tested by a one-way analysis of variance), and a weighted standardization of the criterion measurement scores. Appropriate tables were also used to interpret degrees of freedom and data significance.

Equivalent forms of the McGraw-Hill Basic Skills System Writing Test were used as a pre-test and as a post-test to exam writing knowledge and English knowledge. Content validity was established. The reliability coefficient using the Kuder-Richardson formula, was also accepted.

An additional test, the Bi-polar Semantic Differential Attitude Survey was likewise used as a pre-test and post-test evaluation. Previously confirmed research permitted the bi-polar tool to measure two concepts concerning writing attitudes. Fifteen "high loaded" polar selectors were included for each concept which was surveyed.

Validity was established through face validity and research completed since 1959 established the reliability of the instrument within acceptable ranges of .75 to .93.

The diagnostic sheet, weighted grading sheet, and master tally sheet were instruments designed by the researcher to assist the placement and diagnostic activities, to guide expert's grading of the criterion letters, and to provide a bookkeeping tool which permitted rapid assessment of student's scores, needs, and writing progress. The class information card provided personal data about each of the students and summed their responses to the questionnaire. Programmed materials were organized and duplicated by the researcher. Remedial units teaching the concepts and

rules for sentence structure, paragraph structure, and writing organization were prepared. Other programmed units which taught elements of grammar and punctuation were designed and printed.

All data were tabulated and placed on keypunched cards. Additional data instruction cards were keypunched so that the computer at the Oklahoma State University would provide the appropriate comparisons. The data were then evaluated by the researcher to determine the results of the experiment. The results are reported in Chapter IV.

CHAPTER IV

FINDINGS

Introduction

Chapter IV summarizes the findings of the study (1) by establishing sample assumptions of homogeneity and randomness, (2) by presenting statistical evidence and relating these data to the hypotheses, (3) by analyzing data differences, lack of changes, changes, and cause of improved changes within the data, and (4) by summarizing selected inferences presented by the correlation matricies.

Findings of the study were based on the scores and data attained from 77 Oklahoma State University students who were enrolled in two sections of the course GENAD 3113, Written Communications, during the spring semester of 1973-1974.

The primary purpose of the study was to determine whether or not prescribed treatments, completed out-of-class, caused significant and measureable differences in post-test scores in the following areas: improved knowledge of writing and English principles, as measured by the Writing Skills Test--Form A and Form B; improved attitude regarding the need for training in business writing skills, as measured by the Bi-polar Semantic Differential Attitude Survey; improvement in writing business letters, as written under controlled conditions and as measured by three jury experts; and, a summary of selected influences correlated

from the data, as compared by selected statistical procedures.

Selected elements of the data were analyzed by the student's t-test, by the single-classification or one-way analysis of variance, and by the Pearson r correlation. The level of significance had to be .05 or less to establish a significant difference among the means before a null hypothesis was rejected.

Of the seventy-nine students originally registering for the Written Communication courses, seventy-seven completed the courses. The results of the writing exercises, examinations, and opinion preferences were included in the data.

Analysis of Pre-Test Scores

Statistical Assumptions

To determine that the statistical assumptions have been fulfilled, an analysis of the pre-test scores for the Skills Writing Test was completed.

As illustrated by Table I, the mean scores on the pre-test for the Writing Skills Form B were 47.34 for the control group and 47.90 for the experimental group.

Table I indicated a mean difference score of +.55, therefore an additional comparison was completed which was designed to test whether or not the difference was significant and whether it would reoccur consistently or occur by chance. An analysis of variance was computed and, as illustrated in Table II, was compared to the distribution table for F tests in order to determine the significance of the value.

As Table II indicated, the F test on the Writing Skills Test Form B, pre-test mean scores, was .0798. To reject the assumption that the

TABLE I

SUMMARIZATION AND ANALYSIS OF PRE-TEST SCORES:
CORRECT WRITING SKILLS TEST--FORM B

Treatment Group	Sample Size	Mean	Standard Deviation	Minimum Value	Maximum Value
1	38	47.342105	9.712840	25	64
2	39	47.897436	7.419018	33	60

Difference +.555331 (Experimental group difference)

the means for the experimental and the control group did not result from random samples or from homogeneous populations, the F ratio must be equal to or above 7.01. Therefore no significant difference existed

TABLE II

ANALYSIS OF VARIANCE: COMPARISON OF THE EXPERIMENTAL GROUP
AND THE CONTROL GROUP PRE-TEST SCORES--
CORRECT WRITING SKILLS TEST--FORM B

	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Groups --	5.9356	1	5.9355	.0798
Within Groups --	5582.1424	75	74.4286	
Total	5588.0780	76		

among the means of the writing skills pre-test scores. Table III indicated that the mean scores on the pre-test for the Bi-polar Attitude Measurement, Concept I, were 83.29 for the control group and 80.92 for the experimental group.

TABLE III

SUMMARIZATION AND ANALYSIS OF PRE-TEST SCORES: BI-POLAR ATTITUDE SCORES TOWARD STUDYING BUSINESS WRITING

Treatment Group	Sample Size	Mean	Standard Deviation	Minimum Value	Maximum Value
1	38	83.289474	10.311127	54	101
2	39	80.923077	10.196451	51	96

Difference +2.366397 (Control Group Higher Mean Score)

A difference of +2.37 existed in the mean scores. To determine that the difference was not a significant or an influencing difference in the mean scores, an additional AOV test was completed and illustrated in Table IV. The F value from Table IV is then compared to the distribution table for F tests.

To reject the assumption that the experimental and control group means for the Bi-polar Attitude Survey Concept I did not come for a homogeneous population, the F ratio must be equal to or surpass 7.01. According to Table IV, which showed the analysis of variance data, the

F test on the pre-test scores was 1.03. Therefore, no significant difference existed among the means of the bi-polar attitude survey pre-test scores. The population may be classified as a sample which was selected randomly and was a sample which came from a homogeneous sample population.

TABLE IV

ANALYSIS OF VARIANCE: COMPARISON OF THE EXPERIMENTAL GROUP AND THE CONTROL GROUP PRE-TEST SCORES-- BI-POLAR ATTITUDE SURVEY, CONCEPT I

	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Groups --	107.7786	1	107.7786	1.0252
Within Groups --	7884.5850	75	105.1278	
Total	7992.3636	76		

The analysis of variance was used to simultaneously test the significance of the difference among the treatment means in an effort to disprove the null hypotheses. The AOV test was also used in this study to determine if there was a significant difference in the student's test score means, attitude score means, and criterion score means.

The significance of the resulting F ratio was shown in this study by comparing it to the F test distribution table. The ratio used was (df = N - 1) to determine the degrees of freedom.

