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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

A STUDY OF THE EFFECTIVENESS OF VISUAL COMMUNICATION IN REINFORCING CLASSROOM INSTRUCTION OF SELECTED PRINCIPLES OF BUSINESS COMMUNICATION

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

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degree of

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by

LOUETTA S. MOONEY

Norman, Oklahoma

1972

A STUDY OF THE EFFECTIVENESS OF VISUAL COMMUNICATION IN REINFORCING CLASSROOM INSTRUCTION OF SELECTED PRINCIPLES OF BUSINESS COMMUNICATION

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A STUDY OF THE EFFECTIVENESS OF VISUAL COMMUNICATION IN REINFORCING CLASSROOM INSTRUCTION OF SELECTED PRINCIPLES OF BUSINESS COMMUNICATION

CHAPTER I

THE PROBLEM

Introduction

Visual illustrations are rapidly becoming an almost universal means of instruction in the classroom; slides, photographs, cartoons, transparencies, film strips, and sketches are now in use.

Positive claims made by teachers for effective use of audiovisual materials are upheld by research studies reviewed by Dale, Finn, and Hoban. They point out that audiovisual materials supply a basis for conceptual thinking, as well as the necessary basis for concept learning that, in turn, contributes to permanent learning.[1]

Although visual aids have been widely used to supplement elementary and secondary programs, comparatively little progress has been made by institutions of higher learning to

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[1]Edgar Dale, James D. Finn, and Charles Hoban, Jr., "Audio-Visual Materials," Encyclopedia of Educational Research, ed. by Walter S. Monroe (Rev. ed.; New York: The MacMillan Company, 1950), pp. 84-97.

develop such aids. In general, higher education has been reluctant to accept technological innovations. Furthermore, information has been lacking in the area of business communication to determine the most effective teaching methods which have resulted in improved learning.

Inman stated, "In order to improve the teaching of written communication in colleges and universities, more information is needed about how students learn to write."[1]

For the most part, the limited research to measure the effectiveness of the reinforcement of information acquisition in English has been confined to the application and development of programmed instruction. A search of literature revealed that no studies had been completed to measure the learning outcomes of supplementing classroom instruction with visual materials that illustrate business communication principles.

Authorities recommend that instructors devise instructional methods to aid students to master principles. Lembo made the following statement:

> . . . principles are aids in the acquisition, retention and transfer of large amounts of knowledge. The importance of acquiring principles and/or the importance of introducing organizing principles into the study of new material to facilitate its acquisition, retention and subsequent utilization has been supported in a number of experimental studies.

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[1]Thomas H. Inman, "Business Correspondence: How Much Writing Is Necessary?" The ABCA Bulletin, XXXIII, No. 2 (September, 1970), 1.

> The implication for classroom instructors perhaps is apparent. Since the basic principles in academic subjects have the widest range of application and relatability to future learning episodes, the devising of methods whereby students can identify and master principles should be a primary concern of the classroom instructor.[1]

Research in business communication to investigate the effectiveness of visual aids and to establish improved teaching methods has been very limited. Few reports of innovative use of audiovisual materials have been submitted to the Higher Education Media Study, although there was evidence that the large transparency remains one of the most effective and widely used of all the new media.[2]

Audiovisual materials, transparencies in particular, can be used in a controlled experiment to test the effectiveness of illustrations as a reinforcement cue in learning business communication principles. Menning and Wilkinson stressed the importance of illustrations in presenting business communication principles as follows:

> In learning anything as complex as writing superior letters and reports, you need instruction in PRINCIPLE, then ILLUSTRATION, and finally PRACTICE in applying the principles.[3]

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[1]John M. Lembo, The Psychology of Effective Classroom Instruction (Columbus, Ohio: Charles E. Merrill Publishing Company, 1969), p. 137.

[2]James W. Thornton, et al., "Transparencies for Overhead Projection," New Media and College Teaching (Washington, D. C., National Educational Association, 1968), p. 105.

[3]J. H. Menning and C. W. Wilkinson, Communicating Through Letters and Reports (4th ed.; Homewood, Illinois: Richard D. Irwin, Inc.), p. vi.

Many business communication techniques are difficult to teach by the lecture method. The reinforcement of business communication principles by complementing the traditional lecture with transparencies will result in increased learning outcomes.

Brannen pointed up the need for innovation in the teaching of business communication:

> . . . communication skills have to be learned by memorizing rules and engaging in drills. . . . The teaching methods used by many communications faculties provide little stimulation to the student so that there is as great a need to innovate in most communications courses as there is in many other courses in the university.[1]

Audiovisual materials, transparencies in particular, are effective if they are presented in line drawings, stick figures, cartoon characters, and simple illustrations. This type of presentation would be very adaptable to present principles in the teaching of business communication. The Attneave study was predicated on the hypothesis that perception is enhanced by reducing information to essentials. He concluded that lines bordering objects provide the essence of the information to be conveyed and that cartoons and stick drawings as conveyors of information are very effective.[2]

Lembo, also, maintained that . . . "there is evidence

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[1]Ted R. Brannen, "A Dean's Perception of Business Communication," The ABCA Journal of Business Communication, VII, No. 4 (Summer, 1970), 35.

