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A COMPARATIVE ANALYSIS OF THE ENGLISH
COMMUNICATION COMPETENCIES OF BUSINESS
GRADUATES IN PUERTO RICO.

LEHIGH UNIVERSITY, ED.D., 1978

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A COMPARATIVE ANALYSIS OF THE ENGLISH COMMUNICATION
COMPETENCIES OF BUSINESS GRADUATES IN PUERTO RICO

by
Angelina Adames-Hill

A Dissertation
Presented to the Graduate Committee
of Lehigh University
in Candidacy for the Degree of
Doctor of Education

in the
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for the degree of Doctor of Education.

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ABSTRACT

A COMPARATIVE ANALYSIS OF THE ENGLISH COMMUNICATION COMPETENCIES OF BUSINESS GRADUATES IN PUERTO RICO

Angelina Adames-Hill

Problem: The purpose of this study is to determine the degree of agreement among groups of educators, executives, and business graduates concerning their perceptions of the communication competencies needed for effective performance in business. The study identifies communication competencies for which there is consensus as a basis for making recommendations for a communication curriculum.

Methodology: Data were gathered by means of a Q-sort deck of cards and profile sheets. A list of competency statements was submitted to a panel of experts in education and business for refinement. Their recommendations led to a final list of 50 statements which constituted the 50 Q-sort items used in this study.

Q-sorts and profile sheets were mailed to random samples of educators, executives, and business graduates, 100 in each group. Sixty-two educators, 55 executives, and 70 graduates provided the research data.

To determine the degree of agreement among educators, executives, and graduates, the Kendall W and Kendall tau

were computed. The null hypothesis of a random assignment of ranks was to be rejected at the .05 level of significance. To determine the extent of agreement between the groups' Most Significant and Least Significant statements, the t-test was applied. The null hypothesis of no significant difference in the means between two groups was to be rejected at the .05 level of significance.

On the basis of their content, the 50 competency statements were classified into six categories: Listening and Speaking, Communication Principles, Problem-Solving, Writing Styles, Written Communication, and Content Areas. The differences and similarities between the rankings of the three groups were analyzed descriptively.

Results: The obtained Kendall W value of .9662--significant at the .001 level--revealed a strong degree of agreement among educators, executives, and graduates. Similarly, Kendall tau coefficients of .8203, .18338 and .17888--significant at the .001 level--indicated a high degree of association between the groups.

According to the t-test, the three groups exhibited differences significant at the .05 level in the comparison of the Most and Least Significant statements. Educators, executives, and business graduates disagreed on the individual comparisons of 9 Most Significant

statements and 12 Least Significant statements. Graduates exhibited more differences than any other group. Most of the disagreement occurred in competencies related to Written Business Communications and the Content Area competencies.

On the basis of the findings, it was recommended that the communication curriculum place primary stress on the development of the ability to communicate effectively in oral business situations, and secondly, in the ability to communicate clearly, concisely and simply in written situations.

CHAPTER I

THE PROBLEM, SIGNIFICANCE, AND DEFINITION OF TERMS

Statement of the Problem

The purposes of this investigation were: (1) to compare the degree of agreement between the perceptions of educators, executives, and business graduates concerning the communication competencies needed to perform communication tasks effectively in business careers in Puerto Rico and (2) to identify competencies which would be representative of the communication activities performed at the entry level of business careers.

Using the Q-technique, data were collected from educators, executives, and business graduates. On the basis of the statistical findings, recommendations were made to tailor the business communication curriculum to the expectations of business and industry in Puerto Rico.

The specific objectives of this study were:

1. To determine the degree of agreement on the comparisons of the sets of ranks of the fifty Q-sort communication competency statements for the groups of
 - a. educators, executives, and business graduates
 - b. educators and executives
 - c. executives and business graduates

- d. business graduates and educators
2. To determine the degree of agreement between the pairwise comparisons of the means and rankings of the Most Significant communication competencies for the groups of
 - a. educators and executives
 - b. executives and business graduates
 - c. business graduates and educators
3. To determine the degree of agreement between the pairwise comparisons of the means and rankings of the Least Significant communication competencies for the groups of
 - a. educators and executives
 - b. executives and business graduates
 - c. business graduates and educators
4. To classify the fifty communication competencies into one of the six categories and to review the Most Significant and the Least Significant competency statements according to their placement in the following categories:
 - a. Listening and Speaking
 - b. Communication Principles
 - c. Problem Solving
 - d. Writing Styles and Techniques
 - e. Written Business Communications

f. Content Areas

Significance of the Study

Training in the four language arts in business English contexts--speaking, listening, reading and writing--has been an integral part of the curriculum at the University of Puerto Rico since 1927. For half a century the School of Business Administration of the University of Puerto Rico has been training executives, administrators, and businessmen in general to make the proper use of human and material resources. The pioneer in the teaching of business English communication courses in Puerto Rico, Theodore J. Parthenay (1955), defined the main objectives of the courses in business communications as follows:

...to help the student, prior to his graduation from the College to perfect his command of both spoken and written English for business purposes and to form his own philosophy of business by making him acquainted with the opinions, attitudes, experiences, and methods of selected writers in the various phases of business and of business communication, and of the basic issues facing today's business executive (p. 5).

The well-known business communication leaders and consultants, Wolf and Aurner (1974), stressed the importance of the ability to communicate as essential to the ultimate success in the business world by stating:

Success in the business world is partly dependent on the ability to issue, transmit, and fulfill messages upon attaining proficiency through effective communications that produce the desired actions. Without effective writing, speaking, reading and listening, even the best decision may result in the worst action (p. 8).

A series of historic, political, and economic factors have influenced the teaching of English in Puerto Rico. English has been taught since 1898, sometimes as the main language of instruction and, at others, as a second language. Educational ambivalence permeated the teaching of English up to 1947 when Spanish was legally established as the official medium of instruction and English was retained as a second language. There is little risk in saying that the need and importance of learning communication skills in English is an acknowledged fact in Puerto Rico. The official position of Puerto Rico's Department of Education (1977) reads:

Competency in English is a highly important socioeconomic need in Puerto Rico since English is one of the requirements to perform effectively in different positions. For those who aspire to a profitable future, competency in English is a vital need (p. 18).

A quick perusal of the classified sections of the daily newspapers supports the premise that to get a

well-paying job with opportunities for advancement, the prime requisite is the ability to communicate effectively in Spanish and English. Parthenay (1957) felt that proficiency in business English communication skills was the key that would unlock the door to growth and promotability in a business career. He expressed the economic advantage of business graduates who could speak and write English in these terms:

English is the most practical subject studied. Skill in the use of English is almost the only skill that a student can take from an ordinary educational course that has a definite bread-and-butter value. No other skill makes a more important contribution to the solution of the problems of earning a living (p. 7).

Even though instruction in business English communication is supported and recognized as a major managerial function, no specific academic program in business English communication based on the recommendations of the business sector has been built. Furthermore, there is a lack of formal communication between academic and business groups on the relevance of the business curriculum. Despite the fact that communication training in English is valuable, a systematic assessment of the specific communication skills and competencies necessary for performing communication duties in business

careers in Puerto Rico has not been made.

Research is needed to assess the communication competencies and skills needed to perform communication responsibilities in business careers and to provide educators with the feedback to determine priorities in the business English communication curriculum. This will insure that communication courses prepare the prospective executive for the types of communication tasks he will be expected to perform in his job. Educators need to know the types of communication activities most prevalent in business careers so that they may adjust teaching emphases appropriately.

This study has been an effort to analyze the perceptions of educators, executives, and business graduates relative to the competencies and skills necessary for the effective performance of communication tasks in business careers. Since this study should provide data which may be used in the re-evaluation of business communication programs, its significance lies in the curriculum implications.

Definition of Terms

To provide a basis for consistent interpretation within the study, the following terms are defined:

Business Communication is a process which involves exchanges and sharing of meanings, ideas, feelings, and information among communicators and receivers in business-related activities.

Business Communication Preparation refers to an area of study dealing with many phases of communication in business, such as the development of listening, speaking, reading, and writing skills. As used in this study, business communication preparation is also concerned with the process of communication, semantics, logic, psychology, accuracy of expression in oral and written forms, and an orientation toward the behavioral sciences.

Communication Competencies are the skills which are required to perform communication tasks among the personnel within the organization and between the organization and the public. These competencies deal with the planning, composing, transmitting, and evaluating of business messages in oral and written forms.

Educators are those instructors or professors in institutions of higher learning in Puerto Rico who teach courses in business communications, accounting, management, finance, quantitative methods, and secretarial sciences.

Executives are those top management people at the policy-making level of companies. For the purpose of this study, these executives spend a minimum of 50 per cent of their work day in listening and speaking, reading, writing, reviewing and editing, or in supervising the communication activities of business subordinates.

Business Graduates are those graduates of the University of Puerto Rico who earned bachelor's of business administration degrees in 1970, 1971, and 1972. For the purpose of the study, these graduates had a minimum of three years of working experience in a business career.

CHAPTER II
REVIEW OF THE LITERATURE

The review of related literature was divided into two major areas: the contents and objectives of business communication courses, and the perceptions and attitudes of businessmen regarding the role of business communication in the college curriculum.

A computerized search, Datrix II¹, and a thorough search of the Journal of Business Communication from 1963 to 1978 revealed a paucity of research and literature concerning business English communications in Puerto Rico. The existing literature reflected the reasoning of professionals in mainland United States and stemmed from their personal experiences as educators, consultants, and practicing businessmen.

In spite of research limitations, the writer felt that there was much to be gained from a review of the research conducted in the United States, although caution needed to be exercised in order to avoid confusion. Goals and objectives may be similar in the two geographical areas,

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but the fact remains that the communication program offered in mainland colleges has been designed for English-speaking students. The communication program in Puerto Rico, on the other hand, has been structured for students in a predominantly Spanish-speaking culture which uses English as a second language.

The reviewed literature provided valuable insights into the improvement of instruction, the enrichment of course content, and the implementation of goals and objectives.

Research on the Contents and Objectives of Business Communication Courses

Gerfen (1953) conducted a broad survey study on the organization and status of courses in report writing. He observed that the most frequently cited objectives of such courses were to develop skill in organizing, outlining, and presenting data, to improve the student's logic in organization, and to teach him research methods. According to his respondents, emphasis should be given to the long, formal report elements and the problems of language adaptation. The fundamentals of mechanics in English were given less emphasis. Gerfen's findings revealed a trend toward increased emphasis on methods and use of graphic presentation.

Concerned with the improvement of the teaching of English in the College of Business Administration of the University of Puerto Rico, Mergal (1959) set out to identify the specific Spanish grammatical structures used by Spanish speakers in their English expression. Having lived and taught in Puerto Rico for nearly twenty-five years, Mergal assumed that the major source of difficulty in the teaching of English to business students was attributed to linguistic problems of Spanish-English interference. Thus, her study concentrated on pinpointing the linguistic contrasts which caused interference for the Spanish-speaking student such as article usage, prepositional usage, verb usage, and word order.

Mergal's findings confirmed her assumption: interference was a powerful factor which affected the teaching of English as a second language. Linguistic interference was so common that even Spanish-speaking teachers of English trained in the United States used Spanish structures in their English expression. It seemed as if the competing structure in Spanish became a sort of built-in barrier for the Spanish speaker trying to learn English.

The major implications of Mergal's study for the teaching of English in the College of Business Administration were:

1. Students should be tested in reading comprehension, oral, and written expression upon entrance to the college, and individual remedial programs should be undertaken. The achievement should be checked at the end of the course.
2. The emphasis on listening and on ear-training (dictation, laboratory, movies, radio, television) are to be used to greater advantage.
3. Emphasis should be placed on a structural approach rather than on the formal grammatical approach (pp. 139-140).

The publications of Gordon and Howell (1959) and of Pierson (1959) served as catalytic elements for the evaluation of education in business at the college level. Business communication received much attention on account of these reports. Gordon and Howell favored a broad liberal arts education with very little specialization at the undergraduate level. The importance of communication skills was recognized. The point of difference came with the nature of skills and the best method of acquiring them. They pointed out that the prerequisites for business management are fourfold: skill in problem solving; skill in administration (planning, acquiring, organizing, and evaluating); skill in human relations, and skill in communication (p. 9).

Interpreting business communication courses as composition courses which were substituting for required

basic English courses, Gordon and Howell stated:

Schools should not include adapted courses such as business English, letter writing, or business report writing. In our view, none of these is a satisfactory substitute for a standard sequence in composition and literature given by the English department. We are convinced that courses in business English and letter writing have no place in the university curriculum. Businessmen speak and write the same language as the rest of us (p. 155).

Somewhat in opposition to Gordon and Howell, Pierson reported that businessmen emphasized the importance of oral and written skills. In addition to developing fundamental English skills, Pierson emphasized the need to integrate English skills with the student's major interest area. He indicated that communication courses should integrate the skills of problem-solving, administration, human relations, and skill in communication. Pierson commented favorably on the program run by the New York University Department of Business Writing and Speaking because of "its determination to put training on a continuing and demanding basis" (p. 179-80).

According to Brown (1959), the communications course should train and develop students for the future. He believed the communication course needed to focus on the result--to help students solve communication problems. Essentially, the course should help the student to think

creatively, analytically, and critically. To this effect, Brown developed a model which included the following areas:

1. analyzing problems and planning
2. gathering facts, using sources of business information
3. organizing and outlining
4. analyzing material
5. building good will and proper tone
6. developing psychological aspects of styles
7. using elements of salesmanship
8. creating interest
9. motivating action
10. writing and revising (p. 79).

Prompted by the criticism of the Gordon and Howell report, Murphy (1961) surveyed the extent of business-writing instruction and the department responsible for the instruction in 950 colleges and universities. From 713 replies, 525 institutions indicated that they offered instruction in business writing. Sixty-five per cent reported that this instruction was offered as a rule in the Business Administration Department. Murphy concluded from his findings:

Business writing instruction has a firm place in the modern collegiate curriculum. Over half of our

colleges and universities...think this study worthy of inclusion in their offerings.

The English department plays a more prominent part in this instruction than many of us have supposed (p. 8).

Knapper (1961) analyzed 178 business letters written by managers of insurance companies in order to devise a procedure for identifying writing deficiencies within individual companies. His criteria related to purpose, tone, word choice, sentence and paragraph structure, and organization. The letters were rated on a scale of 1 to 5 by three independent raters using a letter evaluation guide.

The results of the evaluation showed that the greatest need was for improvement in the selection of words and tone. Knapper found that word choice was closely related to tone, sentence and paragraph structure, purpose, and organization. Hence, performance in word choice proved to be a determinant of the writer's performance in the other areas.

The participating managers in this study spent an average of three hours of their working day in writing activities. In general, the raters thought the letters to be well written. The writers, in turn, attributed their writing competence to the ability to organize data, write clear statements, and present ideas in terms

of the reader's interest.

Significant trends in the business writing field were reported by Weeks (1963). He described innovations in the teaching of business writing which have provided the guidelines followed by authorities in the field for the last fifteen years. The list of new developments included the use of interdisciplinary approaches, cooperative courses, graduate courses, honors courses, the use of case studies as supplementary instructional material, programs in technical writing, experiments in programmed learning, enrichment through the assignment of oral reports of business novels, and the preparation of short and long reports (pp. 11-16).

Paralleling the Gerfen study, Bullard (1971) examined the administrative factors relating to business communication courses, characteristics of business communication teachers, instructional materials, evaluation of students, and course objectives and content. The Bullard study was broad in scope, for it was concerned with communication courses in general.

Bullard reported that the primary objective of communication courses was to give students an understanding of the principles of effective communication. According to the gathered data, most emphasis was given to letter writing. Next in importance was report writing,

and minimum importance was assigned to oral communications. In letter writing, the most instructional coverage was given to organizing the letter and to the contents of application letters, credit letters, and data sheets. In report writing, the most instructional coverage was given to analysis of data, analytical reports, informational reports, memorandums, report formats, resolutions, and writing style. As to future trends, Bullard identified the increased use of audio-visual aids and a greater emphasis on communication principles and theory.

Keyser (1972) conducted a normative study including 39 business communication educators in California. The purpose was to obtain current data to determine the specific content for the business communication course. These were the findings:

1. Synopsis writing was included by 79.5 per cent of the professors.
2. Communication theory was an integral part of the communications course according to 89.9 per cent of the professors.
3. Readability formulas (Gunning and Flesch) were taught by 76.9 per cent of the professors. Twenty-three per cent commented that reading formulas were of little value to students.
4. Library skills, techniques of documentation, and techniques of paraphrasing were included by 95 per cent of the professors.

5. The long analytical report was rated as essential by 82 per cent of the educators.
6. Letter writing was included by all the professors. The highest ranks of importance were given to letters of application, inquiry, and claims.
7. Instruction in grammar, use of graphic aids and questionnaire construction ranged from one to five hours (pp. 34-37).

Keyser concluded by stressing the need for relevance in the communication curriculum so that business students can meet the demands of computer-age technology.

In a recent article on the philosophy and contents of communication courses, Swenson (1973) stated that the communications course should be structured to meet the needs of the business community. The contents should include many types of oral presentations as well as the writing of business letters, memorandums, and reports. Swenson recommended that emphasis be given to interpersonal communication expertise through the use of simulation, role playing, and group presentations.

Agreeing with Swenson on the importance of oral skills, Hall (1973) described the goal of the communications course as follows:

To help the student develop an awareness of how others perceive him, and how his actions and reactions can affect others (p. 199).

To achieve this end, Hall recommended the use of videotape machines to record confrontation situations and panel and group discussions. These experiences would help the student evaluate his communication performance and to accept criticism from others.

Related Research on the Perceptions of Executives

About the Business Communication Program

A corrective viewpoint on the contents of communication courses may be found among practicing businessmen. West (1957) conducted a nationwide study to analyze the correspondence improvement programs of 100 corporations. Participants indicated that the school curriculum had failed to prepare them to express ideas effectively in writing. They suggested that more emphasis be placed on the human-relation aspects of letter writing and that less emphasis be given to grammar and syntax. A significant value of the West survey lay in the promotion of active cooperation between business and education to implement curriculum revision.