Analysis of Post-Test Scores

Research Hypothesis I

Hypothesis number I was statistically tested for significance by the single-classification analysis of variance. This hypothesis dealt with the test of writing knowledge, paragraph construction, and paragraph organization. The assumption that no significant difference or change in writing skills would be measured by the Skills Writing Test Form A--post-test, between the experimental and control groups, with prescribed treatments being administered to the experimental group, was made.

An analysis of Table V indicated that the control group's post-test mean scores were 48.18. The table also indicated that the experimental group's post test mean scores were 50.26. The experimental group's mean score was higher by +2.07.

TABLE V

SUMMARIZATION AND ANALYSIS OF POST-TEST SCORES: CORRECT WRITING SKILLS TEST--FORM A

Treatment Group	Sample Size	Mean	Standard Deviation	Minimum Value	Maximum Value
1	38	48.184211	7.547520	28	62
2	39	50.256410	7.354619	32	60

Difference +2.072199 (Experimental Group Higher Means)

An analysis of variance computation was completed to determine whether or not this difference represented an accidental or a significant change. The degree of change, and its interpretation through the use of an F test, also determined whether the null hypothesis could be accepted or the hypothesis would be rejected.

After consulting the distribution table for F tests, it was noted that a significant F ratio of 3.98 would be necessary to reject Hypothesis I at the .05 level of confidence. The F ratio of 1.15, as indicated in Table VI, was not significant.

Therefore, Hypothesis I cannot be rejected. There was no significant change in the variance of the post-test mean scores for the experiment and the control groups as measured by the Writing Skills post-test Form A.

TABLE VI

ANALYSIS OF VARIANCE: CHANGE IN KNOWLEDGE AS MEASURED BY THE WRITING SKILLS TEST--FORM A

	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Groups --	44.2847	1	44.2847	1.1500
Within Groups --	2888.0270	75	38.5070	
Total	2932.3117	76		

Research Hypothesis II

Hypothesis number II was also statistically tested for significance by the single-classification analysis of variance. This hypothesis assumed that no significant change in student's attitude existed between the experimental and the control groups. Attitude scores were measured by the post-test scores gathered by the Bi-polar Semantic Differential Attitude measurement. The mean post-test attitude scores, Concept I, are illustrated in Table VII.

TABLE VII

SUMMARIZATION AND ANALYSIS OF POST-TEST SCORES: BI-POLAR ATTITUDE SURVEY SCORES, CONCEPT I

Treatment Group	Sample Size	Mean	Standard Deviation	Minimum Value	Maximum Value
1	38	73.236842	26.479400	8	96
2	39	77.538462	22.049998	6	96

Difference +4.301620 (Experimental Group Higher Means)

The mean post-test scores measured by the Bi-polar Attitude Measurement for the control group was 73.24. The mean post-test scores measured by the Bi-polar Attitude Measurement for the experimental group was 77.54. A difference of +4.30 in mean post-test scores existed on the experimental group's mean scores. To determine if this difference

resulted by chance or if it happened as a result of the independent variable, prescribed treatments for members of the experimental group, an additional comparison was completed and was shown in Table VIII.

TABLE VIII

ANALYSIS OF VARIANCE: CHANGE IN ATTITUDE ABOUT THE NEED FOR BUSINESS COMMUNICATION TRAINING AS MEASURED BY THE BI-POLAR ATTITUDE SURVEY--CONCEPT I

	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Groups --	855.7576	1	855.7576	1.2491
Within Groups --	51381.1255	75	685.0817	
Total	52236.8831	76		

The F ratio of 1.2491 from the analysis of variance, concerning the mean Bi-polar attitude post-test scores, was compared to the distribution table for F tests using degrees of freedom (N - 1) or 75 - 1. To reject the null hypothesis that no significant change, in the attitude that training in business writing was needed, the F test must be 3.98 at the .05 level of confidence. Therefore, Hypothesis II cannot be accepted. There was no significant change in attitude about the need for business writing as measured by the Bi-polar Semantic Differential Attitude survey, Concept I, post-test.

Hypothesis I and II. These hypotheses cannot be rejected because significant differences or change did not exist between the experimental and the control groups. However, significant differences and change did exist within each of the groups.

To assess these differences within the groups, student t-tests were completed. Tables IX, X, and XI detailed the results of these

TABLE IX

ANALYSIS OF CHANGE--COMPARISON OF IMPROVEMENT WITHIN THE EXPERIMENTAL GROUP

	Mean	Standard Deviation	Minimum Value	Maximum Value	t-test	s/ns .05
Correct Writing Skills	2.3590	4.9656	- 6	+13	2.9542	s
Attitude Survey I	- 3.3846	23.2499	-79	+39	.9062	ns
Attitude Survey II	4.3590	12.4889	-41	+32	2.1750	s

comparisons. The t-test value of 2.95 indicated that there was a statistically significant improvement of knowledge of English fundamentals and principles of writing as measured in this study in the experimental group. It was significant at the .05 level of confidence. Table X showed that the control group's t-test of .7136 was not significant at the .05 level of confidence. Therefore, the control group

TABLE X

ANALYSIS OF CHANGE--COMPARISON OF IMPROVEMENT WITHIN THE CONTROL GROUP

	Mean	Standard Deviation	Minimum Value	Maximum Value	t-test	s/ns .05
Correct Writing Skills	- .8421	7.2616	-12	+22	.7136	ns
Attitude Survey I	-10.0526	28.8705	-92	+23	2.1429	s

did not gain or change significantly in knowledge of English fundamentals or principles of writing as measured by the Correct Writing Skills Test.

An additional computation was completed which compared the progress of both groups without regard to the values of the independent variable. As indicated on Table XI, both the experimental and the control groups improved their knowledge of English and principles of writing significantly, at the .05 level of confidence with a t-test of 2.2749, as measured by other means other than the Correct Writing Skills test.

The experimental group indicated that their attitude toward prescribed remedial learning activities improved significantly; however, according to the t-test score of 2.1750 on Table IX, their attitude toward the need of training in business communication did not improve significantly as indicated by the t-test .9062 from Table IX. Since concept II tested reactions and attitudes concerning the prescribed remedial

TABLE XI

ANALYSIS OF CHANGE--COMPARISON OF IMPROVEMENT WITHIN THE EXPERIMENTAL AND CONTROL GROUPS IGNORING THE INDEPENDENT VARIABLE (TREATMENT)

	Mean	Standard Deviation	Minimum Value	Maximum Value	t-test	s/ns .05
Correct Writing Skills	1.6104	6.2115	-12	-22	2.2749	s
Attitude Survey I	-6.6753	26.2169	-92	+39	2.2343	s

learning activities, the control group did not respond to that portion of the bi-polar survey. However, Table X indicated that the control group did change their attitude about the need for training in business writing to a significant degree as seen by the t-test score of 2.1429, which was significant at the .05 level of confidence.