Watson (1966) reported that written communication is the one area of educational deficiency among businessmen. He accused the colleges and universities of graduating students who lack communication skills. To overcome the problem, Watson recommended a critical examination

of the curriculum and an analysis of the specific needs of students.

Aware of the need for close cooperation between educators and practicing businessmen, Voyles (1967) examined the needs of businessmen and presented them to the business communication teachers as guidelines for preparing students to meet these needs. Her findings revealed that businessmen wanted

1. employees with a solid command of oral and written business English
2. employees who can write clear, concise, and complete letters
3. employees who can organize material, write tactfully, and apply psychological principles
4. employees who can write reports
5. employees who can express their ideas in writing
6. employees who can spell and proofread (p. 179).

Using the questionnaire and interview method, Argueta (1966) gathered data concerning the communication needs of business graduates in Puerto Rico. Her investigation aimed at bringing relevance to the business curriculum to meet the needs of the business community. Argueta's investigation included data obtained from a representative sample of business concerns representing industry, business, and government in the San Juan metropolitan

area. Participating businessmen were drawn from hotels, banks, public finance offices, legal firms, and the dairy industry. Executives from the Puerto Rico Development Corporation and the Corona Brewery were also included. Her findings were based on 32 returned questionnaires from a sample population of 55.

Argueta's investigation revealed that a high degree of proficiency in English speech, closely followed by the ability to write in English are basic requirements for business graduates. They should be able to answer the telephone and to engage in conversations related to business situations. Graduates should be able to write letters of inquiry and memorandums, since most of the correspondence is written in English.

Concerned with the identification of knowledge, competencies, and qualifications essential for writing reports, Minter (1967) analyzed 100 reports written by executives in Nebraska. The evaluative guide included the following areas: descriptive ability, organization ability, critical thinking ability, and principles of scientific thought.

Minter supplemented her analysis with interviews. Executives reported that the writing problems most frequently encountered were writing about a technical subject to a nontechnical reader, writing concisely but

completely, and choosing the appropriate words. When asked to criticize the reports they received, the executives pointed out deficiencies similar to the problem areas. The major criticisms dealt with lack of relevance of information, proper organization, and word power.

On the basis of her analysis and interviews, Minter identified the following competencies as essential for the effective report writer:

1. The ability to write at a high level as revealed in his command of English fundamentals, breadth of vocabulary, and familiarity with readability levels.
2. A high degree of skill in his use of the scientific approach to problem solving, with special emphasis on the ability to define his problem specifically.
3. The ability to find and use information sources of whatever types are needed to provide the necessary facts.
4. A high level of ability in the application of logical thought processes to his collection of information and to the deductions he makes from this information.
5. A high degree of competency in the organization of the content of the report (p. 112).

Similar in purpose to the Minter study, but broader in scope, a study by Van Fleet (1969) examined the characteristics of intra-organizational reports, the

activities report writers perform, the difficulties they experience, and the competencies of report writers. The analysis of 167 reports written by the company personnel revealed that two-thirds were examination and progress reports, and that one-third were recommendation reports, proposals, and justification reports. Of the reports analyzed, 80 per cent were classified as informal or short reports, and 20 per cent were classified as formal or long reports.

The report writers in Van Fleet's study indicated that they had most difficulty in organizing, planning, getting started, and deciding what to include or exclude. Report writers indicated preference for brief, concise writing; for appropriate words, simple words, and simple sentences; and for complete, well-written summaries. Van Fleet stressed the need for instruction in the following skills:

1. developing and improving writing techniques with emphasis on conciseness, correctness, preciseness, and clarity of expression
2. analyzing and presenting data
3. planning and presenting short reports, specifically progress and examinational reports
4. writing particular report sections such as introductions and summaries

5. providing practice in adapting the report to the reader's needs, interest, and background.

Cox (1968) directed a study which surveyed the opinions of 112 businessmen in different levels of management on the variety and nature of communication problems. Cox collected the data by having students in a communications class interview businessmen on the basis of personal friendship or business contacts. The findings revealed that

1. 75 per cent of the managers ranked communication first or second as a source of trouble
2. oral communications were troublesome for 68 per cent of the participants
3. most companies have designed forms they use to present their reports
4. application letters and resumes are the means used to gather information on applicants who aspire to middle management positions
5. written communications are the responsibility of upper level managers (pp. 10-11).

On the basis of the results, Cox concluded, as did Swenson and Hall, that business communications should include oral as well as written communication. Cox asserted that all aspects of communication--reading, writing, speaking, and listening--are important and

deserve the attention and support of curriculum planners, educators, and businessmen. Cox's statement to these groups is still valid:

Communication improvement is the same kind of program as cost reduction; it must go on constantly. Perfection should not be expected of anyone because the senders, receivers, messages, channels and conditions are constantly changing just as materials and processes do, and each change brings with it a new problem. No one becomes a perfect communicator, but the very process of trying to improve develops an awareness which helps prevent breakdowns (p. 12).

Skjerseth (1969) conducted a general investigation to examine the problem areas of business writing in industry, the time which managers spend in communication, and the extent of their formal communication training. The 116 participating middle managers indicated that although they spent almost 50 per cent of their working time in communication activities, they had received very little training in business communications. Actually, only forty-seven per cent had taken at least one course in business communication in college. Skjerseth's middle managers recognized the importance of good writing and the value of oral communications in the collegiate curriculum. As business writers, they considered their greatest liability to be the inability

to organize information and to present material in the most favorable form. Likewise, they attributed the major writing problems of other business communicators to their inability to express ideas accurately, concisely, and completely, and to their inability to organize information.

Lesikar (1968) also canvassed the business community to determine the importance of developing a high degree of communicative skill before students graduate. His findings revealed that top executives spend between 75 per cent and 95 per cent of their time in communications and that mid-managers spend approximately 50 per cent of their time in some phase of the communication process. Lesikar concluded by emphasizing the need to provide adequate training in communication skills to meet the needs of the business community.

Roy and MacNeill (1970) reported a survey of the requirements for success in the accounting profession. Proficiency in written and oral English ranked in the first place in the composite ranking of all respondents. CPA candidates unable to write clearly, concisely, and lucidly may be denied admission to the profession.

Similar in purpose and methodology to the present study, Hansen's investigation (1971) compared the opinions of mainland businessmen and educators on the

objectives and contents of collegiate business communication courses. Data were collected by means of a Q-sort composed of 39 statements describing the content and objectives of communication preparation for college business students. Approximately half of the sample population of businessmen and educators, 109 businessmen and 127 educators, returned completed Q-sorts. Ninety-one per cent of the businessmen represented the top and middle management levels. They reportedly spent 82 per cent of their working day in communication activities.

Hansen's study revealed that businessmen and educators agreed on the contents and objectives of communication preparation for business students. The comparisons of individual statements, however, exhibited twenty-one disagreements in the Listening and Speaking Category and in the Problem-Solving Category. Businessmen assigned more importance to these areas; educators, on the other hand, ranked the writing of business letters higher than the businessmen did. It was significant that both educators and businessmen agreed that the most important objective of the communications program is the development of a clear, concise writing style.

Based on the findings of the study, Hansen recommended that

1. additional emphasis be placed on the development of the speaking and listening skills
2. problem-solving skills such as analysis, organization, interpretation, and judgment be included in classroom activities
3. letter writing activities be interrelated to problem-solving skills
4. emphasis be placed on the development of a clear, concise, simple, easy-to-read writing style
5. emphasis be placed on expanding the understanding of the human relations and psychological aspects of communication (p. 197).

A through study evaluating the status of business communications programs in Ohio community colleges was conducted by Hergenroeder (1973). Ultimately, her purpose was to make recommendations for the improvement of business communication instruction in order to add relevance and pertinence in terms of the needs of the business community. Using the questionnaire technique, Hergenroeder collected data from 50 business communication teachers in Ohio community colleges and from 40 members of the Cleveland Chapter of the Administrative Management Society. The questionnaire sent to educators gathered data on the organizational criteria of the business communication program. The questionnaire sent to executives was designed to determine their perceptions

on the essential communication competencies for success on the mid-management level.

Hergenröder found that the business communication course was a well established course in the community colleges. The major objective of the course, as reported by educators, was to develop the ability to write effective business communications. Applied letter-writing skills were emphasized, while oral communications were not an important part of the program. A significant finding of Hergenröder pointed to the neglect of oral communication skills, even though the executives valued oral skills as most essential for success at the mid-management level.

Based on the findings of her study, Hergenröder recommended that

1. emphasis be placed on the development of oral communication skills, simple telephone conversations, complex oral reports, panel discussions, and interpersonal communicational skills
2. emphasis be placed on outlining and organization skills, logical thinking, vocabulary expansion, and problem-solving approaches in the processing of oral and written communications
3. emphasis be placed on the development of written communication competencies such as memos, letter reports, business letters, and procedural directions

4. training be given to students in the use of audio-visual material and electronic equipment (pp. 245-249).

Still emphasizing the need for close cooperation between educators and businessmen, Jennings (1974) identified the written business communications practices and problems of middle managers and compared them with the instruction given in collegiate courses in written business communications. Using the questionnaire method, Jennings gathered data from 307 middle managers and 94 business communication educators in Kentucky. Her findings revealed that 75 per cent of the middle managers are required to write letters, memorandums, reports, technical descriptions, and proposals.

The inquiry letter series was written by 90 per cent of the middle managers. In addition, the adjustment letter series and the application letters were written by 50 per cent or more of the middle managers. Middle managers rated the reply-to-inquiry letters as the most important and the credit letter as the least important. The two writing problems experienced most frequently were selecting the precise wording to express ideas and using the minimum number of words to express ideas. Problems in spelling, grammar, and punctuation were considered to be the responsibility of secretaries.

Jennings' findings stressed the importance of report writing. Informational, examinational, and analytical reports were written by 80 per cent of the middle managers; informational reports were written with the greatest frequency. Progress reports and periodic reports were written by 85 per cent of the middle managers. The high percentage of middle managers who use letter format, memorandum format, printed forms, and short report format indicated that short reports were used more frequently than long, formal reports. The report writing problems experienced most frequently were

1. planning and getting the report started
2. selecting the precise wording to express ideas
3. using the minimum number of words to express ideas
4. writing interesting and active sentences.

Jennings found that memorandums and reports were given the necessary instructional coverage to meet the expectations of the business community. In fact, letters and reports were given more instructional emphasis than was warranted on the basis of the frequency with which middle managers wrote these communications.

Of relevance to the present study, Herrero (1976) gathered the opinions of executives on the academic

preparation and professional performance of business graduates. Participants from 44 business firms which employed 776 graduates from colleges and universities in Puerto Rico and the United States provided the data for the findings of this survey.

Herrero reported that graduates from mainland educational centers were 100 per cent acceptable in academic preparation and professional performance. Eighty-six per cent of the graduates from the University of Puerto Rico were found to be acceptable, while 14 per cent were rated unacceptable. Sixty-one per cent of the graduates from private universities in Puerto Rico were rated as acceptable, while 39 per cent were found to be unacceptable. Of interest to this study is the finding that the command of the English language of 66 per cent of the University of Puerto Rico business graduates was judged to be unacceptable. Furthermore, the report-writing competency of 52 per cent of these graduates was found to be unacceptable. Participants recommended that communication courses in written and spoken English be offered to better prepare graduates to meet career requirements.

The studies reviewed in this chapter have revealed similarities and differences regarding the relative importance of oral and written skills. Contributing to

the lack of agreement in findings is the overlapping of aspects of communication so that it is difficult to determine whether conclusions are mutually exclusive. The present study, while having some similarities to the reviewed studies, provides a comparison of the opinions of educators, executives, and business graduates on the communication competencies, both oral and written, which graduates need to perform effectively in business careers specifically in Puerto Rico. The present dearth of research on business communication in Puerto Rico underscores the need for studies which focus on the communication problems in different cultural and linguistic environments.

CHAPTER III

RESEARCH METHODS AND PROCEDURES

This research study was undertaken to determine and compare the degree of agreement among selected groups of educators, executives, and business graduates concerning their perceptions of the competencies needed by business graduates to perform communication activities effectively. The purpose of the study is to serve as a guide in formulating a business communication curriculum designed to meet the expectations of the academic and the business communities. At the time this study was initiated, no research proposing to achieve this objective had been done in Puerto Rico.

Chapter III presents (1) the identification of the population, the selection of the sample, (2) the discussion of the Q-methodology used in this study, (3) the development of the Q-sort communication competency statements, (4) the description of the data-collection materials, (5) the description of the procedures for coding the instructions for computer processing, and the subsequent analysis of the data, and (6) the description of the procedures for interpreting the findings of this study.

The Population

The research subjects of this study represented three populations: business educators, executive, and business graduates. The educator population included 172 professors listed in the 1976-1977 Faculty Staff Directory of the School of Business Administration of the University of Puerto Rico, and eight business educators in Puerto Rico listed in the 1976 Membership Directory of the American Business Communication Association (1976). The executive population consisted of 8,028 executives listed in the 1976 Puerto Rico Official Industrial Directory and the 1976 ASPA Directory of Personnel Administrators. The business graduate population was comprised of the 1970, 1971, and 1972 business graduates listed in the University of Puerto Rico Official List of Graduates of the School of Business Administration.

To clarify the procedures employed in the selection of the research subjects, the delineation of the sample for the three participating groups is explained below.

Educator Population

A random sample of 100 names of educators was drawn from a total population of 172 educators taken from the 1976-1977 Faculty Staff Directory of the School of

Business Administration and the 1976 Membership Directory of the American Business Communication Association. By using a table of random numbers, a sample of 100 business educators was selected to provide the potential participating research subjects for the educator group.

Executive Population

The population consisted of executives working for business concerns with 50 or more employees in the metropolitan area of Puerto Rico. This area includes the geographical regions of San Juan, Rio Piedras, Carolina, and Bayamon. By using a table of random numbers, a sample of 80 was drawn from the 1976 Puerto Rico Official Industrial Directory. In addition, a random sample of 20 was drawn from the 1976 ASPA Directory of Personnel Administrators. Thus, a total random sample of 100 executives was selected to participate in the study.

Business Graduate Population

The business graduate population was composed of the 1120 business graduates of the University of Puerto Rico for the years 1970, 1971, and 1972. The Official List Of Business Graduates of the School of Business Administration provided the names of the business graduates. Since an up-to-date list was not available, the current addresses of graduates had to be obtained from various

sources, including the 1976 Metropolitan Area Telephone Directory.

A random sample of three hundred graduates was selected. A letter explaining the purpose of the research, the requirements for participation, and a reply postal card were mailed to the three hundred preliminary potential participants. They were asked to indicate if they had been employed in a business career for at least three years. A positive answer to this question qualified the business graduate for participation in this study. Follow-up letters and telephone calls were made to graduates who had not returned the postal card within two weeks. Many graduates expressed interest to participate in the study, but since they did not meet the competence requirement of three years' experience in a business career were eliminated from participation. For consistency with the samples of educators and executives, a total random sample of 100 business graduates was selected to participate in the study.

Q-Sort Methodology

The Q-technique is a method of data collection, developed in England and brought to the United States by Stephenson (1953). Essentially, this technique is a

method of studying systematically and recording the judgments, impressions, evaluations, and comparisons of individual attitudes. According to Nunnally (1967), the Q-sort was developed for the study of "verbalized attitudes, self-description, preferences, and other issues in psychology and in the study of personality" (p. 544).

The Q-sort technique is basically a card-sort method for ordering items by rank. The process deals with the ranking of statements, objects, photographs, advertisements, or any data that can be combined into a set or deck of cards for sorting purposes by an individual. It is a comparative rating method rather than an absolute rating method.

The participant or sorter is given a deck of cards and is asked to sort them into a pre-arranged quasi-normal distribution along a continuum of most significance to least significance. The most important information is found at either end of the continuum, and little attention is given to the columns in between. The forced distribution arrangement approximates the bell-shape curve resulting in a flattened symmetrical distribution of scores for all participants. This constant feature facilitates the statistical handling of the results since all of the sortings are forced into

a distribution whose means and standard deviations are the same.

Adaptations of the Q-methodology have been successfully used as research technique by Schill (1961) in education, Block (1961) in psychology, Ball (1970) in business, Hansen (1971) in business communication, Ferullo (1961) in clinical psychology, and Quesenberry (1968) in home economics. According to Wittenborn (1961), the Q-sort technique has proved useful in studies ranging from psychotherapy to advertising.

Cronback (1953) states that despite whatever methodological or statistical limitations the Q-technique may have, it has several psychometric advantages which are extremely useful. He summarized them as follows:

...this method of interrogation is much more penetrating than the common questionnaire where the person can say Yes to all of the favorable symptoms and No to all of the unfavorable ones. The method is free from those idiosyncrasies of response which can cause some people to respond Cannot Say twice as often as others, and so make their scores non-comparable. The forced choice requires every person to put himself on the measuring scale in much the same manner. The forced normal distribution gives certain statistical advantages, since correlation is more meaningful when all distributions have the same shape. Since more statements are placed in the middle piles, the subject is free from many difficult

and rather unimportant discriminations he would have to make if he were forced to rank every statement. And the fact that discrimination near the center of the scale is difficult is reduced in importance by the fact that in product-moment correlations the end cells receive the greatest weight (pp. 378-79).

After studying other available measuring instruments and methods, the researcher concluded that the forced-choice technique, Q-methodology, offered a sound and useful means of measurement for the purpose of this study. The nature of this study--the recording, measuring, and comparison of perceptions, judgments, preferences--does not lend itself to absolute ratings. Since the Q-sort technique is a comparative rating method rather than an absolute rating method, it was considered appropriate and useful. The use of the Q-sort method is specially appropriate for this study because it recognizes the inherent overlap of statements typical to a study of communication skills and competencies. Nunnally (1959) defends the appropriateness of the use of the Q-sort method by stating that "relative rating techniques, like the Q-sort, must be used when there is no concrete basis on which absolute ratings can be made" (p. 381).

There are additional advantages to the use of the Q-sort in this study. Participants can recall and

verbalize their opinions with the aid of the written statements on the cards. They can also make changes in their sort before listing the final array without having to erase or correct choices. Changes in the placement of cards are encouraged and facilitated by the technique.

Development of the Statements for the Q-Sort

The Q-sort used in this study contained 50 statement cards. Each card, measuring 2 x 3 inches, described a communication objective in terms of a skill, competency, attitude, or knowledge of value to business graduates for the effective performance of communication responsibilities in business careers. The content of the statements represented the broad areas of business communication as they relate to speaking and listening, communication principles, problem solving, reading, and writing.

Since the development of the statements for the Q-sort is a crucial factor for the validity of the instrument, the necessary precautions and care were taken to insure that the final Q-sort instrument would be inclusive of all the communication skills and competencies business graduates should have in order to perform communication tasks in their business careers. The procedure used is explained in the following paragraphs.

A preliminary list of sixty-seven communication competency statements was prepared by the researcher. The statements were drawn from business communication texts, dissertations, course outlines, periodicals, reference books, personal interviews with educators, executives, and personnel directors in Puerto Rico. Of great value in the formulation of statements, were the informal conversations with members of the American Business Communication Association at the 1975 ABCA Convention in Toronto, Canada. The following studies and reference sources were particularly helpful in phrasing and formulating the communication competency statements: Hansen (1971), Hergenroeder (1973), Jennings (1974), and the Dictionary of Occupational Titles (1965). The thirty-nine statements culled by Hansen were germane and pertinent to the present study. Thus, these statements were included in the preliminary list.

The preliminary list of communication competencies was submitted to a panel of experts composed of authors, consultants, researchers, business leaders, and business educators in Puerto Rico and in the United States. They revised the preliminary list of statements in terms of completeness of content, significance, readability and clarity of the statements. Appendix A lists the names of the members of the panel of experts.

The researcher made a thorough scrutiny of the comments and recommendations made by the panel of experts. One hundred-and-seven competency statements were submitted. The researcher reviewed, combined, restated and edited in clear and concise style the panel's written suggestions. From a total of 107 suggested competency statements, the researcher identified 50 statements which were germane, logical, and meaningful to this study.

Four statements which were similar in content but different in wording were used as a consistency check to test the seriousness of purpose of the participants in completing the Q-sort.

The 50 statements were randomly assigned letter-numbers to reduce order effects and to facilitate the recording of answers. Each letter-numbered card measuring two inches by three inches, described a competency, skill, knowledge or attitude valuable for the performance of communication tasks. The cards were reproduced by the offset process on 65 pound card stock paper.

The complete research package, including cover letter, directions for sorting the Q-sort, 50 Q-sort deck of cards, Model Recording Sheet, Recording Sheet and Profile Sheets, was tested with members of the Association of Personnel Administrators at their 1976 Annual Convention. The purpose of the pilot study was to get

reactions concerning the actual execution of the complete package. The main concern was to obtain feedback on the readability, clarity, relevance, and completeness of the overall process of completing the Q-sort. Three business educators, five personnel administrators, and four business graduates completed and returned the evaluation of the research package. Indicating no apparent difficulties, they completed the sorting and recording of the Q-sort in an average of 37.5 minutes. Since no difficulties were revealed in the pilot study, the researcher concluded that the research package was appropriate for the purpose of this study. The 50 statements, listed on the following pages, comprised the Q-sort used in this study.

STATEMENT
NUMBER

COMMUNICATION COMPETENCY STATEMENT

- 1 To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.
- 2 To continue developing a functional vocabulary to communicate effectively.
- 3 To use correct letter format and attractive appearance.
- 4 To proofread messages.
- 5 To use audio-visual equipment, graphic aids, media, and materials in oral presentations.
- 6 To understand the fundamentals of parliamentary procedure.
- 7 To understand the important role of listening in communication.
- 8 To communicate effectively in oral business situations.
- 9 To further develop proficiency in the correct pronunciation of standard American English.
- 10 To listen patiently to people who express themselves poorly or who show poor reasoning.
- 11 To communicate over the telephone and to handle "trouble calls" effectively.
- 12 To dictate messages efficiently.
- 13 To present oral reports, oral-visual reports, and multimedia reports with facility.
- 14 To participate in panel and group meetings.

STATEMENT
NUMBER

COMMUNICATION COMPETENCY STATEMENT

- 15 To conduct interviews successfully and to be an effective interviewee.
- 16 To have an awareness of "silent" language (gestures, postures, movements, uses of time and of space).
- 17 To understand the communication process, concepts, and applications to interpersonal and organizational problems in business.
- 18 To understand the interrelationship between the psychological aspects of communication and human relations.
- 19 To have an awareness of the meanings people assign to words and their effect on human behavior.
- 20 To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.
- 21 To distinguish among fact, inference, and opinion.
- 22 To collect, analyze, and interpret data.
- 23 To organize and outline data
- 24 To understand and interpret data logically and objectively.
- 25 To find and use primary and secondary sources of business information.
- 26 To analyze and interpret articles dealing with current events.
- 27 To relate problem-solving methods and management philosophy learned in other courses to the writing of letters, memos, and reports.

STATEMENT
NUMBER

COMMUNICATION COMPETENCY STATEMENT

- 28 To have a clear, concise, simple, and natural style of writing.
- 29 To apply the techniques of positive tone and the "you" attitude to convey empathy and courtesy.
- 30 To understand the role of professional and technical terminology--its use and misuse.
- 31 To adapt written messages to the point of view of the reader.
- 32 To handle the techniques of unity, coherence, and emphasis in written messages.
- 33 To translate business communications from Spanish into English and English into Spanish.
- 34 To have a background in general business literature.
- 35 To use form and guide letters as cost-saving devices.
- 36 To write routine interoffice memorandums.
- 37 To write telegrams, cablegrams, and radiograms.
- 38 To write goodwill messages (welcome, appreciation, congratulation messages).
- 39 To write order letters and acknowledgements to order letters.
- 40 To write inquiry letters and reply-to-inquiry letters.
- 41 To write letters that request, grant, and refuse adjustments.

STATEMENT
NUMBER

COMMUNICATION COMPETENCY STATEMENT

- 42 To write letters that request and supply credit information.
- 43 To write letters that grant and refuse credit.
- 44 To write application letters and resumes.
- 45 To write the short forms of reports; periodic, progress, memo, and letter reports.
- 46 To write the long formal reports: informational, examinational, and analytical reports.
- 47 To write summaries, synopses, abstracts, digests, and epitomes.
- 48 To write letters of transmittal.
- 49 To design effective questionnaires.
- 50 To organize and write the minutes of meetings.

Data Collection Materials

The research package, including cover letter, directions for sorting the Q-sort deck of statement cards, deck of 50 Q-sort statement cards, Model Recording Sheet, Recording Sheet and Profile Sheet, was mailed to three hundred participating educators, executives, and business graduates. A follow-up procedure was devised and used.

To increase the rate of participation, the research materials were professionally done by commercial printing services. The cover letter was reproduced by the off-set process on stationery bearing the letterhead of the School of Business Administration of the University of Puerto Rico. Inside addresses and personalized salutations were manually typed in, and each letter was personally signed by the researcher. Special care and effort was taken in the preparation of the directions for sorting the Q-sort, the deck of cards, the Model Recording Sheet, the Recording Sheet, and the Profile Sheets for educators, executives and business graduates. The use of micro-elite type style enabled the instructions to be contained on one page. The deck of cards consisted of 50 cards measuring 2 x 3 inches. To facilitate handling, the cards were cut from card stock weighing 65 pounds. The Model Recording Sheet, the Recording

Sheet, and the Profile Sheets were each presented on one page so as to attract the participant's attention and interest.

Profile Sheets were developed to identify demographic data and various characteristics about each of the research subjects. The one-page Educator Profile Sheet asked for personal, academic, and professional data from the business educators. The personal data included questions relative to sex and age. The academic background data included questions pertaining to highest degree held, institutions granting the degree, and academic field of specialization. The professional data included questions concerning name of institution, department, professorial rank, teaching assignment, teaching experience, involvement in consulting work, subjects taught, language of basic texts, and percentage of instructional time assigned to teaching in Spanish and in English. Also, an open-end question was available for educators who desired to comment on the communication skill they considered most essential for success in a business career.

The Executive and Business Graduate Profile Sheet, also printed on one page, requested personal, business, academic, and professional data. The personal data included questions relative to sex and age. Business

data dealt with the company's industrial classification. Academic data referred to highest degree held, major area of study, and courses taken in business communication. Professional data included questions concerning level of management, position, experience, and on-the-job communication requirements. An open-end question was also available so that respondents could comment on the communication skills they considered most essential for success in a business career.

The Recording Sheet was used to gather the opinions of educators, executives, and business graduates on the communication competencies business graduates need to perform communication functions effectively. The collected data provided the basis for the tabulations and statistical analysis presented in Chapter IV.

The Recording Sheet submitted to the three groups illustrates the forced-choice distribution of the placement of the 50 cards. Statements placed at the ends of the distribution were marked as "Most Significant" and "Least Significant" because these extremes of the continuum have a more important effect on tabulations and statistical measures.

For tabulation purposes and statistical analysis, each of the seven columns (see Appendix D) was weighted, that is, each column was assigned a numerical value. These values ranged from one to seven. Statements placed in columns 1 and 2 were assigned a weighted value of 1 and 2. The ten statements placed in these two columns were marked as the "Most Significant" end of the distribution. Statements placed in columns 3, 4, and 5 were assigned the weighted value of 3, 4 and 5. The thirty statements in these three columns were marked as the "Moderately Significant" end of the distribution. Statements placed in columns 6 and 7 were assigned the weighted value of 6 and 7. The ten statements placed in these two columns were marked as the "Least Significant."

Efforts were made to state clearly, concisely, and completely the directions for sorting. The respondent was instructed to sort all the 50 cards into seven columns according to a forced-choice distribution. The cards were to be placed into seven columns according to the following pattern: four cards in columns 1 and 7; six cards in columns 2 and 6; nine cards in columns 3 and 5, and 12 cards in column 4. The statements valued as most significant were to be placed in columns 1 and 2, statements of moderate significance in columns 3, 4

and 5; and statements of least significance in columns 6 and 7.

Upon sorting, the participant was asked to mentally precede each card with the frame of reference: "to perform effectively in business careers, business graduates should possess competencies in English communication which will enable them..." He was directed to keep the 50 cards visibly laid on top of desk or table to facilitate changes and rearrangements of cards before listing the final ranking. Once the participant felt satisfied with the placement of the 50 cards, he was asked to record the resulting array by writing the letter-number of each card in the corresponding column and box of the Recording Sheet.

Analysis of the Data

Data gathered from the Profile Sheets and Recording Sheets of educators, executives, and business graduates provided the research data for this study. By utilizing the appropriate coding instructions, the data were key punched on computer input decks. A Fortran Computer program, REST¹, was developed to execute the tabulations

¹REST is an item analysis program. It was written by Kenneth Bogle, Human Development Divisions, School of Education, Lehigh University, July, 1977.

and statistical analysis on the Lehigh University Computing Center CDC 6400. A random hand check verified the computer results.

A system of weights was developed for the statistical handling of the Q-sort statements. Each of the seven columns of the Q-sort was weighted by a numerical value ranging from one to seven. As a result, depending upon the column that a statement was assigned to in the Q-sort distribution, a numerical weight was assigned to that particular statement. The weights for each statement were summed across all respondents of one group and then divided by the number of respondents of that particular group. In this manner, a weighted mean for each of the 50 Q-sort statements for each of the three participating groups was obtained. The weighted mean of each statement was the basis for determining the rankings of the statements for each of the participating groups of educators, executives, and business graduates.

To analyze the results of the study, the research data were combined into three groups--educators, executives, and business graduates--for comparison purposes. The procedure outlined below was used to tabulate and analyze the research data.

Rankings of the Q-sort statements were calculated by computing the weighted mean for each of the 50 state-

ments for each group of educators, executives, and business graduates. The statement having the smallest weighted-mean received the first rank, and the statement with the largest weighted-mean received the last rank.

Comparison of the three sets of ranks of educators, executives, and business graduates was made by using Kendall coefficient of concordance W. Siegel (1956) states that Kendall W is computed to obtain a measure of association or agreement of ranks when more than two sets of ranks were compared (pp. 229-39). The null hypothesis of a random assignment of ranks by at least one group independent of the criteria used by the remaining groups was to be rejected at the .05 level of significance.

Comparisons of the Q-sorts of two sets of ranks of educators, executives, and business graduates were made by using Kendall's rank correlations coefficient, tau. Siegel (1956) states that Kendall tau is computed to obtain a measure of the degree of association or correlation between the comparison of two sets of ranks (pp. 213-223). The null hypothesis of a random assignment of ranks was to be rejected at the .05 level of significance.

The t-test was used to test for the difference

between the sample means of a given Q-sort statement for the two groups. The null hypothesis of no significant difference in the weighted means between two groups was to be rejected at the .05 level of significance.

Items similar in content were devised to measure the seriousness of purpose for each group of raters. The group ranks assigned to the four items expressing essentially the same thought, but different in wording, provided the basis for this measure. If, indeed, the ranks of these items were scattered across the 50 possible ranks, then a random assignment of ranks independent of item content would have to be assumed. Alternatively, where item content has been thoroughly examined, the ranks of the four consistency check items should be clustered. Ideally, the range--the difference between the highest rank and lowest rank--would equal three. Under a null hypothesis of a random assignment of ranks, the range may be as high as 49.

A test of the significance of the range statistic may be found in the probability equation¹:

$$P(\text{rk}_{\text{max}} - \text{rk}_{\text{min}} \leq D) = (I - D) \left(\frac{D + 1}{I} \right)^C - (I - D - 1) \left(\frac{D}{I} \right)^C$$

¹Fortran Computer Program REST, Kenneth Bogle, Human Development Division, School of Education, Lehigh University, July, 1977.

Where D = the observed difference in ranks

I = the total number items (or ranks)
to be considered (50 in this case)

C = the number of consistency check
items (four in this case)

The reader will note when $D = 12$, $I = 50$, and $C = 4$, then $P = .051$. Thus, when the range is less than or equal to twelve, the null hypothesis of a random assignment of ranks may be rejected at the .05 level of significance. This standard will be applied as the measure of consistency with which a given group ranked the four consistency check items.

Interpretation of the Findings

The analysis and interpretation of the results of this investigation are directed to answer the main objective of this study: to determine the degree of agreement between and among selected groups of educators, executives, and business graduates on the required competencies and skills business graduates need to perform communication tasks effectively in business careers. The interpretation of rank order comparisons and individual statement comparisons is given below.

According to Siegel, both Kendall tau and W may be interpreted as an average measure of agreement between (τ) and among (W) groups across all items. In a strict

sense, tau is the ratio of a measure of agreement between pairs of ranks to its theoretical maximum value. Like its methodological alternative, Spearman's rho, tau ranges in value from 1 (perfect agreement) to -1 (perfect disagreement), increasing in value with increasing agreement between ranks. Although superior to rho in tests of significance (its sampling distribution approaches normality more rapidly as sample size increases), the interpretation of tau beyond the ratio described above remains elusive.

Likewise, Kendall W may be interpreted as little more than a significant measure of agreement among more than two groups. Its values range from 0 (no agreement) to 1 (perfect agreement). Although N observers may all agree, disagreement is not the symmetrical alternative, thus the elimination of a negative numerical value.

A significant t-statistic reflects the application of distinct criteria by two groups rating the same item. The relatively large and nearly equivalent sample sizes justify the use of the t-statistic as a robust measure of mean rating differences free of the interpretation problems characteristic of its non-parametric alternative, chi square.

CHAPTER IV
ANALYSIS OF THE DATA

Chapter IV analyzes the data collected from the three population groups: executives, educators, and business graduates. The chapter consists of five sections. The first section presents the tabulation of the data from the Profile Sheets of educators, executives, and business graduates. The second section discusses the statistical analyses of the comparisons and rankings of the 50 communication competencies of educators, executives, and business graduates. Section three presents the pairwise comparisons of the Most Significant statements for educators, executives, and business graduates. Section four presents the pairwise comparisons of the Least Significant statements for educators, executives, and business graduates. Section five discusses the placement of the Q-sort statements into the following categories: Communication Principles, Problem Solving, Writing Skills and Techniques, Listening and Speaking, Written Business Communications, and Content Areas.

Sample and Profile of Respondents

Data collected from the groups of educators, executives, and business graduates provided the data for the tabulation and statistical analysis presented in this section. Table 1 summarizes the numerical tabulation of respondent who participated in this study. The devised follow-up procedure via the telephone and the United States mail resulted in a 62 per cent return from the educators, 55 per cent return from the executives, and 70 per cent return from the business graduates. Twenty-one per cent of the educators indicated they could not participate. Sabbaticals, leaves of absence to study or work, and retirement were given as the main reasons for not being able to participate. Twenty-three per cent of the executives listed "not qualified," "lack of time," and "pressing business" as reasons for their inability to participate. Nineteen per cent of the business graduates excused their lack of participation for similar reasons. Because instructions were not followed, 2 per cent of the educators' data and 5 per cent of the executives' data were considered unuseable. No responses were received from 15 per cent of the educators, 17 per cent of the executives and 11 per cent of the business graduates sample populations.

Table 1
EDUCATOR, EXECUTIVE AND BUSINESS GRADUATE RESPONSE TABULATION

Main Groups	Distributed No.	Returned		Non-Participants		Non-Returned		Unusable		Useable	
		No.	%	No.	%	No.	%	No.	%	No.	%
Educators	100	64	64	21	21	15	15	2	2	62	62
Executives	100	60	60	23	23	17	17	5	5	55	55
Business Graduates	100	70	70	19	19	11	11	0	0	70	70
Total	300	194	65	58	19.33	48	16	7	2.33	187	62.33

Educator Profile Data

The Educator Profile Sheet provided general information on the educator population. For descriptive purposes, the respondents were asked to indicate their departmental affiliation, academic preparation, sex, age, teaching experience, type of teaching assignment, highest degree held, professorial rank, involvement in consulting work, language of basic textbooks used, and language used in instruction. In addition, an open-end question was available for respondents who desired to make optional comments stating what they considered to be the most essential communication skill for success in a business career. The data from the Profile Sheets were coded and punched into data cards for computer processing.