To summarize, both groups did improve significantly, within their own group, in knowledge of English, in principles of writing, and in their attitude about writing training. However, the experimental group responded to the bi-polar concept II, which assessed their opinions concerning programmed and prescribed remedial learning activities; and the control group responded to the bi-polar concept I, which assessed their opinions concerning the need for training in business writing.

Research Hypothesis III

Hypothesis number III dealt with the test of improved writing skills as measured by expert jurors. The criterion-referenced test was designed

to compare performance criterion and was guided by the Clark, Perry, Murphy Weighted Grading Chart. Hypothesis III was specifically designed as a criterion test so that it could be used to evaluate interim or en route change of writing skills. Specifically, Hypothesis III assumed that there would be no significant change in writing abilities between those who received prescribed learning treatments and those students who did not receive prescribed learning treatments.

A review of group means (Table XII) revealed that the control group's mean for letters one, two and three was +.0085 higher than the experimental group's mean. Although the difference appeared negligible,

TABLE XII

SUMMARIZATION AND ANALYSIS OF TEST SCORES: JUROR'S CRITERION MEASUREMENTS OF LETTER THREE

Treatment Group	Sample Size	Mean	Standard Deviation	Minimum Value	Maximum Value
1	38	.331842	2.6876	-6.01	+5.14
2	39	.323333	2.3279	-6.87	+4.19

Difference +.008519 (Control group higher mean)

a series of analysis of variance calculations compared these means. It was discovered that each comparison resulted in no significant change or improvement between the means within each group. Table XIII was provided as a sample of the three F tests in this series.

TABLE XIII

ANALYSIS OF VARIANCE: CHANGE IN WRITING ABILITY AS MEASURED BY THE JUROR'S CRITERION SCORES

	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Groups --	8.2617	1	8.2617	1.3095
Within Groups --	473.1990	75	6.3093	
Total	481.4608	76		

To further test the hypothesis, the assumption of (L - 3) - (L - 1) equals change, was introduced. It was assumed that letter three minus the juror's evaluation of letter one would indicate a criterion movement or change.

Two potential intervening variables were also identified. Assumption one was that the three writing exercises, though using different kinds of letters, were criterionally related since they were all written by the same author. Assumption two was that change would be writing improvement change, although in reality there may have been other unidentified intervening variables. Table XIV was provided to illustrate the overall achievement of letter writing improvement. The mean letter writing score of the control group was .59 with a difference of +1.01 achieved by the control group.

The F ratio obtained for Table XV was 4.97 which was an indication of a statistically significant change in overall letter writing skills in both groups. Interpreting this data to hypothesis III revealed that

TABLE XIV

SUMMARIZATION AND ANALYSIS OF TEST SCORES: JUROR'S CRITERION MEASUREMENTS OF LETTER WRITING

Treatment Group	Sample Size	Mean	Standard Deviation	Minimum Value	Maximum Value
1	38	0.608947	2.127171	-3.800	5.530
2	39	-0.594872	2.582246	-6.160	5.990

Difference +1.014075 (Control group higher means)

there was no significant difference between the two groups; therefore, Hypothesis III cannot be rejected. However, in assessing the overall data which compared the groups, regardless of the treatment, it was noted that there was overall significant improvement in business letter

TABLE XV

ANALYSIS OF VARIANCE: CHANGE IN OVERALL WRITING ABILITY AS MEASURED BY THE JUROR'S CRITERION SCORES

	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Groups --	27.8920	1	27.8920	4.9707*
Within Groups --	420.8473	75	5.6113	
Total	448.7394	76		

*Significant at the .05 level of confidence--F test

writing skills as judged by the jury of experts. In this regard, Hypothesis III may have been rejected as a result of practical judgement, but statistically it was not rejected in this study.

An analysis of contributing factors and influences were felt necessary for understanding the data of this study. After consultation with a statistician, it was determined that the comparison could best be accomplished through the use of the Pearson r Correlation. (See Formula Derivations, Appendix F, page 130). A one-way analysis of variance or single analysis of variance was to be applied to values which indicated significant difference between the experimental and the control groups. The correlation was completed. However, the one-way analysis of variance was not utilized because no significant differences were discovered.

Interpreting correlation values in behavioral or human science style studies required an additional adjustment to the study. In exact sciences or animal oriented research, inate response and repetition could be planned and anticipated. However, in behavioral studies directly related to human indecision and human interaction, the usual strict classifications of coefficient values must be lessened for interpretative purposes. The correlation coefficients of .30 and above were judged to be significant to the data of this study. Confidence limits were judged to be significant at the .05 degree.

Hypothesis Number IV

The assumptions of hypothesis number IV were that significant differences exist and that these differences could be tested on selected influences within and between the experimental and the control groups.

There were no substantial differences, measured as change, between the two groups. Therefore, Hypothesis IV cannot be rejected.

Nonetheless, there were a number of significant influences existing within the experimental and the control groups. These influences, existing within each group, have been identified and listed. But, to analyze the influences, ten by ten cell matricies were designed and correlated. Coefficients were obtained for each cell. This provided nearly two hundred cells or correlations which were examined for significance and influence. It was discovered that two intervening classifications had no influences on the other cells, so the classifications, CAS 2, and SAB (L3 - L1), were eliminated from Tables XVI and XVII.

These tables illustrated selected seven by seven matricies with coded subtitles. These subtitles are defined as follows:

CWS denoted Correct Writing Skill Scores
EGPA represented English grade point averages
CAS1 represented Class Attitude scores, Concept I
GPA was self explanatory
L1, L2, and L3 represented criterion measurement scores

Individual cells were structured to place the correlation value at the top of each cell and the degree of significance value at the bottom of each cell.

Selected influences which were identified and studied in the experimental group were as follows:

(1) Overall grade point averages correlated significantly with English grade point averages in the experimental group.

(2) The Correct Writing Skills scores correlated significantly with the English grade point averages.

(3) Grade point averages correlated significantly with criterion measurements one and two.