Of a total population of 62 educators, 32 per cent (20) belonged to the English and Spanish Communications Departments, 21 per cent (13) represented the Secretarial Science Department, and 47 per cent (29) were from the Accounting, Finance, Management and Statistics Departments.

The major areas of academic preparation for educators were English as a Second Language, Education, Business Administration, Accounting, Economics, Statistics, and Law. Other areas of study were Secretarial Sciences,

Finance, Public Administration, Psychology, Spanish, and Linguistics. Table 2 presents the major areas of study combined with the departmental affiliation of the educators.

There were 62 educators, 31 females and 31 males. Their mean age was 46 years. Thirteen per cent (8) were in the 20-30 age bracket, 18 per cent (11) were in the 30-40 age bracket, 23 per cent (14) were in the 40-50 age bracket, 39 per cent (24) were in the 50-60 age bracket, and 8 per cent (5) were in the 60 and over age bracket.

The educator group had a mean of 18.3 years of college teaching experience. Approximately 97 per cent (56) had full-time appointments, and 84 per cent (52) had tenure in the university system.

All 62 educators held master's degrees or higher. Seventy-three per cent (45) held master's degrees, and 27 per cent (17) held doctor's degrees. Seventy-seven per cent (48) obtained their highest academic degrees in the United States and Spain, while 23 per cent (14) received their degrees in Puerto Rico. Approximately 84 per cent (52) held the ranks of assistant professor, associate professor, or full professor, while 16 per cent (10) held ranks of instructor or lecturer.

Table 2
 EDUCATOR'S MAJOR AREA OF STUDY
 BY DEPARTMENTAL AFFILIATION

Major Area of Study ^a	I	II	III	IV	V	VI	VII	Totals	Per Cent
English as a Second Language	15							15	24
Business Administration			1			6		7	11
Education	1		8					9	14
Accounting				6				6	10
Economics					3	2	1	6	10
Statistics							3	3	5
Law				2		1		3	5
Marketing						1		1	2
Finance					2			2	3
Public Administration	1		1					2	3
Spanish		2						2	3
Linguistics	1							1	2
Psychology			1					1	2
Secretarial Science			2					2	3
Industrial Engineering							1	1	2
Actuarial Sciences							1	1	2
Total	18	2	13	8	5	10	6	62	100
Per Cent^b	29	3	21	13	8	16	10	100	

^aI, Business English; II, Business Spanish; III, Secretarial Science; IV, Accounting; V, Finance; VI, Management; VII, Statistics.

^bPercentages have been rounded to the nearest whole number.

Forty-five per cent (28) of the educators engaged in consulting work, while 55 per cent (34) were not involved in consulting work.

Educators were asked to evaluate the relative importance of Spanish and English as media of instruction. Table 3 summarizes their responses. A paradoxical feature of the educational experience in Puerto Rico is revealed upon examination of this table. Educators use textbooks written in English 81 per cent of the time, and textbooks written in Spanish 19 per cent of the the time. However, Spanish seems to be the dominant language of instruction since it is used 63 per cent of the time, while English is used 37 per cent of the time.

Table 3
RELATIONSHIP OF THE USE OF SPANISH AND ENGLISH
IN CLASSROOM INSTRUCTION

	Use of Spanish %	Use of English %	Total %
Language of Textbooks	19	81	100
Language of Classroom Instruction	63	37	100

Executive Profile Data

General information on the personal, academic, and professional areas of the executive group was gathered through the profile sheets. The personal data refer to the sex and age of the participants. The academic data deal with academic preparation, major area of study, and business communication courses taken. The professional data relate to the level of management, title of position, experience, on-the-job communication requirements, and percentage of time devoted to Spanish and English communication activities. In addition, an open-end question was available for participants to comment on the communication skills they valued as most essential for success in a business career.

Of a sample population of 55 executives, 91 per cent (50) were males and 9 per cent (5) were females. As a group, their mean age was 42 years. Fifteen per cent (8) were in the 20-30 age bracket, 33 per cent (18) were in the 30-40 age bracket, 25 per cent (14) were in the 40-50 age bracket, 20 per cent (11) were in the 50-60 age bracket, and 7 per cent (4) were in the 60 and over age bracket.

The majority of the executive population were graduates from colleges and universities in Puerto Rico

and in the United States. Sixty-two per cent (34) earned their degrees in Puerto Rico, while 38 per cent (21) were educated in the United States. Approximately 70 per cent (39) obtained bachelor's degrees, 20 per cent (11) held master's degrees, 4 per cent (2) received law degrees, 4 per cent (2) had a high school diploma, and 2 per cent (1) held doctor's degrees. The prevalent areas of academic preparation were Business Administration and the related areas of Accounting, Finance, Economics, and Public Administration. Sixty-three per cent (33) were trained in these disciplines, while 40 per cent (22) were trained in the Liberal Arts, Law, Mathematics, and Engineering.

As a group, executives had solid training in business communication courses. Of 55 executives, 50 had completed oral and written courses in business communications in oral communications, speech improvement, public speaking, composition and grammar, business communications, business letter writing, report writing, Spanish-English translation, journalism, literature, and advertising. Furthermore, some educators indicated that another source of communication preparation was obtained through self-study and special seminars in related communication areas sponsored by the employing companies.

Looked at professionally, the executives represented the industrial, commercial, manufacturing, merchandising, government, and service sectors of business concerns in the metropolitan area of Puerto Rico. Table 4, a combined table showing the industrial classifications of executives' companies and the executives' major area of study, reveals that 66 per cent (36) of the executives were employed by the manufacturing and service sectors of the economy.

The majority of executives occupied top-level management positions: 73 per cent (40) were senior executives, 24 per cent (13) were middle managers, and 4 per cent (2) were non-supervisory personnel. As a group, the executives had a 6.6 mean number of years of experience in their present positions. The most commonly listed position titles were president, vice-president, executive director, personnel director, industrial relations director, general manager, sales manager, comptroller, and consultant.

Communication functions played an important role in the executives' work day. Reportedly, they spent 66 per cent of the time in communication tasks, while 34 per cent of the time was devoted to non-communication activities. Tabel 5 shows the distribution of their

Table 4

EXECUTIVES AND THEIR MAJOR AREA OF STUDY BY CLASSIFICATION OF THE COMPANY

Major Area of Study	Company Classification ^a					Total	Per Cent
	I	II	III	IV	V		
Business Administration	1	2	7	9	7	26	47
Accounting				1	2	3	5
Finance and Economics		1			1	2	4
Public Administration			1		1	2	4
Liberal Arts and Education	1		5		4	10	18
Law and Business			2	1	2	5	9
Mathematics and Engineering	2		3	1	1	7	13
Total	3	4	18	12	18	55	100
Per Cent ^b	5%	7%	33%	22%	33%	100%	

^aI, Industrial Companies; II, Banking Institutions; III, Manufacturing Companies; IV, Merchandising Companies; and V, Government and Service Companies.

^bPercentages have been rounded to the nearest whole number.

communication responsibilities: 58 per cent to listening and speaking, 38 per cent to memo, letter and report writing, and 4 per cent to Spanish-English translation. The importance of the ability to communicate in both Spanish and English is highlighted by the fact that executives reported that they performed communication activities in Spanish 61 per cent of the time and in English 39 per cent of the time.

Table 5

RELATIONSHIP OF COMMUNICATION ACTIVITIES OF EXECUTIVES

Communication Activity	Time %
Listening	23
Speaking	35
Letter Writing	16
Memo Writing	12
Report Writing	10
Spanish-English Translation	4
Total	100

Business Graduate Profile Data

The business graduate profile sheets, identical in form to the executive profile sheets, provided general descriptive information on the personal, academic, and professional areas of the business graduate group.

Of a sample population of 70 graduates, 57 per cent (40) were males and 43 per cent (30) were females. As a group, their mean age was 29 years. Compared to the educator and executive groups, the graduate group was relatively young. Seventy-one per cent (50) were in the 20-30 age bracket, 17 per cent (12) were in the 30-40 age bracket, 10 per cent (7) were in the 40-50 age bracket, and 2 per cent (1) were in the 50-60 age bracket.

All 70 business graduates held bachelor's degrees in Business Administration from the University of Puerto Rico. Of these, 10 per cent (7) held master's degrees, and 3 per cent (2) had obtained law degrees. Their major fields of study were management, accounting, secretarial science, finance and economics, statistics, business education and law. As shown in Table 6, most of the graduates had majored in Accounting, Management, and Secretarial Science for a combined 72 per cent, or 50 graduates.

All the business graduates were trained in oral and

Table 6
 BUSINESS GRADUATES AND THEIR MAJOR AREA OF STUDY
 BY CLASSIFICATION OF THE COMPANY

Major Area of Study	Company Classification ^a						Total	Per Cent
	I	II	III	IV	V			
Management	1	8		1	4	14	20	
Accounting	1	3	3	4	14	25	36	
Secretarial Science	1			1	9	11	16	
Statistics		1			3	4	6	
Finance & Economics		6	1	1		8	11	
Law			1	1	1	3	4	
Education				1	4	5	7	
Total	3	18	5	9	35	70	100	
Per Cent^b	4%	26%	7%	13%	50%	100%		

^aI, Industrial Companies; II, Banking and Insurance; III, Manufacturing Companies; IV, Merchandising Companies; V, Government and Service companies

^bPercentages have been rounded to the nearest whole number.

written communications skills. Besides having taken 12 credit hours in basic English and Spanish courses, the graduates had completed an average of 14 to 18 credit hours in such courses as Business Spanish Communications, Business English Communications, Speech Improvement, Report Writing, and Spanish-English Translation. In addition, some graduates indicated they had attended company in-service training programs and seminars in communications and human relations.

The business graduates were employed by companies representing the industrial, banking, manufacturing, merchandising, and government and service sectors of the economy in the metropolitan area. Table 6 details the distribution of graduates' employers in terms of the industrial classification of the companies and it also presents their major areas of study. As evidenced from this combined table, 76 per cent (53) of the graduates were employed by banking and insurance institutions and by government and service companies.

In contrast to executives, business graduates occupied low-level and middle-level management positions. Forty-five per cent (32) classified their positions in the low management level, 41 per cent (29) identified their positions in the middle management level, and 14 per cent (10) reported that they occupied upper management

level positions. The position titles most frequently listed were credit analyst, credit manager, sales manager, personnel manager, public relations manager, administrator, junior accountant, accountant, senior accountant, auditor, comptroller, auditor, executive secretary, and assistant vice-president. As a group, the business graduates had a mean of 3.3 years of experience in their current positions.

Communication activities played an important part in the eight-hour working day of the business graduates. Five hours, or 59 per cent of the time, were spent on communication functions, while three hours, or 41 per cent were allotted to non-communications activities. Table 7 indicates that graduates performed communication activities according to the following distribution: 53 per cent of the time was spent in listening and speaking duties, 39 per cent of the time was earmarked for the writing of business communications, and 8 per cent of the time was assigned to Spanish-English translation. Like the executive group, the graduate group also stressed the importance of the proficiency in Spanish and English as basic requirements to meet the expectations of the business community. Graduates indicated that 62 per cent of their communication

time was devoted to communication activities in Spanish, while 38 per cent of the time was allotted to communication functions in English.

Table 7
RELATIONSHIP OF COMMUNICATION ACTIVITIES
OF BUSINESS GRADUATES

Communication Activity	Time %
Listening	20
Speaking	33
Report Writing	17
Letter Writing	13
Memorandum Writing	9
Spanish-English Translation	8
Total	100

Statistical Analyses of the Q-Sort Comparisons

The primary objective of this investigation was to determine the degree of agreement between groups of educators, executives, and business graduates on the ranking of statements concerning the communication

competencies needed by graduates for effective performance of communication tasks in business careers. To achieve this objective, four comparisons were made: a three-way comparison among educators, executives, and business graduates; and three two-way comparisons. These two-way comparisons were made between educators and executives, executives and business graduates, and business graduates and educators. Comparisons were also made to test for agreement on individual statement comparisons.

Since this study involved a ranking or sorting procedure, it was necessary to determine the seriousness of purpose of the sorters. To test the reliability and consistency of the participants in the sorting of the Q-sort, four of the 50 Q-sort statements were developed and used as consistency check statements. The statements listed below, described competencies or skills which were similar in essence; that is, they essentially expressed the same thought, but were worded differently.

Code Number	Consistency Check Statement
21	To distinguish among fact, inference, and opinion.
22	To collect, analyze, and interpret data.
23	To organize and outline data.
24	To understand and interpret data logically and objectively.

The test of consistency was designed to reveal that if the participants' sorts were done at random, the ranking of the Q-sort statements would be scattered throughout the range (1 to 50) of each respective group. Table 8 shows that the rankings of the four consistency check statements were not assigned entirely at random to each other within any one group. A test of statistical significance¹ revealed a probability of five per cent that the spread, the difference between the highest and lowest rank of the four ranks is 12 or less. At this level of significance, even though the null hypothesis of a random assignment of ranks may be rejected for the business graduate group, it may not be rejected for the educator and executive groups.

¹The mathematical equation is described in Chapter III, pp. 59-60.

Table 8

COMPARISON OF THE CONSISTENCY CHECK STATEMENTS

Code Number	Statement Rank		
	Educators' Rank	Executives' Rank	Business Graduates' Rank
21	8.0	12.0	16.5
22	11.0	11.0	13.0
23	18.0	15.0	21.0
24	2.0	2.0	11.0
Range	16.0	13.0	10.0
Probability	.1083	.0629	.0313

It may be speculated that the major cause for the inconsistency lies in the level of abstraction of these statements. Statement 23, "to organize and outline data," may have been interpreted as a mechanical objective, requiring lower level of abstraction. Statement 21, "to distinguish among fact, inference, and opinion," and statement 22, "to collect, analyze, and interpret data," may have connoted emphasis on the form, the organization, and the general process of reasoning. On the other hand, statement 24, "to understand and interpret data logically and objectively," probably suggested an objective requiring a reordering of ideas into a higher level of abstraction involving a configuration of ideas based on the processes of analysis and synthesis.

Comparison of Educators, Executives and Graduates

The comparison of the means and rankings of the 50 communication competencies among educators, executives, and business graduates is presented in Table 9. This table contains the coded identification numbers of the communication competency statements and their content, written in full; the mean and the rank order of each statement for the educators; similar information for the executives; and the same information for the business graduates. The competency statements were

arranged in this table in accordance with the rank order of importance of these items to the educator group, beginning with the most important; that is, lowest mean value means rank order number one.

The Kendall W statistic, a coefficient of concordance, was used to test for association or agreement among all groups of educators, executives, and business graduates. This is an appropriate statistical procedure when more than two sets of ranks are to be compared. The computation of the Kendall W for the comparison of the three groups yielded a value of .9662. This value reveals a significant agreement in the ranking of the statements at the .01 level. To this effect, Siegel (1956) states:

A high or significant value of W may be interpreted as meaning that the observers or judges are applying essentially the same standard in ranking the N objects under study. Often their pool ordering may serve as a 'standard,' especially when there is no relevant external criterion for ordering the objects (p. 237).

As a result, there is a strong assurance that the significant agreement in the ranking of the statements among the three groups at the .01 level indicates that the three groups applied the same criteria or standard in the ranking of the 50 communication competency statements.

Comparison of Educators and Executives

The two sets of rank orders of educators and executives were compared by means of Kendall's tau statistic. Of this statistic, Siegel (1956) says: "the Kendall rank correlation coefficient, τ (tau) is suitable as a measure of correlation for the ordinal measurement of the degree of association or correlation between two sets of ranks" (p. 213). Furthermore, Siegel states that "...the sampling distribution of T under the null hypothesis is known, and therefore T is subject to tests of significance" (p. 214). The obtained tau statistic value of .8203 revealed a high degree of agreement or association when the two sets of ranks were compared. This strong tendency to agree across all the 50 statements was significant at the .01 level. Thus, the null hypothesis that the two sets of rankings were independent or that the agreement occurred by chance is rejected. This means that the group of educators and executives have used the same criteria in the ranking of the 50 communication competency statements. The educators and executives gave a similar ranked importance to the statements relative to their role in the performance of communication tasks in business careers.

Comparison of Executives and Business Graduates

Since two sets of rankings were compared, the tau statistic was computed and applied to determine the degree of agreement or association between the sets of ranks of executives and graduates. A tau value of .7888 produced a significant agreement at the .01 level. Thus, the null hypothesis of a random ranking of communication competency statements may be rejected. Essentially, this means that the executives and business graduates gave a similar ranked importance to the communication competency statements.

Comparison of Business Graduates and Educators

The tau statistic value of .8338 indicated a high tendency to agree across all the 50 statements. This high degree of association or agreement between the sets of ranks of business graduates and educators was significant at the .01 level. Hence, the null hypothesis that the groups of business graduates and educators ranked the sets of ranks randomly may be rejected. Thus, the two groups gave a similar relative ranking to the communication competency statements.

The statistical correlations for the three two-way comparisons between educators, executives, and business graduates are summarized in Table 10.

Table 9

COMPARISON OF MEANS AND RANKINGS OF Q-SORT STATEMENTS OF
EDUCATORS, EXECUTIVES, AND BUSINESS GRADUATES

Communication Competency Statement	Educators		Executives		Business Graduates	
	Mean	Rank	Mean	Rank	Mean	Rank
8 To communicate effectively in oral business situations.	1.90	1	1.96	1	2.23	1
24 To understand and interpret data logically and objectively.	2.37	2	2.25	2	2.86	11
18 To understand the interrelationship between the psychological aspects of communication and human relations.	2.44	3	2.75	8	2.67	5.5
17 To understand the communication process, concepts, and applications to interpersonal and organizational problems in business.	2.50	4.5	2.44	4	2.37	3
28 To have a clear, concise, simple, and natural style of writing.	2.50	4.5	2.58	5	2.61	4
1 To handle correctly sentence structure, grammar, word choice, spelling and punctuation.	2.55	6	2.80	9	2.67	5.5
32 To handle the techniques of unity, coherence, and emphasis in written messages.	2.61	7	2.87	10	2.86	11
21 To distinguish among fact, inference, and opinion.	2.77	8	2.98	12	3.39	16.5
19 To have an awareness of the meanings people assign to words and their effect on human behavior.	2.82	9	3.11	14	2.79	7
20 To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.	2.87	10	2.31	3	2.36	2
22 To collect, analyze, and interpret data.	3.05	11	2.93	11	3.30	13

Table 9
(continued)

Communication Competency Statement	Educators		Executives		Business Graduates	
	Mean	Rank	Mean	Rank	Mean	Rank
2 To continue developing a functional vocabulary to communicate effectively.	3.16	12	2.71	7	2.86	11
29 To apply the techniques of positive tone and the "you" attitude to convey empathy and courtesy.	3.26	13	3.58	18	2.80	8
7 To understand the important role of listening in communication.	3.29	14	2.67	6	2.84	9
27 To relate problem-solving methods, and management philosophy learned in other courses to the writing of letters, memos, and reports.	3.31	15	3.40	16	3.31	14
13 To present oral reports, oral-visual reports, and multi-media reports with facility.	3.34	16	3.00	13	3.53	19
31 To adapt written messages to the point of view of the reader.	3.42	17	3.71	22	3.39	16.5
23 To organize and outline data.	3.45	18	3.25	15	3.86	21
11 To communicate over the telephone, and to handle "trouble calls" effectively.	3.71	19	3.55	17	3.51	18
45 To write the short form of reports: periodic, progress, memo, and letter reports.	3.76	20	3.98	24	4.00	24
30 To understand the role of professional and technical terminology--its use and misuse.	3.79	21	3.69	21	3.34	15
9 To further develop proficiency in the correct pronunciation of standard American English.	3.85	22	4.11	27	4.17	27.5
15 To conduct interviews successfully and to be an effective interviewee.	3.98	23	3.60	19	3.84	20

Table 9
(continued)

Communication Competency Statement	Educators		Executives		Business Graduates	
	Mean	Rank	Mean	Rank	Mean	Rank
26 To analyze and interpret articles dealing with current events.	4.02	24	4.20	29	4.11	26
25 To find and use primary and secondary sources of business information.	4.05	25	4.24	30.5	3.96	23
16 To have an awareness of "silent" language (gestures, postures, movements, uses of time and of space).	4.19	26	4.02	25	4.29	30
33 To translate business communications from Spanish into English and English into Spanish.	4.21	27	4.09	26	4.26	29
46 To write the long formal reports: informational, examinational, and analytical reports.	4.27	28	4.13	28	4.03	25
12 To dictate messages efficiently.	4.34	29	3.67	20	4.17	27.5
14 To participate in panel and group meetings.	4.42	30	3.96	23	3.91	22
47 To write summaries, synopses, abstracts, digests, and epitomes.	4.47	31	4.40	32	4.53	33
3 To use correct letter format and attractive appearance.	4.52	32	4.42	33	4.43	32
10 To listen patiently to people who express themselves poorly or who show poor reasoning.	4.56	33	4.24	30.5	4.41	31
38 To write goodwill messages (welcome, appreciation, congratulation messages).	4.63	34	5.07	40	4.96	40
34 To have a background in general business literature.	4.65	35	4.91	36	4.93	39

Table 9
(continued)

Communication Competency Statement	Educators		Executives		Business Graduates	
	Mean	Rank	Mean	Rank	Mean	Rank
41 To write letters that request, grant, and refuse adjustments.	4.71	36	4.96	37	4.83	35
40 To write inquiry letters and reply-to-inquiry letters.	4.74	37	4.98	38.5	4.90	36.5
44 To write application letters and resumes.	4.31	38	5.47	47	4.73	34
36 To write routine interoffice memorandums.	4.82	39	5.13	41	5.10	45
5 To use audio-visual equipment, graphic aids, media, and materials in oral presentations.	4.90	40	4.64	34	5.29	48
43 To write letters that grant and refuse credit.	4.92	41	5.36	45	4.91	38
42 To write letters that request and supply credit information.	5.00	42	5.36	45	4.90	36.5
39 To write order letters and acknowledgements to order letters.	5.02	43	5.49	48	5.07	43
50 To organize and write the minutes of meetings.	5.27	44	4.76	35	5.07	43
49 To design effective questionnaires.	5.31	45	5.27	42	5.23	46.5
48 To write letters of transmittal.	5.35	46	5.64	49	5.07	43
4 To proofread messages.	5.44	47	5.33	43	5.03	41
35 To use form and guide letters as cost-saving devices.	5.52	48.5	4.98	38.5	5.23	46.5
6 To understand the fundamentals of parliamentary procedure.	5.52	48.5	5.36	45	5.41	49
37 To write telegrams, cablegrams, and radiograms.	5.66	50	5.67	50	5.64	50

Table 10

STATISTICAL CORRELATIONS OF THE COMPARISONS
OF EDUCATORS, EXECUTIVES, AND BUSINESS GRADUATES

Group Comparisons	Kendall <u>W</u> Value	Kendall <u>tau</u> Value
Educators, Executives and Business Graduates	.9662*	
Educators and Executives		.8203*
Executives and Business Graduates		.7888*
Business Graduates and Educators		.8338*

*Statistical correlations are significant at the .001 level.

Comparison of the Most Significant Statements

The second objective of this study was to discuss the Most Significant communication competency statements of the main groups of educators, executives, and business graduates. The Most Significant statements, often referred to as the top ranked statements, are those placed in columns one and two by the respondents. For the purpose of this study, the forced Q-sort used as a data collection instrument required that ten statements be placed in columns one and two.

The rank order of the 50 statements for a specific group was determined by the value of each statement's weighted mean. The weighted mean determined the rank order for each of the 50 statements. The first rank was assigned to the statement with the smallest weighted mean, and the last or fiftieth rank, was given to the statement with the largest weighted mean. The most discriminating decisions as to the ranking of the 50 statements had to be made in columns one and two.

Comparison of Most Significant Statements of Educators and Executives

The group of educators and executives, averaging 46 and 42 years of age, are closer in age, but most different in objectives and functions in terms of the other pairs analyzed. Table 11 shows that the educators'

top ten statements, while presenting many similarities and overlaps with those of the executives, do not perfectly duplicate either the rank or all of the statements in the top ten of the executives. Statement 21, "to distinguish among fact, inference, and opinion," ranked eighth by the educator group was not a selected choice of the executives Most Significant statements. Similarly, statement 7, "to understand the important role of listening in communication," ranked sixth by the executives, was not selected as a Most Significant statement of the educator group. A similar observation about the executive/educator ranking is to be made in reference to statement 2, "to continue developing a functional vocabulary to communicate effectively." It was ranked seventh by the executives, while the educators placed it twelfth.

In spite of the differences mentioned above, Table 11, reflects the consensus of opinions previously found in the Kendall tau and in the Kendall W statistics. On the basis of the statistical procedures employed, the null hypothesis--that there is no difference between the educators and executives in the means of the Most Significant competency statements--may not be rejected at the .05 level for most of the statements. The obtained t-values for statements 8, 24, 18, 17, 28, 1, 32, 21 and

Table 11

COMPARISON OF THE MEANS AND RANKINGS OF THE MOST SIGNIFICANT
STATEMENTS OF EDUCATORS AND EXECUTIVES

Communication Competency Statement	Educators		Executives		T-Value
	Mean	Rank	Mean	Rank	
8 To communicate effectively in oral business situations.	1.90	1	1.96	1	- .3376
24 To understand and interpret data logically and objectively.	2.37	2	2.25	2	.5217
18 To understand the interrelationship between the psychological aspects of communication and human relations.	2.44	3	2.75	8	-1.1543
17 To understand the communication process, concepts, and applications to interpersonal and organizational problems in business.	2.50	4.5	2.44	4	.2536
28 To have a clear, concise, simple, and natural style of writing.	2.50	4.5	2.58	5	- .3342
1 To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.	2.55	6	2.80	9	- .9479
32 To handle the techniques of unity, coherence, and emphasis in written messages.	2.61	7	2.87	10	-1.1717
21 To distinguish among fact, inference, and opinion.	2.77	8	2.98	12	- .8298
19 To have an awareness of the meanings people assign to words and their effect on human behavior.	2.82	9	3.11	14	-1.2350
20 To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.	2.87	10	2.31	3	2.0069*
7 To understand the important role of listening in communication	3.29	14	2.67	6	2.1037*
2 To continue developing a functional vocabulary to communicate effectively.	3.16	12	2.71	7	2.810*

*These statements are significant at the .05 level.

19 are indicative that these statements are not only highly ranked by both groups, but also display no statistically significant or practical differences between their respective group rankings.

Statements 20, 7, and 2, as illustrated on Table 11, present the opposite situation. The obtained t-value of 2.0069, 2.1037, and 2.2810 reveal significant differences for these statements. Thus, the null hypothesis of no significant difference may be rejected at the .05 level. Notwithstanding the statistical differences, it is worth pointing out that statement 20, "to exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities," is indeed ranked among the Most Significant statements for both educator and executive groups. Hence, it may be inferred that since the educators ranked statement 20 in the tenth place and the executives ranked it in the third position, the statistical difference is of little practical consequence.

Comparison of Most Significant Statements of Executives and Business Graduates

With respect to this pairing, the executives averaging 42 years of age and the business graduates averaging 29 years of age are farther apart in age but

closer, at least in objectives, than the educator/ executive group. Table 12 shows that the top ranked competency statements for the executives present many similarities and overlaps with those of the business graduates even though the rankings do not perfectly duplicate each other. For example, statement 24, "to understand and interpret data logically and objectively," ranked second by the executives, is ranked only eleventh by the business graduates. On the other hand, statements 19 and 29, ranked seventh and eighth by the business graduates, do not appear in the top ten ranked statements of the executive group.

Table 12 displays the overall agreement between the comparisons of the two groups. Seven competency statements were included in the Most Significant statement list of both the executive/business graduate groups. These statements were: 8, 20, 17, 28, 7, 18, 1. Business graduates included statement 19, "to have an awareness of the meanings people assign to words and their effect on human behavior," and statement 29, "to apply the techniques of positive tone and the 'you' attitude to convey empathy, and courtesy," in their most significant rankings while the executive group did not select these statements as top ranked choices.

Table 12

COMPARISON OF THE MEANS AND RANKINGS OF THE MOST SIGNIFICANT
STATEMENTS OF EXECUTIVES AND BUSINESS GRADUATES

Communication Competency Statement	Executives		Business Graduates		T-Value
	Mean	Rank	Mean	Rank	
8 To communicate effectively in oral business situations.	1.96	1	2.23	1	1.4869
24 To understand and interpret data logically and objectively.	2.25	2	2.36	11	2.6560**
20 To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.	2.31	3	2.36	2	.1960
17 To understand the communication process, concepts, and application to interpersonal and organizational problems in business.	2.44	4	2.37	3	- .2570
28 To have a clear, concise, simple, and natural style of writing.	2.58	5	2.61	4	.1347
7 To understand the important role of listening in communication.	2.67	6	2.34	9	.6052
2 To continue developing a functional vocabulary to communicate effectively.	2.71	7	2.36	11	.7759
18 To understand the interrelationship between the psychological aspects of communication and human relations.	2.75	8	2.67	5.5	- .2723
1 To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.	2.80	9	2.67	5.5	- .4924
32 To handle the techniques of unity, coherence, and emphasis in written messages.	2.87	10	2.36	11	- .0646
19 To have an awareness of the meanings people assign to words and their effect on human behavior.	3.11	14	2.79	7	-1.3092
29 To apply the techniques of positive tone and the "you" attitude to convey empathy and courtesy.	3.58	18	2.80	8	3.4321**

**Significant at the .01 level.

Although there were seven overlapping statements, the statistical analysis of Table 12 revealed strong agreement in ten of the comparisons of the executive/business graduate group. The obtained t-values for statements 8, 20, 17, 28, 7, 2, 18, 1, 32, and 19 gave evidence that the null hypothesis may not be rejected at the .05 level of significance.

Of the twelve items listed in Table 12, statistically significant differences were found in the individual comparison of statement 24, "to understand and interpret data logically and objectively," and statement 29, "to apply the techniques of positive tone and the 'you' attitude to convey empathy, and courtesy." As Table 12 shows, the obtained t-values of 2.6560 for the former statement and 3.4321 for the latter indicated that the null hypothesis--that there is no difference between the executive/business graduate groups in the ranking of the communication competency statements--may be rejected at the .05 level of significance for statements 24 and 29.

Comparison of Most Significant Statements of
Business Graduates and Educators

Table 13 presents the comparisons of the Most Significant statements placed in the first ten rankings by business graduate and educator groups. The same nine statements were included in the top ten rankings

of both groups, although not with the identical ranks. The statements were: 8, 20, 17, 28, 1, 18, 19, 32 and 24. With regard to concordance, only one statement in the educators' list, number 21, did not appear on the list of the business graduates.

In addition to the nine overlapped statements of the business graduate/educator group, business graduates also top ranked statement 29, "to apply the techniques of positive tone and the 'you' attitude to convey empathy, and courtesy"; statement 7, "to understand the important role of listening in communication"; and statement 2, "to continue developing a functional vocabulary to communicate effectively." On the other hand, the educator's group ranked these statements in the thirteenth, fourteenth, and twelfth positions, thus excluding them from their list of Most Significant communication competency statements.

As displayed in Table 13, the t-values for statements 8, 17, 28, 1, 18, 19, 7, and 32 indicate a very strong degree of agreement on the relative ranking of each of these statements when compared between the business graduates and educators. Thus, the null hypothesis for these statements may not be rejected at the .05 level of significance.

On the other hand, four significant differences were found in the business graduate/educator comparison. These were statement 20, "to exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities"; statement 29, "to apply the techniques of positive tone and the 'you' attitude to convey empathy, and courtesy"; statement 21, "to distinguish among fact, inference, and opinion"; and statement 24, "to understand and interpret data logically and objectively."

The obtained t-values, shown in Table 13, indicate that the individual comparisons of statements 20, 29, 21 and 24 were significantly different at the .05 level. Thus, the null hypothesis--that there is no significant difference between the business graduates and the executives in the ranking of the communication competency statements--may be rejected at the .05 level of significance.

Notwithstanding the mentioned differences in t-values for statements 20, 29, 21, and 24, both groups of business graduates and educators were consistent in their evaluation of the ranking of two of these statements as being highly significant. Statement 20 is ranked second by business graduates and tenth by educators. Similarly, statement 24 is ranked second by educators and eleventh by business graduates. Therefore, both groups valued

Table 13

COMPARISON OF THE MEANS AND RANKINGS OF THE MOST SIGNIFICANT
STATEMENTS OF BUSINESS GRADUATES AND EDUCATORS

Communication Competency Statement	Business Graduates		Educators		T-Value
	Mean	Rank	Mean	Rank	
3 To communicate effectively in oral business situations.	2.23	1	1.90	1	-1.7740
20 To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.	2.36	2	2.37	10	1.9557*
17 To understand the communication process, concepts, and applications to interpersonal and organizational problems in business.	2.37	3	2.50	4.5	.5405
23 To have a clear, concise, simple, and natural style of writing.	2.61	4	2.50	4.5	-.4802
1 To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.	2.67	5.5	2.55	6	-.4800
18 To understand the interrelationship between the psychological aspects of communication and human relations.	2.67	5.5	2.44	3	-.3668
19 To have an awareness of the meanings people assign to words and their effect on human behavior.	2.79	7	2.82	9	.1622
29 To apply the techniques of positive tone and the "you" attitude to convey empathy and courtesy.	2.30	8	3.26	13	2.0912*
7 To understand the important role of listening in communication.	2.84	9	3.29	14	1.7358
32 To handle the techniques of unity, coherence, and emphasis in written messages.	2.86	11	2.61	7	-1.0734
21 To distinguish among fact, inference, and opinion.	3.39	16.5	2.77	8	-2.6747**
24 To understand and interpret data logically and objectively.	2.86	11	2.37	2	-2.1379*

*Significant at the .05 level.

**Significant at the .01 level.

statement 20 as one of the Most Significant statements; statement 24 was closely behind in relative importance.

Comparison of the Least Significant Statements

The third objective of this study was to discuss the Least Significant communication competency statements of the groups of educators, executives, and business graduates. The Least Significant statements, referred to as the bottom ranked statements, are those placed in columns 6 and 7. The most discriminating choices had to be made at the "tails" of the rating distribution, in this case, the ten statements at each end of the continuum. Thus, the Least Significant statements are the statements placed in columns 6 and 7.

Comparison of Least Significant Statements of Educators and Executives

Table 14 compares the means and rankings of the Least Significant communication competency statements between educators and executives. Educators and executives valued statements numbered 43, 42, 39, 49, 48, 4, 6, and 37 as Least Significant by placing them in the last ten rankings.

Close examination of the contents of the above mentioned overlapping statements points out that the educator/executive group selected competencies concerned

with the writing of specific types of functional business communications as bottom-ranked choices. These low-ranked statements on written business communications were "...letters that grant and refuse credit" (43), "...letters that request and supply credit information" (42), "...order and acknowledgements..." (39), "...letters of transmittal" (48), and "...telegrams, cablegrams..." (37).

However, executives selected statements 36 and 44 as bottom-ranked choices, whereas educators, assigning moderate importance to these statements, excluded them from the Least Significant statement list.

Educators placed items 50 and 35 in the list of the ten Least Significant statements, ranking them 44 and 48.5 respectively. The executives, on the other hand, valued these same two statements somewhat more importantly, having ranked them 35 and 38.5 respectively. Therefore, they do not appear in the executives' ten Least Significant list.