TABLE XVI

AN ANALYSIS OF CORRELATION COEFFICIENTS RESULTING FROM COMPARISONS OF SKILLS EVALUATIONS, ATTITUDE SCORES, CRITERION MEASUREMENTS AND ENGLISH GRADES

EXPERIMENTAL		CWS	CAS1	GPA	EGPA	L1	L2	L3
CWS	--	1.0000	.0358	.0186	.2114	.0645	.0395	.0511
		.0000	.8228	.9063	.1937	.6986	.8070	.7552
CAS1	--		1.0000	.0456	.2265	.2383	.1417	.1167
			.0000	.7792	.1622	.1405	.6066	.5138
GPA	--			1.0000	.3934	.3010	.0423	.2603
				.0000	.0127	.0578	.7946	.1057
EGPA	--				1.0000	.3657	.3646	.0871
					.0000	.0208	.0213	.6044
L1	--					1.0000	.4081	.3836
						.0000	.0097	.0152
L2	--						1.0000	.2740
							.0000	.0878
L3	--							1.0000
								.0000

TABLE XVII

AN ANALYSIS OF CORRELATION COEFFICIENTS RESULTING FROM COMPARISONS OF SKILLS EVALUATIONS, ATTITUDE SCORES, CRITERION MEASUREMENTS AND ENGLISH GRADES

CONTROL	GROUP	CWS	CAS1	GPA	EGPA	L1	L2	L3
CWS	--	1.0000	.0056	-.4372	-.2512	-.4352	-.2943	.3545
		.0000	.9719	.0061	.1245	.0064	.0095	.0273
CAS1	--		1.0000	.0600	.0958	.1110	.0721	.1235
			.0000	.7211	.5736	.5138	.6706	.5335
GPA	--			1.0000	.5819	.2349	.3207	.4185
				.0000	.0003	.1524	.0470	.0088
EGPA	--				1.0000	.3607	.3359	.5666
					.0000	.0246	.0370	.0004
L1	--					1.0000	.6073	.6943
						.0000	.0002	.0001
L2	--						1.0000	.5187
							.0000	.0012
L3	--							1.0000
								.0000

(4) English grade point averages correlated significantly to criterion measurements one and two.

(5) Criterion measurement letter one correlated significantly at the .05 level with criterion measurement letters two and three.

Selected influences, which were identified and listed as significant at the .05 level in the control group, were as follows:

(1) Grade point averages correlated significantly at the .05 level with English grade point averages.

(2) The Correct Writing Test Scores correlated significantly in a negative manner with the criterion measurements.

(3) English grade point averages correlated significantly at the .05 level with the criterion measurement scores for the control group.

(4) Criterion measurement letter one correlated significantly with letters two and three.

Significantly correlated trends were identified in the data of both groups:

(1) Letter 1, Letter 2, and Letter 3 correlated significantly to each other for both the experimental and control groups. The high degree of correlation indicated significant relationship between each of the three case letters used in the study.

(2) English grade point averages correlated significantly to the three criterion measurements for both the experimental group and the control group.

(3) Comparisons of overall grade point averages and English grade point averages to improvement in business writing were not

consistent. Interestingly, the control group's English grade point and overall grade point averages correlated with the criterion writing scores.

(4) There was a significant correlation between students' self-appraisal of their writing skills and their attitude toward the need for a business communication course and for training in writing.

(5) The bi-polar attitude scores consistently correlated with opinions and attitudes rather than performance scores. Both the experimental and the control groups' bi-polar scores did not significantly correlate to grade point average, English grade point averages or to criterion measurements. Attitude and performance were not related in the study.

Trends and influences which were not significantly correlated were noted as follows:

(1) There was no correlation of students' opinion about their writing abilities and their performance on the Correct Writing Skills Test.

(2) There was no significant correlation between students' self-appraisal of their own writing abilities and the jury of expert's appraisal of the students' abilities to write letters.

(3) There was no consistent correlation between the scores students achieved on the Correct Writing Skills Test and their scores on the Bi-polar Attitude Survey. Students possessing high skills may or may not possess high attitude scores.

(4) There was no correlation between the Correct Writing Skills Test and the students' high school English grade point

averages for both groups involved in this study.

(5) Correlations between the attitude survey and the student grade point averages were not significant for either group.

Summary

The major findings of the study were that the four null hypotheses could not be rejected:

(1) There were no significant differences in knowledge of English and understanding of writing principles between the two groups.

(2) There were no significant differences in attitudes about the need for communication courses and training in writing between the two groups.

(3) There were no significant differences in improvement of letter writing skills between the two groups.

Other findings of the study indicated that there were significant changes occurring within both the experimental and the control groups. Significant change and improvement in knowledge of English and principles of writing occurred in the experimental group, but did not occur in the control group as measured by the Correct Writing Skills Tests.

Attitude about the need for business communication courses and writing training decreased to a significant degree in the control group, but decreased to a lesser degree in the experimental group. Attitude regarding individually prescribed programmed instruction increased to a significant (.05 level) degree in the experimental group. Attitude was measured by the Bi-polar Semantic Differential Survey tests. Overall writing skills increased significantly within both the control and the

experimental group according to the jury of experts and the criterion measurements. However, differences of increase between the two groups were not significant.

Significant influences and non-significant influences resulting from the data were identified and classified.

The summary, conclusions, and recommendations to the data are presented in the following chapter.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter V summarizes five areas: (1) the purpose of the experiment, (2) a description of the sample, (3) the findings of the study, (4) the resulting conclusions, and (5) the recommendations of the study.

Purposes of the Study

The purpose of the experiment was to determine the effects and changes, if any, between two groups of collegiate communication students enrolled in a college course in business communications. An individually prescribed, remedially structured, programmed treatment was administered to members of the experimental group. The treatments were completed outside the regular communication class. Members of the control group did not receive the treatments, but all other assignments and in-class activities were organized identically.

A Description of the Sample

Participants in the experiment were collegiate sophomores, juniors, and seniors who registered for the GENAD 311 Written Communication course at Oklahoma State University during the spring semester of 1972-73. A total of seventy-seven students were randomly assigned to either the experimental treatment or the control groups.

The Findings of the Study

The results of the study concerning the effectiveness of individually prescribed treatments to those students originally diagnosed as needing remedial, or additional, knowledge of English and principles of writing, were not conclusive. Pre-test scores revealed no significant differences in students' knowledge of English, in their understanding of writing principles, or in their attitudes toward the need for communication training. Initial letter writing skills were not measured; however, subsequent comparisons of the student's letter writing abilities indicated that student's criterion measurement scores correlated significantly with subsequent scores awarded by the jury of experts.

Knowledge, attitude, and writing skills were benefits which hypotheses suggested would result from the prescribed treatments. However, statistical comparisons of the data indicated the following:

(1) The null hypothesis that there would be no significant change in knowledge of English or principles of writing between the experimental and the control groups was not rejected.

(2) Failure to reject the null hypothesis that significant change in attitude would result between the experimental and control groups was a finding of this study.

(3) The null hypothesis that there would be no significant differences or improvement in the letter writing skill between the control group and the experimental group was not rejected.

(4) Failure to accept the hypothesis that significant influences could be identified, and that these influential differences between the control group and the experimental group would be significant, was also a result of this study.

Significant differences within the experimental and the control groups were evident from the study's statistical comparisons. The individually prescribed (programmed remedial English) treatments permitted the experimental group to improve significantly in their knowledge of English and their understanding of the principles of writing according to the Skills Writing test. Students within the control group did not significantly improve their knowledge of English or their understanding of the principles of writing according to the Skills Writing test.

Both the experimental and the control groups showed significant changes in attitude within their individual groups. The experimental group rated the individually prescribed approach positively, (at the .05 degree of confidence), on the Bi-polar Attitude Survey Test. The members of the control group judged the need for communication and writing training important (at the .05 significance level) within their own group on the Bi-polar Attitude Survey Test.

The jury of experts indicated that improved letter writing skills became progressively evident from the beginning until the conclusion of the study. The overall change was significant at the .05 level of confidence within both the control and the experimental groups. Consequently, improvement in letter writing skills was significant (at the .05 degree), but neither group's mean criterion measurements were markedly superior to the criterion scores of the other group.

Several explanations were offered for these contradictory results: (1) intervening variables were present which could not be measured or controlled and which affected the results either in the experimental group or in the control group. (2) Although the amount of time the students officially studied the individually prescribed treatments was

within the permitted time limits acceptable to the design of the study, the degree or intensity of concentration or use of the programmed treatments within those time limits could not be assessed under the design of the study. (3) Although the group samples were statistically judged to have been selected from a homogeneous population, actual composition of the control group may have affected the results of the data. The control class was heavily weighted with students who had an unusual amount of background and experience in English fundamentals while the experimental group appeared more "normal or usual" in class composition and their background and experience in English fundamentals peripherally appeared more "normal or usual." (4) The investigator suggested, also on judgmental evidence, that the time of day the courses were taught may have been an intervening variable.

The Conclusions of the Study

The findings of the study provided evidence for the following conclusions:

(1) When measuring principles of writing and English grammar competency, the Correct Writing Skills Test was not consistently predictive between the experimental and the control groups. Apparently, instruments need to be designed for specific functions and specific testing purposes.

(2) Students receiving individually diagnosed and prescribed remedial treatments did not perform significantly better than students who did not receive the treatments on the selected tests in the experiment. Apparently many of the traditional methods of teaching business communications remained effective as methods of teaching collegiate

communication courses.

(3) The importance of studying communication and writing principles was not consistently measured by the Bi-Polar Semantic Differential Survey tests between the experimental group and the control group in this study. However, the attitude measurement correlated highly to opinion and survey styled data measured within either group.

(4) The experimental group did not significantly improve their letter writing abilities over the letter writing improvement of the control group according to the jury of expert communication professors. Apparently, traditional methods of presenting principles and concepts were not affected markedly by the influences of individually prescribed out-of-class activities.

(5) The in-class writing test letters used in the experimental and the control groups were highly related and correlated significantly to the purposes of criterion assessment.

(6) English grade point averages correlated highly with the in-class writing scores awarded by the jury of experts. Professor's judgment remained a most reliable measure of letter writing effectiveness in this study. Student's self-appraisals of their writing capacities and writing needs were not consistent with their scores on the examinations used in the study.

(7) A positive attitude as assessed by the Bi-Polar Survey Measurements was not a predictor of effective writing or performance on knowledge of English examinations. According to the experiment, students may or may not write effectively despite their attitude toward the course or their attitudes about the importance of learning to write.

(8) The Bi-Polar Attitude Survey test indicated that students' interest and attitude toward the course decreased from the initial assessment at the beginning of the semester. The control group's attitude scores decreased significantly more than the experimental group's attitude. Summarizing this data, the experimental group retained other interest and attitudes not retained in the control group.

The Recommendations of the Study

The recommendations are:

(1) A similar experiment should be conducted where the conditions of the individually prescribed treatments could be administered and controlled by a lab proctor in laboratory controlled conditions.

(2) An additional experiment should be conducted where the effectiveness of individually prescribed treatments in English fundamentals and principles of writing may test and evaluate free use of remedial sources as compared to laboratory controlled and teacher reinforced remedial activities.

(3) Because of the contradictory results which existed in the comparisons and evaluations of data analyzing between group results and data analyzing within group results, a great deal more experimentation must be conducted before conclusive statements can be made concerning the effectiveness of out-of-class programmed reinforcement of communication and writing principles.

(4) A self-administered diagnostic manual should be prepared to accompany a communication textbook. Such a programmed manual would permit students to test themselves and to place emphasis and additional study on areas of weaknesses.

(5) Educators should continually search for improved techniques and methods of teaching business communication courses and should use their classes to complete extensive research; but specifically, to conduct small-scale action-oriented research in an effort to determine more effective means of teaching.

Summary

The major purpose of this study was to determine the differences or the achievement individually prescribed (programmed remedial English) treatments caused in an experimental study involving controlled teaching and testing conditions in two collegiate Business Communication courses at Oklahoma State University.

The findings of the study indicated that no significant differences or change occurred between the experimental and the control groups as a result of the individually prescribed activities. Significant differences occurred within the control group and within the experimental group, but degrees of change between the two groups were not significant.

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APPENDIX A

STUDENT INFORMATION SHEET

GENAD 3113 -- INFORMATION CARD

GENAD (Section ___) 3113
_____ Semester, 19_____

Name (Last) (First) (Middle)

Telephone: _____

Sex: Male _____ Female _____

Year in School: _____ Sr. _____ Jr. _____ Soph. _____ Other

Approximate GPA :_____

English GPA Average:_____

Major: _____

Grade in Business English:_____

Minor: _____

Semesters in High School English :_____

GENAD 3113 was:
- ____ required
- ____ an elective
- ____ suggested by an advisor

I write letters:
- ____ effectively
- ____ good enough for my needs
- ____ poorly

I prefer to communicate with my teachers:
- ____ by letter
- ____ by telephone
- ____ by face to face conversations

In my spare time, I:
- ____ read
- ____ work with hobbies--i.e., athletics, organizations, painting, etc.
- ____ watch television

I prefer to communicate with other students:
- ____ by letter
- ____ by telephone
- ____ by face to face conversations

I believe an ability to write will be:
- ____ important regardless of how I use it
- ____ helpful to me generally
- ____ useful on a job

APPENDIX B

DIAGNOSTIC SHEET

DIAGNOSTIC SHEET

_____: Date: _____

Your diagnostic tests and your in- and out-of-class writing assignments indicate that you can benefit from studying the following:

Adjectives and Adverbs ---------- _____

Capitalization ---------- _____

Clauses and Phrases ---------- _____

Linking Words ---------- _____

Paragraph Organization ---------- _____

Sentence Structure ---------- _____

Possession ---------- _____

Pronouns and Nouns ---------- _____

Punctuation ---- Book: _____ _____
Page: _____ _____

Singular and Plural ---------- _____

Verb Usage ---------- _____

Other: --------- Book: _____ _____
Page: _____ _____

Other: --------- Book: _____ _____
Page: _____ _____

Today's Assignment:

An Individually Prescribed Learning Unit is included. Please complete it. It is due at the beginning of the next scheduled class period.