The statistical analysis of the individual comparisons displayed in Table 14 revealed that the t-values for statements 43, 42, 39, 50, 35, and 44 indicated that significant differences at the .05 level occurred in the educator/executive group. Hence, the null hypothesis--that there is no difference between the

Table 1-
COMPARISON OF THE MEANS AND RANKINGS OF THE LEAST SIGNIFICANT
STATEMENTS OF EDUCATORS AND EXECUTIVES

Communication Competency Statement	Educators		Executives		T-Value
	Mean	Rank	Mean	Rank	
43 To write letters that grant and refuse credit.	4.92	41	5.36	45	-2.3951*
42 To write letters that request and supply credit information.	5.00	42	5.36	45	-2.0572*
39 To write order letters and acknowledgments to order letters.	5.02	43	5.49	48	-2.4417*
50 To organize and write the minutes of meetings.	5.27	44	4.76	35	2.1429*
49 To design effective questionnaires.	5.31	45	5.27	42	.1347
48 To write letters of transmittal.	5.35	46	5.64	49	-1.3180
4 To proofread messages.	5.44	47	5.33	43	.4249
6 To understand the fundamentals of parliamentary procedure.	5.52	48.5	5.36	45	.5581
35 To use form and guide letters as cost-saving devices.	5.52	48.5	4.98	38.5	2.2653*
37 To write telegrams, cablegrams, and radiograms.	5.66	50	5.67	50	-.0511
36 To write routine interoffice memorandums.	4.82	39	5.13	41	-1.2139
44 To write application letters and resumes.	4.81	38	5.47	47	-2.7882**

* Significant at the .05 level.

**Significant at the .01 level.

rankings of the statements--may be rejected at the .05 level of significance for these six statements. This means that the educators and the executives gave significantly different rankings to statements 43, 42, 39, 50, 35 and 44. Nevertheless, in spite of the statistically significant ranking differences, three of the six statements--42, 43 and 39--did appear in the ten Least Significant statement list of the educator/ executive groups.

Comparison of Least Significant Statements of Executives and Business Graduates

Previous statistical analyses have indicated that the group of executives and business graduates agree in the comparison of the means and rankings across the 50 communication competencies. A strong degree of agreement in the comparisons of the Most Significant competencies was also evidenced. The comparisons of the Least Significant statements of the executive/business graduates, Table 15, reveal similarities and overlaps between the two groups.

Executives and business graduates agreed on the selection of statements 36, 49, 4, 29, 48 and 37 as Least Significant statements. Four of these statements dealt with the writing of functional business communications: "...memorandums" (36), "...order letters..." (39), "...letters of transmittal" (48), and "... telegrams, cablegrams" (37). The executive/business graduate

group assigned bottom ranks to statements which deal with the ranking of functional business communications. Three of these bottom ranked statements for the executive/business graduate group--39, 48, and 37-- were also bottom ranked for the educator/executive group.

Table 15 shows similarities and overlaps in six statements. Executives included in their ten Least Significant list three statements dealing with written business communications--42, 43 and 44. However, these same three were excluded by the business graduate group from their ten Least Significant list. In so doing, business graduates gave these three statements more importance than the executives did. Of the three statements dealing with written business communications, number 44 is noteworthy. It appears in the ten Least Significant list of the executives, but not in the ten Least Significant list of the business graduates. Similarly, in the pairwise comparison--educators/executives--it did not appear in the educator's ten Least Significant list. Both educators and graduates viewed application letters and resumes as being more important than executives did.

With further regard to differences, business graduates assigned bottom ranks to statements 50, 35 and 5, whereas

Table 15

COMPARISON OF THE MEANS AND RANKINGS OF THE LEAST SIGNIFICANT
STATEMENTS OF EXECUTIVES AND BUSINESS GRADUATES

Communication Competency Statement	Executives		Business Graduates		T-Value
	Mean	Rank	Mean	Rank	
36 To write routine interoffice memorandums.	5.13	41	5.10	45	- .1078
49 To design effective questionnaires.	5.27	42	5.23	46.5	- .1945
4 To proofread messages.	5.33	43	5.03	41	-1.1866
42 To write letters that request and supply credit information.	5.36	45	4.90	36.5	-2.3069*
43 To write letters that grant and refuse credit.	5.36	45	4.91	38	-2.1076*
6 To understand the fundamentals of parliamentary procedure.	5.36	45	5.41	49	.1957
44 To write application letters and resumes.	5.47	47	4.73	34	-3.2424**
39 To write order letters and acknowledgments to order letters.	5.49	48	5.07	43	-2.0387*
48 To write letters of transmittal.	5.64	49	5.07	43	-2.5268**
37 To write telegrams, cablegrams, and radiograms.	5.67	50	5.64	50	- .1355
50 To organize and write the minutes of meetings.	4.76	35	5.07	43	1.4257
35 To use form and guide letters as cost-saving devices.	4.98	38.5	5.23	46.5	1.0704
5 To use audio-visual equipment, graphic aids, media, and materials in oral presentations.	4.64	34	5.29	48	2.5745**

* Significant at the .05 level.

**Significant at the .01 level.

executives placed these statements in ranks of moderate significance.

The statistical analysis of Table 15 revealed that the null hypothesis--that there is no difference in the pairwise comparisons of statements--may not be rejected at the .05 level. The obtained t-values for statements 36, 49, 4, 37, 50, and 35 strongly indicated that there was no statistically significant difference between the respective comparisons.

On the other hand, statements 42, 43, 44, 39, 48, and 5 present the opposite statistical situation. The obtained t-values listed in Table 15 revealed that there were significant differences for these statements. Thus, the null hypothesis of no significant difference may be rejected at the .05 level for these six statements.

Comparison of Least Significant Statements of Business Graduates and Educators

The statistical analysis have revealed that business graduates and educators agree in the comparison across the 50 communication competencies. In fact, the association or congruence was found to be significant at the .01 level.

The comparisons of the Least Significant statements of the business graduate/educator groups, Table 16, presented a pattern of strong agreement for each statement.

In fact, no individual statement comparison revealed a significant difference. Furthermore, the overlap was extensive. The two groups placed the same eight statements in their Least Significant lists. These statements were 4, 39, 48, 50, 49, 35, 6 and 37.

In so far as dissimilarities, the business graduates excluded from the ten bottom ranks statement 42, "to write letters that request and supply credit information;" and statement 43, "to write letters that grant and refuse credit." On the other hand, educators excluded from the ten bottom ranks statement 36, "to write... memorandum," and statement 5, "to use audio-visual equipment...graphic aids...."

A content analysis of the overlapping Least Significant statements showed that five statements dealing with the writing of functional types of business communications were selected by the business graduate/educator group. The statements in reference were "...order letters... (39), "...letters of transmittal" (48), "...minutes of meetings" (50), "...form and guide letters" (35), and "...telegrams, cablegrams..." (37). A similar pattern, with minor variations, was found in both the educator/ executive comparisons, and in the executive/business graduate comparisons.

Table 16

COMAPRISON OF THE MEANS AND RANKINGS OF THE LEAST SIGNIFICANT
STATEMENTS OF BUSINESS GRADUATES AND EDUCATORS

Communication Competency Statement	Business Graduates		Educators		T-Value
	Mean	Rank	Mean	Rank	
4 To proofread messages.	5.03	41	5.44	47	1.7728
39 To write order letters and acknowledgments to order letters.	5.07	43	5.02	43	- .2898
48 To write letters of transmittal.	5.07	43	5.35	46	1.2583
50 To organize and write the minutes of meetings.	5.07	43	5.27	44	.9126
36 To write routine interoffice memorandums.	5.10	45	4.82	39	-1.1051
49 To design effective questionnaires.	5.23	46.5	5.35	45	.3290
35 To use form and guide letters as cost-saving devices.	5.23	46.5	5.52	48.5	1.3504
5 To use audio-visual equipment, graphic aids, media, and materials in oral presentations.	5.29	48	4.90	40	-1.7607
6 To understand the fundamentals of parliamentary procedure.	5.41	49	5.52	48.5	.4079
37 To write telegrams, cablegrams, and radiograms.	5.64	50	5.66	50	.0898
42 To write letters that request and supply credit information.	4.90	36.5	5.00	42	.5164
43 To write letters that grant and refuse credit.	4.91	38	4.92	41	.0251

Categories of the Communication Statements

The fourth objective of this study was to review the Most Significant and the Least Significant communication competencies in terms of their classification in the following categories: Listening and Speaking, Communication Principles, Problem Solving, Writing Styles and Techniques, Functional Business Writing and Content Areas. These broad categories encompass the verbal skills of writing, reading, speaking and listening, as well as the non-verbal areas of analyzing problems and planning, analyzing material, application of logical thought processes to communications, objectivity in the presentation of facts and ideas, and the psychological aspects of communication and human relations.

The 50 communication competency statements were placed in one of the mentioned six categories according to their subject matter content. Some competencies may fit into two categories, in which case, the researcher made the final placement of statements on the basis of meaningfulness and appropriateness in order to facilitate comprehension and synthesis of the gathered data.

Essentially, the following discussion of the categories allows for a review and an analysis of the findings

of this study in a descriptive manner. The list of 50 communication competency statements, grouped in their respective categories, is presented in pages 124-128.

Listening and Speaking Category

The nine communication competency statements comprising the Listening and Speaking Category are displayed in Table 17.

Table 17
COMPARISON OF THE LISTENING AND SPEAKING
CATEGORY STATEMENTS

Statement Code Number	Educators' Rank	Executives' Rank	Business Graduates' Rank
8	1	1	1
7	14	6	9
13	16	13	19
11	19	17	18
9	22	27	27.5
15	23	19	20
12	29	20	27.5
14	30	23	22
10	33	30.5	31

Statement number 8, "to communicate effectively in oral business situations," was ranked in the first place by educators, executives, and business graduates. This finding is consistent with the data gathered in the Profile Sheets where the graduates indicated that they devoted approximately fifty-two per cent of their work day to listening and speaking functions. Likewise, executives indicated that sixty-seven per cent of their work day was spent on tasks requiring listening and speaking skills.

Statement number 7, "to understand the important role of listening in communication," was ranked in the top ten by the executives and business graduates groups. Nevertheless, the educators, ranking it in the fourteenth place, did not value it as a Most Significant statement. As a result of this discrepancy, a significant difference existed between the educators and the executives groups.

On the other hand, none of the nine communication competency statements in the Listening and Speaking category was valued by any group as a Least Significant statement.

Communication Principles

The comparison of the rank distribution of the eight statements comprising this category is shown in

the following table.

Table 18
COMPARISON OF THE COMMUNICATION PRINCIPLES
CATEGORY STATEMENTS

Statement Code Number	Educators' Rank	Executives' Rank	Business Graduates' Rank
18	3	8	5.5
17	4.5	4	3
19	9	14	7
20	10	3	2
2	12	7	11
29	13	18	8
30	21	21	15
16	26	25	30

Six competency statements out of a total of eight were ranked by at least one of the groups of educators, executives, and business graduates as Most Significant statements. These were statements 18, 17, 19, 20, 2 and 29. Of these six, three statements were ranked as Most Significant by each participating group. These statements were "to understand the communication process,

concepts, and applications to interpersonal and organizational problems in business" (17), "to understand the interrelationship between the psychological aspects of communication and human relations" (18), and "to exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities" (20).

The business graduate group ranked statements 20, 17, 18, 19, 29 and 2 as of primary importance by assigning them the second, third, sixth, seventh, eighth, and tenth ranks respectively. The educator group placed statements 18, 17, 19 and 20 in the third, fourth, ninth, and tenth ranks respectively. Following a consistent pattern, the executive group assigned statements 20, 17, 2 and 18 to the top ranks by placing them in the third, fourth, seventh, and eighth places respectively.

Statement 19, "to have an awareness of the meanings people assign to words and their effect on human behavior," was ranked Most Significant by business graduates and educators with ranks of seventh and ninth respectively. On the other hand, executives judged this statement to be of moderate importance by ranking it in the fourteenth place.

Statement 2, "to continue developing a functional vocabulary to communicate effectively," ranked seventh

and tenth by executives and business graduates, was valued as a Most Significant statement. Educators assigned statement 2 a twelfth rank, which is very close behind the Most Significant statements.

Statement 29, "to apply the techniques of positive tone to the 'you' attitude to convey empathy and courtesy," is highly ranked only by business graduates who placed it in the eighth position of importance. On the other hand, educators and executives ranked it in the thirteenth and eighteenth places.

Furthermore, the importance of the Communication Principles Category is heightened by the fact that none of its eight communication competency statements was placed in the bottom ranks by any of the three responding groups.

Problem Solving Skills

Table 19 presents the comparison of the rankings of the Problem Solving Category statements as perceived by the groups of educators, executives, and business graduates.

There are seven communication competency statements in this category; their rankings range from a high of 2 to a low of 30.5. Only one of these--statements 24, "to understand and interpret data logically and

objectively," was ranked as a Most Significant statement by the three groups. Educators and executives ranked it in the second position, while business graduates placed it in the tenth position.

Table 19
COMPARISON OF THE PROBLEM SOLVING
CATEGORY STATEMENTS

Statement Code Number	Educators' Rank	Executives' Rank	Business Graduates' Rank
24	2	2	10
21	8	12	16.5
22	11	11	13
27	15	16	14
23	18	15	21
26	24	29	26
25	25	30.5	23

Statement 21 was considered as a Most Significant statement only by the educator group who placed it in the eighth position of importance. Executives and graduates viewed the distinguishing of facts, inferences, and opinions as a competency statement of moderate

significance by assigning it ranks of twelfth and sixteenth places.

Statement 22, "to collect, analyze and interpret data," ranked eleventh by educators and executives, was close behind the Most Significant statements. Though recognizing the importance of this competency, business graduates excluded it from the top ranks by assigning it thirteenth place.

None of the seven communication competency statements pertaining to the Problem Solving Category was valued as a Least Significant statement by the groups of educators, executives, and business graduates. As revealed in Table 19, statements 27, "to relate problem solving methods, and management philosophy learned in other courses to the writing of letters, memos, and reports," 23, "to organize and outline data," and 26, "to analyze and interpret articles dealing with current events," were selected as choices of moderate significance by the three groups.

Writing Styles and Techniques

Table 20 displays the ranks assigned by the educators, executives, and business graduates to the six communication competency statements in the Writing Styles and Techniques Category.

Table 20

COMPARISON OF THE WRITING STYLES AND
TECHNIQUES CATEGORY STATEMENTS

Statement Code Number	Educators' Rank	Executives' Rank	Business Graduates' Rank
28	4.5	5	4
1	6	9	5.5
32	7	10	11
31	17	22	16.5
3	32	33	32
4	47	43	41

In this category there were three competency statements selected as Most Significant by two or more of the three groups: 28, "to have a clear, concise, simple and natural style of writing"; 1, "to handle correctly sentence structure, grammar, word choice, spelling, and punctuation," and 32, "to handle the techniques of unity, coherence, and emphasis in written messages."

On the other hand, the ability "to adapt written messages to the point of view of the reader" (31) was considered of moderate significance for the three groups. Moreover, this statement was not as important to the

executives as it was to the educators and to the business graduates. The executives ranked it twenty-second; the educators, seventeenth; and the graduates, sixteenth.

Finally in this category, there were two statements at the opposite end of the ranking spectrum: 3, "to use correct letter format and attractive appearance" and 4, "to proofread messages." The mechanics of letter format were uniformly ranked in the thirties and with little, if any, variation--thirty-two for the educators and business graduates, and thirty-three for the executives. Proofreading messages was uniformly ranked in the forties by the three groups of respondents.

Written Business Communications

As illustrated in Table 21 a large number of competencies fit into this category, fifteen in all. As in the previously discussed categories, the ranking differences are numerous and the range is large. As for the range covered in the ranking spectrum it goes all the way from twentieth by the educators, for statement 45 to fiftieth by each group for statement 37. However, unlike the previous categories, the range covered in the ranking spectrum is not from top to bottom. No statement in this category was ranked most significant. Moreover, with only one minor qualification, there was no statement placed in the eleventh through twentieth

rankings. Thirteen of the fifteen statements fell either in the thirty to forty range or the forty to fifty range.

The remaining two statements of the fifteen total in this category were 45, "to write short forms of reports...." and 46, "to write long formal reports...." Both of these were ranked in the twenties by the three responding groups. Of the writing competencies, these were more important than the other thirteen. Though classified in the Written Business Communications Category, because of their position in the ranking spectrum, they may be viewed as logical adjuncts to statement 13, "to present oral reports, oral visual reports, and multimedia reports with facility."

Table 21

COMPARISON OF THE WRITTEN BUSINESS
COMMUNICATION CATEGORY STATEMENTS

Statement Code Number	Educators' Rank	Executives' Rank	Business Graduates' Rank
45	20	24	24
46	28	28	25
47	31	32	33
38	34	40	40
41	36	37	35
40	37	38.5	36.5
44	38	47	34
36	39	41	45
43	41	45	38
42	42	45	36.5
39	43	48	43
50	44	35	43
48	46	49	43
35	48.5	38.5	46.5
37	50	50	50

Content Areas

There are five statements, essentially dissimilar in content, in this category. Classifying these competency statements presented difficulties, for some of them may have been grouped into more than one category. In view of the fact that some of the competency statements called for specialized and often technical functions, the researcher did not deem it reasonable to force-fit them into any of the alternative categories.

Their functional dissimilarity notwithstanding, three of the statements were ranked as Least Significant by one or more of the groups of respondents: 5, "to use audio-visual equipment, graphic aids, media and materials in oral presentations"; 6, "to understand the fundamentals of parliamentary procedure"; and 49, "to design effective questionnaires." A fourth statement, number 34, "to have a background in general business literature," was also relatively unimportant, having been ranked as low as thirty-ninth by one of the three groups. Table 22 presents the comparisons.

Statement 33--"to translate business communications from Spanish into English and English into Spanish"--was ranked in the twenties by the three groups of educators, executives, and business graduates.

Table 22

COMPARISON OF THE CONTENT AREAS CATEGORY STATEMENTS

Statement Code Number	Educators' Rank	Executives' Rank	Business Graduates' Rank
33	27	26	29
34	35	36	39
5	40	34	48
49	45	42	45
6	49	46	49

CATEGORY CLASSIFICATION OF
COMMUNICATION COMPETENCY STATEMENTS

Statement Number	Communication Competency Statement
---------------------	---------------------------------------

LISTENING AND SPEAKING CATEGORY

- | | |
|----|-------------------------------------------------------------------------------------------|
| 7 | To understand the important role of listening in communication. |
| 8 | To communicate effectively in oral business situations. |
| 9 | To further develop proficiency in the correct pronunciation of standard American English. |
| 10 | To listen patiently to people who express themselves poorly or who show poor reasoning. |
| 11 | To communicate over the telephone, and to handle "trouble calls" effectively. |
| 12 | To dictate messages efficiently. |
| 13 | To present oral reports, oral visual reports, and multimedia reports with facility. |
| 14 | To participate in panel and group meetings. |
| 15 | To conduct interviews successfully, and to be an effective interviewee. |

COMMUNICATION PRINCIPLES

- | | |
|----|-------------------------------------------------------------------------------------------------------|
| 2 | To continue developing a functional vocabulary to communicate effectively. |
| 16 | To have an awareness of "silent" language (gestures, postures, movements, uses of time and of space). |

CATEGORY CLASSIFICATION OF
COMMUNICATION COMPETENCY STATEMENTS
(continued)

Statement Number	Communication Competency Statement
17	To understand the communication process, concepts, and applications to inter-personal and organizational problems in business.
18	To understand the interrelationship between the psychological aspects of communication and human relations.
19	To have an awareness of the meanings people assign to words and their effect on human behavior.
20	To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.
29	To apply the techniques of positive tone and the "you" attitude to convey empathy and courtesy.
30	To understand the role of professional and technical terminology--its use and misuse.
PROBLEM SOLVING SKILLS	
21	To distinguish among fact, inference, and opinion.
22	To collect, analyze, and interpret data.
23	To organize and outline data.
24	To understand and interpret data logically and objectively.

CATEGORY CLASSIFICATION OF
COMMUNICATION COMPETENCY STATEMENTS
(continued)

Statement Number	Communication Competency Statement
25	To find and use primary and secondary sources of business information.
26	To analyze and interpret articles dealing with current events.
27	To relate problem-solving methods, and management philosophy learned in other courses to the writing of letters, memos, and reports.

WRITING STYLES AND TECHNIQUES

1	To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.
3	To use correct letter format and attractive appearance.
4	To proofread messages.
28	To have a clear, concise, simple, and natural style of writing.
31	To adapt written messages to the point of view of the reader.
32	To handle the techniques of unity, coherence, and emphasis in written messages.

WRITTEN BUSINESS COMMUNICATIONS

35	To use form and guide letters as cost-saving devices.
36	To write routine interoffice memorandums.

CATEGORY CLASSIFICATION OF
COMMUNICATION COMPETENCY STATEMENTS
(continued)

Statement Number	Communication Competency Statement
37	To write telegrams, cablegrams, and radiograms.
38	To write goodwill messages (welcome, appreciation, congratulation messages).
39	To write order letters and acknowledgements to order letters.
40	To write inquiry letters and reply-to-inquiry letters.
41	To write letters that request, grant, and refuse adjustments.
42	To write letters that request and supply credit information
43	To write letters that grant and refuse credit.
44	To write application letters and resumes.
45	To write the short forms of reports: periodic, progress, memo, and letter reports
46	To write the long formal reports: informational, examinational, and analytical reports.
47	To write summaries, synopses, abstracts, digests, and epitomes.
48	To write letters of transmittal.
50	To organize and write the minutes of meetings.

CATEGORY CLASSIFICATION OF
COMMUNICATION COMPETENCY STATEMENTS
(continued)

Statement Number	Communication Competency Statement
CONTENT AREAS	
5	To use audio-visual equipment, graphic aids, media, and materials in oral presentations.
6	To understand the fundamentals of parliamentary procedure.
33	To translate business communications from Spanish into English and English into Spanish.
34	To have a background in general business literature.
49	To design effective questionnaires.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A summary of this study, conclusions, and recommendations are presented in this chapter.

Summary

Problem

The purpose of this study was to compare the degree of agreement among the perceptions of educators, executives, and business graduates concerning the business communication competencies needed by business graduates to perform communication tasks effectively in business careers in Puerto Rico. On the basis of the statistical findings of these comparisons, recommendations were made to aid curriculum planners in setting organizational criteria to restructure business communication programs in Puerto Rico.

Objectives

1. To determine the degree of agreement on the comparisons of the sets of ranks of the 50 Q-sort communication competencies for
 - a. educators, executives, and business graduates
 - b. educators and executives
 - c. executives and business graduates

- d. business graduates and educators
2. To determine the degree of agreement on the pairwise comparisons of the means and rankings of the Most Significant communication competencies for
 - a. educators and executives
 - b. executives and business graduates
 - c. business graduates and educators
3. To determine the degree of agreement on the pairwise comparisons of the means and rankings of the Least Significant communication competencies for
 - a. educators and executives
 - b. executives and business graduates
 - c. business graduates and educators
4. To classify the 50 communication competencies into one of the six categories and to review the Most Significant and the Least Significant competencies according to their placement in the following categories:
 - a. Listening and Speaking
 - b. Communication Principles
 - c. Problem Solving
 - d. Writing Styles and Techniques
 - e. Written Business Communications
 - f. Content Areas

Methodology

The total population of this study consisted of all the 172 business educators listed in the 1976-1977 Faculty Staff Directory of the School of Business Administration and in the 1977 Membership Directory of the American Business Communication Association; the 8,028 executives listed in the 1976 Puerto Rico Official Industrial Directory and in the 1976 ASPA Directory of Personnel Administrators; and the 1120 business graduates of the University of Puerto Rico for the years 1970, 1971, and 1972.

A random sample of 100 was drawn from each of the populations of educators, executives, and business graduates. Thus, a total random sample of 300 was selected to provide potential participants for this study. Sixty-two educators, 55 executives, and 70 graduates provided the data for this study.

The educators' population included 31 male and 31 female professors from the University of Puerto Rico. As a group, their mean age was 46 years. According to departmental classification, 32 belonged to the English and Spanish Communication departments, 29 to the departments of Accounting, Finance, Management and Statistics, and 13 to the Secretarial Science department. The 62 professors held master's degrees and 27 held doctor's

degrees. Forty-eight of the 62 professors obtained degrees in the United States.

There were 50 male respondents and only 9 female respondents in the business population sample. As a group, their mean age was 42. Thirty-six executives were employed in manufacturing and service companies. As a group, they represented the top level of management. Reportedly, executives performed oral communication most of the time. The majority of executives had earned a college degree. It was interesting to note that 50 executives had had solid training in communication courses.

In comparison to the educators and executives, the business graduates, with a mean age of 29 years, were relatively young. Most of them occupied low and middle level management positions in banking and service companies. As was the case with the executives, communication activities consumed most of their working schedule. Fifty-three per cent of their time was spent in listening and speaking activities. As a group their communication preparation included 14 to 18 credit hours in communication courses.

The Q-sort methodology was used as the means of data collection. It is a relative rating procedure in which the participant sorts a group of statements into a predetermined number of columns. Each column contains a

specified number of items. The most common arrangement is one that results in a quasi-normal distribution in a symmetrical pyramid fashion. The columns represent the rank order of the characteristics under study along a continuum of most significance to least significance. It is the items sorted at either end of the continuum that have the most important effect on statistical measures.

The Q-sort used in this investigation contained 50 communication competency statements representing the communication tasks performed in business careers. A preliminary list of 107 competencies was obtained from the literature and conversations with personnel managers and educators. Fifty of the statements, judged by a panel of experts to be the most appropriate, constituted the Q-sort deck of statements used in this study. For the purpose of this study, instructions were given to participants to sort the 50 competency statements into a forced distribution consisting of seven columns. In addition, respondents were asked to sort according to the following frame of reference: "To perform effectively in business careers, business graduates should possess competencies in English Communication which will enable them..."

To determine the degree of agreement among educators, executives and business graduates groups, the Kendall W and tau were computed. The null hypothesis of a random assignment of ranks was to be rejected at the .05 level of significance. The t-test was applied to determine the degree of agreement between the groups' Most Significant and Least Significant statements. The null hypothesis of no significant difference in the means between two groups was to be rejected at the .05 level of significance.

Results

The first objective sought to determine the degree of agreement on the comparisons of the sets of ranks of 50 Q-sort statements among educators, executives, and business graduates. The three-way comparison among the sets of ranks of educators, executives, and business graduates produced a Kendall W value of .9662. This extremely high value indicated a high degree of association in the three sets of rankings of these groups. The tendency for agreement was significant at the .01 level.

The two-way comparison between the sets of ranks of educators and executives yielded a tau value of .8203. This value indicated a tendency for the educators and the executives to agree in the overall rankings of the 50

Q-sort statements.

The two-way comparison between the sets of ranks of executives and business graduates produced a tau value of .7888. This value indicated a tendency for the executives and business graduates to agree in the overall rankings of the 50 Q-sort statements.

The two-way comparison between the sets of ranks of business graduates and educators yielded a tau value of .8338. This high value indicated a tendency to agree across the 50 statements. The degree of agreement was significant at the .01 level.

The second objective of this study was to determine the degree of agreement of the means of the Most Significant statements of educators, executives, and business graduates.

Educators and executives agreed on the selection of the following statements as Most Significant:

To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.

To communicate effectively in oral business situations.

To understand and interpret data logically and objectively.

To understand the interrelationship between the psychological aspects of communication and human relations.

To understand the communication process, concepts, and applications to interpersonal and organizational problems in business.

To have a clear, concise, simple, and natural style of writing.

To handle the techniques of unity, coherence, and emphasis in written messages.

To distinguish among fact, inference, and opinion.

To have an awareness of the meanings people assign to words and their effect on human behavior.

Significant differences, as determined by the t-test, occurred in only three statements:

To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.

To understand the important role of listening in communication.

To continue developing a functional vocabulary to communicate effectively.

Executives and business graduates agreed on the selection of the following statements as Most Significant:

To communicate effectively in oral business situations.

To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.

To understand the communication process, concepts, and applications to interpersonal and organizational problems in business.

To have a clear, concise, simple, and natural style of writing.

To understand the important role of listening in communication.

To continue developing a functional vocabulary to communicate effectively.

To understand the interrelationship between the psychological aspects of communication and human relations.

To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.

To handle the techniques of unity, coherence, and emphasis in written messages.

To have an awareness of the meanings people assign to words and their effect on human behavior.

Significant differences occurred in only two statements:

To understand and interpret data logically and objectively.

To apply the techniques of positive tone and the "you" attitude to convey empathy and courtesy.

Business graduates and educators agreed on the selection of the following statements as Most Significant:

To communicate effectively in oral business situations.

To understand the communication process, concepts, and applications to interpersonal and organizational problems in business.

To have a clear, concise, simple, and natural style of writing.

To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.

To understand the interrelationship between the psychological aspects of communication and human relations.

To have an awareness of the meanings people assign to words and their effect on human behavior.

To understand the important role of listening in communication.

To handle the techniques of unity, coherence, and emphasis in written messages.

Significant differences occurred in only four statements:

To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.

To apply the techniques of positive tone and the "you" attitude to convey empathy and courtesy.

To distinguish among fact, inference, and opinion.

To understand and interpret data logically and objectively.

The third objective of this study was to determine the degree of agreement of the means of the Least Significant statement of educators, executives, and business

graduates.

Educators and executives agreed on the selection of the following statements as Least Significant:

To design effective questionnaires.

To write letters of transmittal.

To proofread messages.

To understand the fundamentals of parliamentary procedure.

To write telegrams, cablegrams and radiograms.

To write routine interoffice memorandums.

Significant differences occurred in the following statements:

To write letters that grant and refuse credit.

To write letters that request and supply credit information.

To write order letters and acknowledgements to order letters.

To organize and write the minutes of meetings.

To use form and guide letters as cost-saving devices.

To write application letters and resumes.

Executives and business graduates agreed on the selection of the following statements as Least Significant:

To write routine interoffice memorandums.

To design effective questionnaires.

To proofread messages.

To write telegrams, cablegrams and radiograms.

To organize and write the minutes of meetings.

To use form and guide letters as cost-saving devices.

Significant differences occurred in the following statements:

To write letters that request and supply credit information.

To write letters that grant and refuse credit.

To write application letters and resumes.

To write order letters and acknowledgements to order letters.

To write letters of transmittal.

To use audio-visual equipment, graphic aids, media, and materials in oral presentations.

Business graduates and educators agreed on the selection of the following statements as Least Significant:

To proofread messages.

To write order letters and acknowledgements to order letters.

To write letters of transmittal.

To organize and write the minutes of meetings.

To design effective questionnaires.

To use form and guide letters as cost-saving devices.

To understand the fundamentals of parliamentary procedure.

To write telegrams, cablegrams, and radiograms.

To write routine interoffice memorandums.

To use audio-visual equipment, graphic aids, media, and materials in oral presentations.

To write letters that request and supply credit information.

To write letters that grant and refuse credit.

There were no statistically significant differences.

The fourth objective was to classify the 50 communication competencies into one of six categories and to review Most and Least Significant statements by category.

Of the 50 competencies, eight were classified in Communication Principles. Six of these eight were ranked by at least one of the three groups as Most Significant:

To understand the interrelationship between the psychological aspects of communication and human relations.

To understand the communication process, concepts, and applications to inter-personal and organizational problems in business.

To have an awareness of the meanings people assign to words and their effect on human behavior.

To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.

To continue developing a functional vocabulary to communicate effectively.

To apply the techniques of positive tone and the "you" attitude to convey empathy and courtesy.

The remaining two statements in this category, "to understand the role of professional and technical terminology-- its use and misuse," and "to have an awareness of 'silent' language (gestures, postures, movements, uses of time and of space)," were not ranked as Least Significant by any group.

Two of the seven Problem Solving Category statements, "to understand and interpret data logically and objectively," and "to distinguish among fact, inference, and opinion," were ranked as Most Significant by at least one group. No statement was ranked as Least Significant by any group.

Six statements were classified in the Writing Styles and Techniques Category. Three were ranked as Most Significant by two or more groups.

To have a clear, concise, simple, and natural style of writing.

To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.

To handle the techniques of unity, coherence, and emphasis in written messages.

"To proofread messages" was ranked as Least Significant by all three groups.

Nine statements were classified in the Listening and Speaking Category. Two statements, "to communicate effectively in oral business situations" and "to understand the important role of listening in communication," were ranked as Most Significant by at least two groups. None of the nine statements was ranked as Least Significant by any group.

Fifteen statements were classified in the Written Business Communications Category. None of these was ranked as Most Significant by any group. However, nine statements were ranked as Least Significant by one or more groups:

To write application letters and resumes.

To write routine interoffice memorandums.

To write letters that grant and refuse credit.

To write letters that request and supply credit information

To write order letters and acknowledgements to order letters.

To organize and write the minutes of meetings.

To write letters of transmittal.

To use form and guide letters as cost-saving devices.

To write telegrams, cablegrams, and radiograms.

From the five statements classified in the Content Areas Category, none was ranked as Most Significant by any group. On the other hand, statements "to use audio-visual equipment, graphic aids, media, and materials in oral presentations"; "to design effective questionnaires," and "to understand the fundamentals of parliamentary procedure" were ranked as Least Significant by at least one group.

Conclusions

1. Educators, executives, and business graduates agreed significantly in their perceptions concerning the communication competencies needed by business graduates for effective performance in business careers in Puerto Rico.

2. Educators, executives, and business graduates agreed in their perceptions concerning the Most Significant communication competency statements needed by business graduates for effective performance in

business careers in Puerto Rico. Educators, executives, and graduates disagreed when individual statement comparisons were made. The comparisons of the Most Significant statements revealed 9 significant differences on individual statements.

3: Educators, executives, and business graduates agreed in their perceptions concerning the Least Significant communication competency statements for effective performance in Puerto Rico.

Educators, executives, and graduates disagreed when individual statement comparisons were made. The comparison of the Least Significant statements revealed 12 significant differences on individual statements.

4. Educators, executives, and business graduates agreed on the importance of the communication competencies placed in categories related to Communication Principles, Writing Styles, Listening and Speaking, and Problem Solving. Competencies and skills related to the psychological aspects of communication as it applies to the achievement of empathy and courtesy; the communication process and its application to organizational problems; the ability to write clearly, concisely, coherently and naturally; listening and speaking skills, and problem solving skills were valued as most significant competencies in the performance

of communication tasks.

5. Educators, executives, and business graduates agreed on the relative unimportance of the competencies placed in the Content and Written Business Communications. Skills related to the writing of business letters by types, such as orders, credit, transmittal, and application, and special forms such as memorandums, cablegrams, and minutes were viewed as least significant. Designing questionnaires, using audio-visual equipment and graphic aids, and learning parliamentary procedure techniques were also judged to be least significant in terms of communication requirements for effective performance in business.

Recommendations

On the assumption that educators, executives, and business graduates are qualified judges of the necessary communication competencies for a business career, the researcher has used the Most Significant and the Least Significant competency statements, as viewed by these groups, to indicate what should be emphasized and what should be de-emphasized in a business communication curriculum. Thus, those competencies ranked as Most Significant will represent the areas which merit emphasis, and the Least Significant statements will sum up

the areas which may be de-emphasized in the curriculum.

The foundations of the recommended curriculum rest on the linguistic mechanics and fundamentals of the English language, on oral and written communications as applied to business situations, on the process of logical thought as it applies to problem-solving and decision-making, and on the psychological aspects of communications and human relations.

Competencies to be Emphasized

The ranking of the competency "to communicate effectively in oral business situations" as the first Most Significant by the educators, executives, and business graduates indicates the importance of oral communications as a requirement for effective performance of communication tasks in business careers. Thus, the recommended business communication curriculum should place primary stress on the development of oral communications skills as they relate to business situations. Creative steps should be taken to facilitate the implementation of possible changes in the business communication curriculum. To meet the challenge and the need of the business community, a new course "Oral Business Communications" might well become part of the business course program.

Executives and business graduates, being involved in real on-the-job problems, signal the importance of the competency "to understand the important role of listening in communication" as an integral part of the curriculum. Thus, the communication curriculum should incorporate training in the listening skills to fully prepare business graduates to become effective communicators.

The cultural, political, and economic reality--that Puerto Rico communicates to the world in both Spanish and English--highlights the importance of the following competencies:

To handle correctly sentence structure, grammar, word choice, spelling, and punctuation.