APPENDIX C

WEIGHTED GRADING SHEET

C L A R K E / P E R R Y / M U R P H Y

Weighted Grading System for Business Correspondence
For Use in Grading Selected Business Letters - 1973

Student Number: _____

In-class Letter Writing No._____

SCALE: 100 Points Possible

I. CONTENT
(Weighted Ratio -5-)

Organization)
Psychology)
Appropriateness)

4 2 POINTS POSSIBLE

II. STYLE
(Weighted Ratio -4-)

Buffer or Beginning)
Transition)
Subordination)
Positional Emphasis)
Negative Phrasing)
Attitude, you,
service,)

3 3 POINTS POSSIBLE

III. MECHANICS
(Weighted Ratio -3-)

Spelling)
Punctuation)
Diction)
Grammar)
Syntax)

2 5 POINTS POSSIBLE

Letter's Weighted Grade:

APPENDIX D

BI-POLAR SEMANTIC DIFFERENTIAL ATTITUDE SURVEY

Bi-Polar Differential Survey

The purpose of this questionnaire is to measure your feelings about the importance of studying business communication and business writing techniques. We wish to measure your suggestions and impressions about using prescribed segments as learning reviews and then follow up these reviews with programmed segments which assess your learning or improvement.

On the next two pages are two scales with numbered lines and words by each line. The words at the ends of the scales are opposite in meaning. Please rate the concept listed at the top of each page of each of the scales which are listed. There is no "wrong" answer. Please also mark each concept according to the way you feel about it.

There is no time limit. Remember, these results will not be reported and will in no way affect any grades or scores you receive from this communication course.

Here is how you are to use these scales:

If you feel that the concept at the top of the page is very closely related to one or the other end of the scale, you should place your check-mark in one of the following ways.

fair ● : ___ : ___ : ___ : ___ : ___ : ___ unfair
3 2 1 0 1 2 3

OR

fair ___ : ___ : ___ : ___ : ___ : ___ : ● unfair
3 2 1 0 1 2 3

If you feel that the concept is related to one or the other ends of the scale (but not extremely), you should place your check-mark in one of the following ways:

strong ___ : ● : ___ : ___ : ___ : ___ : ___ weak
3 2 1 0 1 2 3

OR

strong ___ : ___ : ___ : ___ : ___ : ● : ___ weak
3 2 1 0 1 2 3

If the concept seems slightly related to one side as opposed to the other side (but is not really neutral), then you should check in one of the following ways:

active___ : ___ : ___ : ___ : ___ : ___ : ___passive
3 2 1 0 1 2 3

OR

active___ : ___ : ___ : ___ : ___ : ___ : ___passive
3 2 1 0 1 2 3

The direction toward which you check, of course, depends upon which of the two ends of the scale seems most characteristic of the thing you are judging.

If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space:

safe___ : ___ : ___ : ___ : ___ : ___ : ___dangerous
3 2 1 0 1 2 3

IMPORTANT: (1) Place your darkened marks in the middle of the spaces, not on the boundaries:

THIS NOT THIS

safe___ : ___ : ___ : ___ : ___ : ___ : ___dangerous
3 2 1 0 1 2 3

(2) Be sure you check every scale for every concept--do not omit any.

(3) Never put more than one check-mark on a single scale.

Concept 1:

Why Study Business Communications and Effective Writing

commonplace	o/3	o/2	o/1	o/0	o/1	o/2	o/3	unique
difficult	o/3	o/2	o/1	o/0	o/1	o/2	o/3	easy
good	o/3	o/2	o/1	o/0	o/1	o/2	o/3	bad
haphazard	o/3	o/2	o/1	o/0	o/1	o/2	o/3	systematic
hazy	o/3	o/2	o/1	o/0	o/1	o/2	o/3	clear
interesting	o/3	o/2	o/1	o/0	o/1	o/2	o/3	dull
meaningful	o/3	o/2	o/1	o/0	o/1	o/2	o/3	meaningless
necessary	o/3	o/2	o/1	o/0	o/1	o/2	o/3	unnecessary
pleasant	o/3	o/2	o/1	o/0	o/1	o/2	o/3	unpleasant
simple	o/3	o/2	o/1	o/0	o/1	o/2	o/3	complex
uninformative	o/3	o/2	o/1	o/0	o/1	o/2	o/3	informative
unrewarding	o/3	o/2	o/1	o/0	o/1	o/2	o/3	rewarding
unscholarly	o/3	o/2	o/1	o/0	o/1	o/2	o/3	scholarly
vague	o/3	o/2	o/1	o/0	o/1	o/2	o/3	precise
worthless	o/3	o/2	o/1	o/0	o/1	o/2	o/3	valuable

Concept 2:

Why Use Individually Prescribed Reviews in GENAD 3113?

easy	o 3	o 2	o 1	o 0	o 1	o 2	o 3	difficult
short	o 3	o 2	o 1	o 0	o 1	o 2	o 3	long
good	o 3	o 2	o 1	o 0	o 1	o 2	o 3	bad
meaningful	o 3	o 2	o 1	o 0	o 1	o 2	o 3	unmeaningful
profitable	o 3	o 2	o 1	o 0	o 1	o 2	o 3	nonprofitable
routine	o 3	o 2	o 1	o 0	o 1	o 2	o 3	varied
harmful	o 3	o 2	o 1	o 0	o 1	o 2	o 3	helpful
unpleasant	o 3	o 2	o 1	o 0	o 1	o 2	o 3	pleasant
interesting	o 3	o 2	o 1	o 0	o 1	o 2	o 3	dull
available	o 3	o 2	o 1	o 0	o 1	o 2	o 3	not available
complicated	o 3	o 2	o 1	o 0	o 1	o 2	o 3	simple
continue	o 3	o 2	o 1	o 0	o 1	o 2	o 3	discontinue
systematic	o 3	o 2	o 1	o 0	o 1	o 2	o 3	haphazard
unrealistic	o 3	o 2	o 1	o 0	o 1	o 2	o 3	realistic
rewarding	o 3	o 2	o 1	o 0	o 1	o 2	o 3	unrewarding

APPENDIX E

RAW DATA SHEETS

TABLE XVIII

CONTROL GROUP RAW DATA

	CWS Test		Bi-polar Attitude Tests				Juror's Criterion Measurements								
	Pre-	Post	Pre1	Pre2	Post1	Post2	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3
050	41	43	76	69	74	65	78	80	72	86	97	86	82	87	86
037	52	49	84	80	83	87	67	68	60	86	65	62	81	70	86
022	62	62	77	81	84	77	82	84	74	79	80	90	84	89	84
030	58	59	87	79	77	75	88	70	70	87	70	80	89	79	89
047	25	31	84	89	79	93	55	65	61	73	67	70	67	57	59
046	45	47	66	63	66	65	63	62	67	78	78	80	68	70	72
023	49	48	90	58	95	75	79	77	76	80	81	82	76	65	71
044	61	60	89	82	87	80	91	76	73	73	73	73	83	79	94
017	31	36	86	85	92	85	55	43	54	60	60	53	59	62	65
026	46	49	81	62	80	68	80	78	70	69	81	66	79	69	90
049	50	38	93	79	92	60	70	67	71	73	69	68	83	83	79
042	40	28	89	80	83	82	62	61	67	61	60	58	80	67	70
040	45	55	66	72	78	65	64	71	65	64	57	61	73	71	69
015	40	41	67	68	75	59	77	72	80	54	59	58	77	68	80
019	31	45	90	96	93	88	55	68	59	69	64	67	76	60	68
036	31	45	90	96	93	88	55	68	59	69	64	67	76	60	68
021	34	46	90	72	90	60	60	57	50	76	59	59	79	65	70
043	50	43	77	71	83	73	57	82	60	63	60	64	87	62	78
024	56	53	92	86	92	93	79	65	75	86	95	78	94	87	99
014	53	43	84	79	85	79	74	80	85	83	80	75	87	82	76