To continue developing a functional vocabulary.

To have an awareness of the meanings people assign to words and their effect on human behavior.

To handle the techniques of unity, coherence, and emphasis in written messages.

To have a clear, concise, simple and natural style of writing.

Consequently, it is necessary that business graduates master linguistic mechanics, vocabulary skills, semantics, and the fundamentals of the English language. In fact, this area should become a pivotal component

of the communications program. Even though business communication courses were not meant to be remedial courses, it is recommended that the teaching of the fundamentals of the English language be approached realistically and functionally. This may be achieved by offering remedial courses to correct weaknesses which hinder effective communications. Furthermore, the necessary instructional emphasis should be given to provide the student with adequate training to overcome the psycholinguistic and cultural barriers germane to a Spanish-English milieu.

Educators, executives, and business graduates have indicated that an essential competency for business graduates is the ability to write clearly, concisely, simply, and naturally. Thus, the business communications program should include simulation workshops in written communications patterned after the written communications of real-business situations in Puerto Rico.

The selection of four social interaction competencies as most significant suggests that educators, executives, and business graduates view business communications as a vital tool in the behavioral aspects of managerial functions. These competencies were

To understand the communication process, concepts, and applications to interpersonal and organizational problems in business.

To understand the interrelationship between the psychological aspects of communication and human relations.

To apply the techniques of positive tone and the "you" attitude to convey empathy and courtesy.

To exercise initiative, empathy, persistence, reliability, and intellectual honesty in performing communication responsibilities.

Thus, in order to equip graduates with the expertise to handle the psychological, ethical, and human relations aspects of the business world, training in interaction and interpersonal skills should be provided. A relevant business communication curriculum should be built on a broad perspective integrating related aspects of the behavioral sciences--psychology, ethics, and human relations. Therefore, to meet the expectations of the business community and to occupy a rightful place in the business curriculum, the business English communication program should surpass the myopic approach of structuring contents on merely the mechanics of language and the fundamentals of prescribed written business forms.

"To distinguish among fact, inference and opinion "
and "to understand and interpret data logically and

objectively" are viewed by both the academic and the business sectors as most significant competencies. As such, they should be integral parts of the communication curriculum. Therefore, curriculum planners should become cognizant of the need to include the development of critical thinking skills in the academic preparation of business students. Serious consideration should be given by the academic and business sectors to promote the offering of a course in the logical process of thought as it applies to problem-solving and decision-making situations in business.

Competencies to be De-Emphasized

Educators, executives, and business graduates rated thirteen communication competencies in the spectrum of least significance. Five competencies related to the writing of specific letters were considered to be least significant. These were:

To write letters of transmittal.

To write order letters and acknowledgements to order letters.

To write letters that request and supply credit information.

To write letters that grant and refuse credit.

To write application letters and resumes.

Probably this is a warning against the orthodox step-by-step approach to letter writing. Perhaps the necessity for writing these types of letters is unimportant in terms of the writing of other types of written communications. It may be that business graduates will not be required to write these types of letters as part of on-the-job communication duties. Instruction in the writing of these types of letters should be de-emphasized.

Writing application letters is valued as unimportant by the executives, but moderate in importance by educators and business graduates. This competency is obviously helpful for business graduates to obtain appointments to positions. Yet, from the point of view of the executives, this competency is not required of business graduates to perform on-the-job written communication responsibilities.

The competencies involving the credit related letters and the letters of transmittal play a minor role in the written communication activities of business graduates. Being highly delicate and specialized in content, these letters are generally written by professional writers, top executives, or by a particular organizational department.

Four competencies related to mechanical and routine functions were viewed as unimportant by business graduates. These were:

To write telegrams, cablegrams and radiograms.

To proofread messages.

To use form and guide letters as cost-saving devices.

To write routine interoffice memorandums.

Probably, these skills are best learned in the in-service training programs of each company.

Four competencies of the Content Areas were viewed by educators, executives, and business graduates as least significant. These were:

To understand the fundamentals of parliamentary procedure.

To design effective questionnaires.

To organize and write the minutes of meetings.

To use audio-visual equipment, graphic aids, media, and materials.

Executives perceived the writing of minutes and the use of audio-visual equipment and materials as having moderate significance. Probably, these competencies, such as the design of questionnaires, are entrusted to experts in the field.

Others, such as parliamentary procedure and audio-visual techniques, should not be considered major objectives of a communication curriculum. Finally, the writing of minutes may be best learned in individualized circumstances. Thus, the instructional time devoted to the teaching of these competencies should be de-emphasized in the business communication curriculum.

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APPENDIX A

LIST OF MEMBERS OF THE PANEL OF EXPERTS

<u>Name</u>	<u>Affiliation</u>
Dr. Leland Brown	Department of Management Eastern Michigan University
Dr. William H. Bonner	Tennessee Technological University
Dr. Presley C. Dawson	Long Beach City College
Dr. John Gould	School of Business Administration University of Southern California
Dr. J. Harold Janis	New York University
Dr. William C. Himstreet	School of Business Administration University of Southern California
Dr. Raymond V. Lesikar	Department of General Business The University of Texas
Professor David Pilfold	Queens University, Canada
Dr. Norman B. Sigband	School of Business Administration University of Southern California
Dr. Jean L. Voyles	Department of Vocation and Career Education Georgia State University
Dr. Walter Wells	School of Humanities California State College
Dr. Francis Weeks	Executive Director, ABCA University of Illinois

<u>Name</u>	<u>Affiliation</u>
Dr. Morris Philip Wolf	University of Houston
Dr. C.W. Wilkinson	School of Business Administration University of Alabama
Professor Margot B. Argueta	University of Puerto Rico
Professor Margarita S. Horn	School of Business Administration University of Puerto Rico
Dr. Margaret Mergal	University of Puerto Rico
Dr. Margaret A. Nance	School of Humanities University of Puerto Rico
Professor Ana Maria O'Neill	University of Puerto Rico
Professor Mary C. Ortiz	School of Business Administration University of Puerto Rico
Professor Carmen Pérez Román	School of Business Administration University of Puerto Rico
Dr. Aurelio Roque Delgado	School of Business Administration University of Puerto Rico
Dr. Jose Rivera Silvestrini	School of Business Administration University of Puerto Rico
Mr. Antonino R. de León	President, Association of Personnel Administrators

APPENDIX B

LETTERS OF REQUEST FOR PARTICIPATION

Does the business English communication curriculum meet the needs of business and industry in Puerto Rico?

I am involved in a doctoral study at Lehigh University which will determine the extent of agreement among businessmen, educators, and business graduates on the communication competencies necessary for business students to acquire at the collegiate level. The research is conducted under the guidance of Dr. Glenn Christensen, Distinguished Professor of Lehigh University.

Because of your experience, research, and publications, you are among the qualified professionals whose help I need to design a reliable instrument to gather the data for this study.

The enclosed Preliminary List is the initial step in the development of a complete and meaningful instrument. This list consists of sixty-seven statements each of which describes briefly an educational objective in terms of a skill or a competency to be acquired by business students. The statements are grouped in nine categories which represent the broad areas of business English communication.

Your contribution, if you are willing to assist in the study, is to review the sixty-seven statements for completeness of coverage, and for readability, clarity, and significance. Please write your suggestions, questions, additions, and deletions directly on the Preliminary List. Additional comments may be written on the back of one or more sheets of the List.

Please return the Preliminary List with your comments and revisions in the enclosed stamped addressed envelope. I should appreciate hearing from you before November 15.

Cordially yours,

Angelina Adames-Hill
Associate Professor
University of Puerto Rico

Encs. 2

I am engaged in a doctoral study at Lehigh University to determine the degree of agreement on the content and objectives of business English communication courses at the college level. The participants are selected groups of business graduates from the University of Puerto Rico, executives, and business educators.

As a graduate of the School of Business Administration, you have the academic training and the business experience to judge the communication competencies business graduates need for effective performance in business careers. I need your professional help in the identification of those competencies in business English communication which should be acquired by business students in their communication courses.

May I have your professional help in this study? By participating, you can provide valuable insights for the curriculum revision of business English communication courses.

All that you need to do is to sort the enclosed deck of cards according to the given instructions, and complete and return the Recording Sheet and the Profile Sheet. The task is quick and easy; only twenty minutes of your time is needed.

Your cooperation is vital to the success of this study. Won't you share your judgments and opinions by returning the Recording Sheet and the Profile Sheet at your earliest convenience?

Cordially yours,

Angelina Adames-Hill
Associate Professor
School of Business Administration
University of Puerto Rico

Enc. 7

I am engaged in a doctoral study at Lehigh University to determine the degree of agreement on the content and objectives of business English communication courses at the college level. The participants are selected groups of executives, educators, and business graduates.

As an executive, you devote considerable time to communication activities. Hence you are an experienced judge of the communication competencies and skills business graduates need for effective performance in the business world in Puerto Rico.

May I have your professional help in this study? By participating, you can provide valuable insights for the curriculum revision of business English communication courses.

All that you need to do is to sort the enclosed deck of cards according to the given instructions, and complete and return the Recording Sheet and the Profile Sheet. The task is quick and easy; only twenty minutes of your time is needed.

The success of this study depends on the competent judgments and opinions of businessmen like you. Won't you give me your cooperation by returning the Recording Sheet and the Profile Sheet at your earliest convenience?

Cordially yours,

Angelina Adames-Hill
Associate Professor
School of Business Administration
University of Puerto Rico

Enc. 7

APPENDIX C

EXECUTIVE AND BUSINESS GRADUATE PROFILE SHEET

Please fill in or encircle the choice which fits your case.

Position/Title _____

Level of Management:

- | | |
|----------------------|--------------------|
| 1. Executive | 3. Supervisory |
| 2. Middle Management | 4. Non-supervisory |

Number of years in present position _____

Age: 1. 25-30 3. 40-50 5. 60-70 Sex _____
 2. 30-40 4. 50-60

Company classification:

- | | |
|---------------------------|---------------------------------|
| 1. Advertising Agency | 7. Public Utility |
| 2. Industrial company | 8. Manufacturing company |
| 3. Commercial bank | 9. Federal agency |
| 4. Life insurance company | 10. ELA agency |
| 5. Merchandising company | 11. Exporting/Importing company |
| 6. Transportation company | 12. Other _____ |

Educational background:

Highest degree held _____
 Institution granting the degree _____

Major Area of Study:

- | | |
|----------------------------|---------------------------|
| 1. Business Administration | 10. Humanities |
| 2. Accounting | 11. Journalism |
| 3. Marketing | 12. Education |
| 4. Management | 13. Law |
| 5. Secretarial Science | 14. Natural Sciences |
| 6. Quantitative Methods | 15. Engineering |
| 7. Finance | 16. Agriculture |
| 8. Economics | 17. Public Administration |
| 9. Social Sciences | 18. Other _____ |

Circle the number of the courses you have taken in Business Communication:

- | | |
|------------------------------------|--------------------------------------------------|
| 1. Business English Communication | 5. Speech Improvement in English |
| 2. Business English Letter Writing | 6. English-Speaking Translation |
| 3. Report Writing in English | 7. Communication courses offered by your company |
| 4. Public Speaking | 8. None of these |

Relationship of Communication Activities to your Total Job:

Percentage of time devoted to Non-Communication Activities _____
 Percentage of time devoted to Communication Activities in Spanish _____

Percentage of time devoted to Communication Activities _____
 Percentage of time devoted to Communication Activities in English _____

Total _____
 100%

Total _____
 100%

EXECUTIVE AND BUSINESS GRADUATE PROFILE SHEET
(continued)

List the percentage of time devoted to the following communication responsibilities:

Letter Writing	_____	%
Report Writing	_____	%
Memorandum Writing	_____	%
Listening	_____	%
Oral Communications	_____	%
English-Spanish Translation	_____	%
Total	_____	%
		100%

List in order of importance three college courses which have specially helped you to achieve success in your present position.

1. _____ 2. _____ 3. _____

Optional Comment

According to your personal experience, what communication skill(s) do you consider most essential for success in a business career?

Should you like a copy of the summary of the finding of this study, please let me know.

EDUCATORS' PROFILE SHEET

Please fill in or encircle the choice which fits your case.

Name of Institution _____ Faculty _____

Department _____

Sex _____ Age: 1. 25-30 3. 40-50 5. 60-70
2. 30-40 4. 50-60

Highest degree held:

- 1. Bachelor
- 2. Master
- 3. Law
- 4. Doctor

Institution granting degree:

Academic Field of Specialization:

Undergraduate Major _____

Graduate Major _____

- Rank: 1. Professor
2. Associate Professor
3. Assistant Professor

- 4. Instructor
- 5. Lecturer
- 6. Other _____

Teaching Assignment: 1. Full Time 2. Part Time

Teaching Experience _____ years

Do you do consulting work in addition to your teaching? 1. yes 2. No

Subjects Taught:

Authors and names of basic text(s) used in course(s) you teach.

Language of basic text(s) used
in courses you teach

Spanish _____ %
English _____ %
Total 100%

Percentage of instructional time
conducted in:

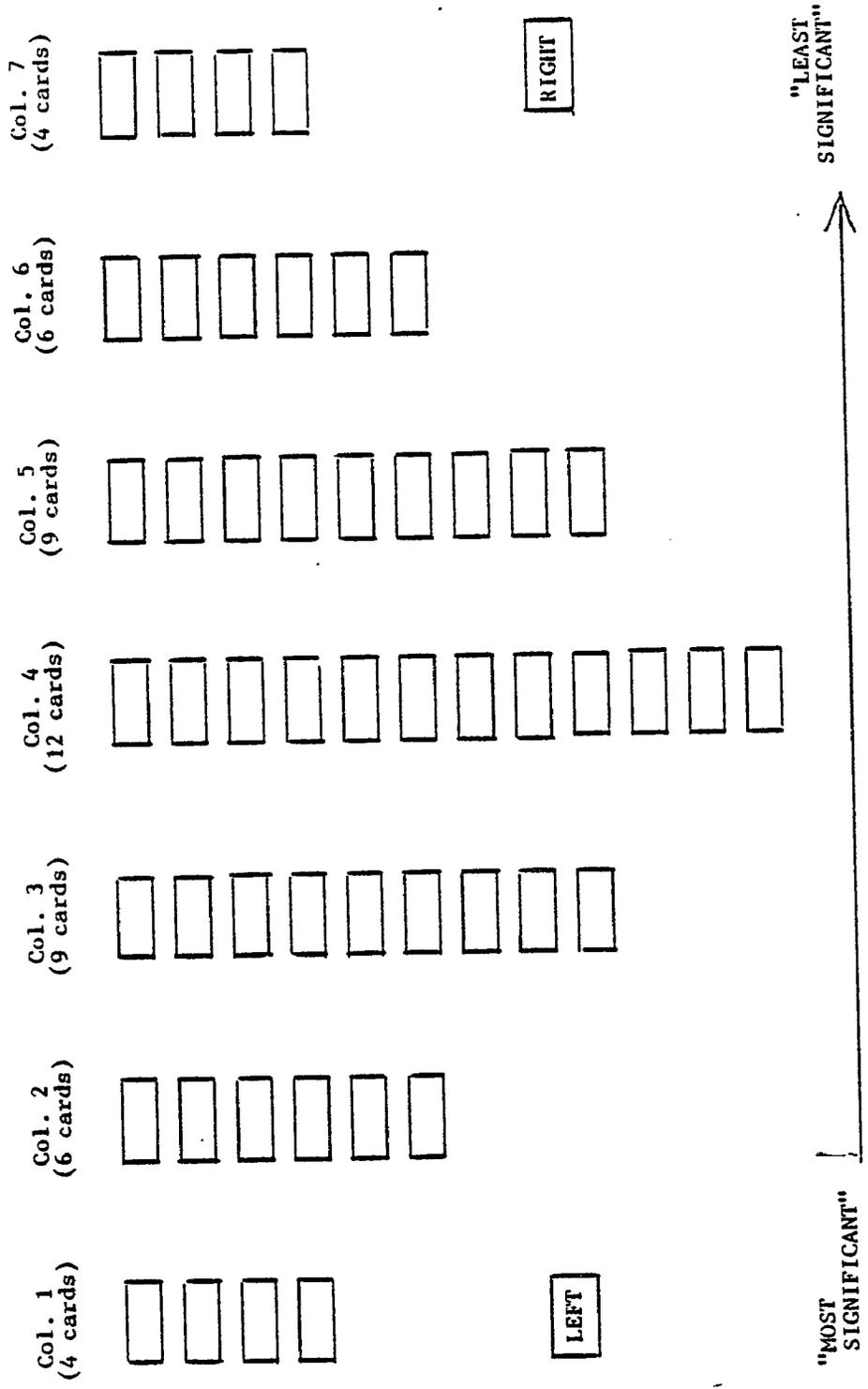
Spanish _____ %
English _____ %
Total 100%

Optional Comment

According to your personal experience, what communication skill(s) do you consider most essential for success in a business career?

Should you like a copy of the summary of the findings of this research study, please let me know.

APPENDIX D
MODEL SORTING DIAGRAM



VITA

ANGELINA ADAMES-HILL

Place and Date of Birth: Panama, Republic of Panama,
August 3, 1935

Education:

Instituto Pan-Americano, Panama, Republic of Panama
High School Diploma 1948-1953

Cornell College, Mount Vernon, Iowa
Bachelor of Arts 1953-1957

University of Wisconsin, Madison, Wisconsin
Master of Arts 1957-1958

University of Puerto Rico, Rio Piedras, Puerto Rico
Graduate Work in Philosophy 1969-1971

Inter-American University, San Juan, Puerto Rico
Graduate Work in Education 1972-1974

Lehigh University, Bethlehem, Pennsylvania
Doctor of Education 1975-1978

Professional Experience:

Instructor, English Department, 1958-1960
College of Agriculture and Mechanical Arts
Mayaguez, Puerto Rico

Associate Professor, Business English Department, 1960-
School of Business, University of Puerto Rico
Rio Piedras, Puerto Rico

Professional Organizations:

Association of University Professors of Puerto Rico

American Business Communication Association

National College English Teachers Association

Association for Supervision and Curriculum Development