TABLE XVIII (Continued)

	CWS Test		Bi-polar Attitude Tests				Juror's Criterion Measurement								
	Pre-	Post	Pre1	Pre2	Post1	Post2	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3
032	43	53	93	85	87	71	73	85	81	86	64	67	94	81	77
027	59	56	87	85	89	84	81	75	75	85	94	91	81	78	85
045	54	54	86	82	84	80	90	73	72	79	70	68	93	70	83
013	27	49	84	60	82	74	45	45	54	64	58	97	63	67	60
039	54	48	91	90	90	80	90	78	74	81	65	70	87	78	86
038	49	47	92	78	94	78	77	77	82	90	81	81	87	66	82
034	47	51	83	76	79	72	82	74	84	81	76	89	92	90	72
048	47	52	78	69	84	86	87	68	74	79	64	64	77	69	71
020	43	49	87	72	90	61	53	47	58	54	69	47	85	71	72
033	50	55	58	60	81	75	73	84	95	74	71	77	91	83	95
029	52	54	93	88	96	84	77	73	70	74	86	72	78	80	99
018	44	42	90	80	81	75	55	61	75	81	69	78	87	69	87
012	46	47	86	82	82	80	62	66	64	86	74	74	60	53	58
031	53	50	83	79	82	78	73	67	68	76	82	70	92	71	85
016	62	55	96	37	88	72	88	78	80	75	91	87	83	88	88
025	49	42	83	77	72	65	62	61	76	69	68	67	73	65	62
041	53	48	72	73	74	73	86	73	70	79	70	70	83	72	68
028	64	59	101	65	90	86	84	81	69	78	75	87	93	92	89

CWS = Correct Writing Skills Form A and Form B

Bi-Polar Attitude Tests
Pre-test, Concepts I and II
Post-test, Concepts I and II

Juror's Criterion Measurements (Example)
1-1 = Juror 1, letter 1
1-2 = Juror 1, letter 2
1-3 = Juror 1, letter 3

TABLE XVIV

EXPERIMENTAL GROUP RAW DATA

	CWS Test		Bi-polar Attitude Tests				Juror's Criterion Measurement								
	Pre-	Post	Pre1	Pre2	Post1	Post2	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3
114	53	54	71	66	85	84	71	62	72	82	69	71	72	72	86
117	44	42	75	74	89	79	71	80	81	75	81	75	75	68	70
136	52	57	87	71	100	77	75	88	79	86	61	95	79	69	72
146	60	54	75	82	81	74	71	77	76	87	73	71	90	87	68
133	43	37	76	71	60	73	68	62	71	75	68	62	70	55	57
138	42	53	89	72	85	77	71	66	65	77	74	67	85	68	76
145	35	39	51	53	51	75	75	68	77	66	69	70	74	78	65
140	42	43	73	78	89	72	71	59	58	86	69	76	76	53	60
157	54	60	79	68	86	66	71	77	71	81	71	73	93	94	88
144	54	50	91	57	66	61	84	69	73	78	87	64	73	90	71
127	50	53	89	65	78	68	64	66	70	53	48	53	79	78	72
137	58	54	89	78	93	70	74	88	67	69	81	70	81	87	84
141	33	32	84	77	79	70	67	61	63	81	66	79	93	67	68
151	52	53	87	79	94	38	77	76	58	88	70	68	79	80	75
148	36	43	67	60	73	77	49	67	48	62	59	58	83	74	82
153	55	58	74	77	79	82	91	83	98	69	68	63	78	83	86
126	35	48	82	65	85	73	78	71	80	86	84	58	77	87	80
135	56	56	90	77	78	63	67	86	87	78	71	87	78	81	97
149	44	43	80	74	86	77	74	73	84	60	66	59	85	67	70
121	51	54	87	79	91	86	81	73	71	84	82	79	86	69	76

TABLE XVIV (Continued)

	CWS Test		Bi-polar Attitude Tests				Juror's Criterion Measurement								
	Pre-	Post	Pre1	Pre2	Post1	Post2	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3
147	50	46	57	70	96	95	72	69	65	85	85	68	85	88	76
128	41	48	89	69	93	84	71	65	59	70	66	66	69	70	65
158	57	59	89	69	100	77	86	83	91	85	84	89	87	89	72
129	50	60	86	73	89	79	65	63	62	72	69	78	75	73	76
139	38	47	87	73	82	70	69	59	65	78	63	70	42	61	58
125	48	57	78	61	82	81	86	78	91	84	78	77	84	70	70
150	47	49	85	75	78	87	81	78	88	76	69	70	82	70	77
152	60	59	83	48	88	65	92	72	91	79	65	70	69	67	70
160	49	50	90	78	89	78	85	62	81	64	63	74	82	82	75
132	45	44	96	87	93	87	75	59	77	73	80	77	89	74	77
122	35	36	83	80	78	80	60	69	51	49	61	62	63	65	57
123	46	55	94	85	92	92	68	65	77	71	76	66	88	70	80
124	56	58	58	39	69	71	80	73	71	89	80	75	84	80	76
131	54	50	75	69	71	66	89	70	78	80	65	72	83	88	71
113	52	57	82	76	86	85	76	67	80	69	69	69	78	68	86
155	51	55	71	75	77	67	80	75	75	76	70	71	74	77	77
119	44	54	91	90	86	89	80	74	76	83	69	77	80	59	62
134	53	54	82	62	85	77	57	59	71	64	77	67	79	71	64
159	43	39	84	84	96	81	47	77	64	74	68	69	69	66	63

CWS = Correct Writing Skills Form A and Form B

Bi-Polar Attitude Tests
Pre-test, Concepts I and II
Post-test, Concepts I and II

Juror's Criterion Measurements--(Example)
1-1 = Juror 1, letter 1
1-2 = Juror 1, letter 2
1-3 = Juror 1, letter 3

APPENDIX F

STATISTICAL DATA

Statistical Data

Paired Comparison and t-test:

To test: Ho: $\mu = \mu_o$

$$t = \frac{\bar{X} - \mu_o}{S / \sqrt{N}} \sim t_{n-1}$$

Where:

$$\bar{X} = \sum_{i=1}^{n} X_i / n$$

$$S^2 = \sum_{i=1}^{n} (X_i - \bar{X})^2 / (n - 1)$$

μ_o is a known hypothesized value (in this case o)

/u all your cases,

$$X_i = \text{Post} (k)_i - \text{Pre} (k)_i$$

Statistical Data

Standardization for Criterion Measurement Scores:

i =	L1			L2			L3		
j =	J1	J2	J3	J1	J2	J3	J1	J2	J3

i = letter = 1, 2, 3

j = Judge = 1, 2, 3

Y_{ijk} = score assigned to k^{th} student on the i^{th} letter by the j^{th} judge

Standardization

Computed $$\bar{Y}_{ij.} = \frac{\sum_{k=1}^{77} Y_{ijk}}{77}$$

and $$S^2_{ij} = \frac{\sum_{k=1}^{77} (Y_{ijk} - \bar{Y}_{ij.})^2}{76}$$

Standard score for k^{th} student was then

$$Z_{ijk} = \frac{Y_{ijk} - \bar{Y}_{ij.}}{s_{ij}}$$

Statistical Data

Analysis of Variance:

Y_{ij} = j^{th} student within i^{th} treatment

(i = 1, control; i = 2, Experimental)

$j = 1, 2, \ldots n_j$

$n_1 = 38, \quad n_2 = 39$

ANOVA

Source	df	S S
Treatments	1	$\sum_{i=1}^{2} n_i (\bar{Y}_{i.} - \bar{Y}_{..})^2$
Residual	$\sum_{i=1}^{2} (n_i - 1) = 75$	$\sum_{i=1}^{2} \sum_{j=1}^{n_i} (Y_{ij} - \bar{Y}_{i.})^2$

Where $\bar{Y}_{i.} = \dfrac{\sum_{j=1}^{n_i} Y_{ij}}{n_i}$

And $\bar{Y}_{..} = \dfrac{\sum_{i=1}^{2} \sum_{j=1}^{n_i} Y_{ij}}{\sum_{i=1}^{2} n_i}$

Statistical Data

Pearson r Correlation Coefficient:

Y_{ik} = score of $_k$th individual, k = 1, 2, . . .,> 3

on the $_i$th variable

i = 1, CWS, i = 2 CAS1, ik

$$r = \frac{\sum_{k=1}^{77} (Y_{ik} - \bar{Y}_i) (Y_{jk} - \bar{Y}_j)}{\sqrt{\sum_{k=1}^{77} (Y_{ik} - \bar{Y}_i)^2 \sum_{k=1}^{77} (Y_{jk} - \bar{Y}_{ji})^2}}$$

where $i \neq j$,

$$\bar{Y}_{i.} = \frac{\sum_{k=1}^{77} Y_{ik}}{77} \qquad i = 1, 2, \ldots .$$

APPENDIX G

BUSINESS COMMUNICATION (GENAD)

3113 COURSE OBJECTIVES

GENAD 3113

Written Communications

STUDENT OBJECTIVES--General:

1. To become familiar with logical and psychological applications of language within business contexts.

2. To write effective letters by studying the principles and practicing the skills and arts of letter writing.

STUDENT OBJECTIVES--Specific:

1. To investigate past and present trends in written business messages.

2. To acquire a constantly enriched, varied, and precisely selected vocabulary on the basis of listening, reading informational and literary materials, and referring to a dictionary or thesaurus.

3. To use an economical and orderly system of taking memoranda gained through listening and reading.

4. To develop an appreciation of the richness and flexibility of the English language and some understanding of its grammatical characteristics.

5. To use sentences that are pleasingly varied, forceful, complete, and structurally correct.

6. To identify and explain the function of each word, phrase, and clause in any English sentence in terms of the grammatical structure of the sentence.

7. To write business letters more clearly, concisely, persuasively, and naturally.

8. To edit (revise if necessary) the diction and structure of any English sentence for appropriate point of view, unity, clearness and appropriateness of thought, conciseness, and force.

9. To edit (revise if necessary) any paragraph (combination of sentences) in any communication for appropriate basic organization (inductive or deductive); effective topic sentence, expressed or implied; paragraph unity; conciseness; and coherence.

10. To gain further insight into the ways of the business world: practices used in getting people to buy, handling orders, gaining and refusing credit, making collections, adjusting claims, and selecting employees.

11. To practice tact, patience, consideration of the other person, a necessarily optimistic attitude, and to say things pleasantly and positively instead of negatively.

12. To explain in writing the difference between logical (inductive) and psychological (deductive) arrangement of facts and ideas; also, the appropriateness of each arrangement in terms of the receiver's needs and desires.

13. To demonstrate in written paragraphs and in complete communications an understanding of logical (inductive) and psychological (deductive) arrangement of facts and ideas.

14. To select the proper arrangement of facts and ideas in written communication in terms of the receiver's needs and desires.

15. To justify the inclusion and placement of any expression in any communication in terms of the receiver's needs and desires.

16. To apply principles of practical psychology for better professional and social relationships with other people.

Other, more specific objectives will be assigned throughout the course in regard to selected learning methods and supplement prescribed units.

VITA

Larry Donald Hartman

Candidate for the Degree of

Doctor of Education

Thesis: AN EXPERIMENTAL STUDY OF COLLEGIATE BUSINESS STUDENTS' ATTITUDES AND WRITING SKILLS RESULTING FROM INDIVIDUALLY PRESCRIBED REMEDIAL TREATMENTS

Major Field: Business Education

Biographical:

Personal Data: Born June 12, 1938, at Ioka, Utah, the son of E. Max and Edna Lemon Hartman.

Education: Attended elementary school at Duchesne, Utah; secondary school at Altamont, Utah; and was graduated from the Altamont High School in May, 1956. Received the Bachelor of Science degree and the Master of Science degree from Brigham Young University, with a major in Business Education, in August, 1962, and August, 1964, respectively. Completed requirements for the Doctor of Education degree in July, 1973.

Professional Experience: Employed as accountant, C. H. Cox Company, 1959, as a high school instructor, 1962, as an instructor of Business Education, Brigham Young University, 1964-1968, as an instructor II of Business Education, Church College of Hawaii, 1969, as an adviser and Business Education Technical Consultant, Southern Illinois University (Kingdom of) Nepal Contract, US Agency for International Development, 1969-1971, and as a part-time instructor at Oklahoma State University, 1971-1973.

Professional Organizations: Members of Delta Pi Epsilon, National Business Education Association, Oklahoma Business Education Association, Betta Gamma Sigma, Phi Delta Kappa, American Business Communication Association, Mountain-Plains Business Education Association, and Rotary International.