[2]Fred Attneave, "Some Informational Aspects of Visual Perception," Psychological Review, LX, No. 3 (October, 1954), 185.

that the use of instances which contain a minimum of detail and/or permit an emphasis of the essential or salient characters of exemplars tends to facilitate concept acquisition."[1]

There is need for research in business communication through controlled experimentation to devise more effective means of instruction. Industry depends increasingly on colleges and universities to offer communication training to businessmen. Ross came to the following conclusions after conducting a classroom experiment:

> . . . their [student's] abilities are not adequate for the requirements of most of today's employers. . . . My thesis is that since they have not learned how to communicate adequately they find additional work in this area a difficult and trying experience.[2]

Knapper's study, which was concerned with the identification and classification of the writing deficiencies of businessmen, included the following recommendation:

> There is need for research through controlled experimentation to devise programs of education which will produce greater writing competencies of students as well as businessmen.[3]

Transparencies developed in a planned series could

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[1]Lembo, Classroom Instruction, p. 130.

[2]Kenton E. Ross, "Management Objectives Applied to the Business Communication Class," The ABCA Journal of Business Communication, VIII, No. 2 (Winter, 1971), 3.

[3]A. F. Knapper, "Written Communication: A Critical Analysis of the Writings of Business Correspondents," (unpublished doctoral dissertation, State University of Iowa, 1961), pp. 167-68.

result in improved instruction in a basic business communication course.

Travers visited sources that produced films or audiovisual material and who were recognized experts at producing visual aids. He observed that, on the whole, textbooks show some agreement in important factors of information that can be transmitted through audiovisual materials; however, an investigation of the materials produced by four leading designers of materials, two university and two commercial producers, showed no agreement on principles that should be followed.[1]

According to Travers, some of the variation among the producers on principles to be covered included the following:

1. Differences in assumptions concerning the best methods of transmitting information (audio or visual.)
2. Differences in principles of the use of color.
3. Differences in the use of verbal material.
4. Differences in the recommended methods of presentation.[2]

Travers concluded that producers of instructional materials make production decisions in terms of hunches and intuition rather than well-defined production principles.[3]

Inspection of a recent catalog of instructional

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[1]Robert M. W. Travers, et al., Research and Theory Related to Audiovisual Information Transmission (Rev ed.; Kalamazoo, Michigan: U. S. Department of Health, Education and Welfare, Office of Education Contract No. 3-20-003, 1967), p. 9.

[2]Ibid., p. 11.

[3]Ibid.

materials revealed that eight companies produced transparencies in the language arts area. One of these companies listed transparencies that might be used for a few selected principles of business communication.[1]

Statement of Problem

This study investigated the following question:

> Will the instruction that is complemented by teacher-made transparencies emphasizing business communication principles result in more effective learning than the traditional method of instruction in terms of achievement in a reaction-evoking persuasive communication assignment?

Statement of Purpose

The purpose of this study was to determine whether collegiate business communication classes would experience similar achievement after being taught by two instructional techniques: (1) the traditional method, utilizing the chalkboard, the text, and lectures; and (2) the experimental method, utilizing specially prepared transparencies projected on a screen to complement the traditional method.

Population and Sample

The population chosen for the conduct of this study was eight classes of students, both full-time and part-time, who pre-enrolled for the spring semester of 1971-1972, in

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[1]United Transparencies, Educator's Purchasing Master, Instructional Materials, I (3d ed.; Englewood, Colorado: Fisher Publishing Company, Inc., 1971), p. 385.

Business Communication 323a at Central State University, Edmond, Oklahoma.

This study was limited to eight classes or sections of the eleven sections of the business communication course offered during the spring semester at Central State University, Edmond, Oklahoma. Each instructor who was a cooperating teacher in the study, was randomly assigned both a control group and an experimental group.

At the end of the second semester, twenty subjects were randomly selected from each of the four control classes and twenty subjects were randomly selected from each of the four experimental classes, making a total of eighty subjects in the control group and eighty subjects in the experimental group.

The two groups of eighty students were the subjects of the study to determine the effectiveness of the audio-visual material that supplemented traditional methods of instruction.

Limitations

To avoid overgeneralizations of the results of this study, the following limitations are acknowledged:

First, the population is restricted to eight classes of Central State University students.

Second, the validity of the scores recorded are limited to the instruments being utilized in the study.

Operational Definitions

The special terminology used in this study was defined as follows:

1. Direct Reaction-Evoking Persuasive Letter.--An original sales letter-writing problem prepared by the investigator, using the elements of persuasion to receive a feedback of action or reaction.

2. Experimental Subgroups (Classes).--Those students who received business communication instruction complemented by the use of audio-visual materials.

3. Experimental Subjects.--Students from experimental subgroups who met the additional criteria presented in the section, "Choice of Population and Sample."

4. Traditional Subgroups (Classes).--Those students who received business communication instruction not complemented by the use of audiovisual material.

5. Traditional Subjects (Control).--Students from traditional subgroups who met the additional criteria presented in the section, "Choice of Population and Sample."

6. Letter-Rating Scale.--A weighted rating instrument devised by the researcher for scoring the direct reaction-evoking persuasive letter.

7. Teacher-Rating Scale.--A weighted rating instrument devised to obtain a concomitant measure of the three different instructors.

8. Business Communication Principles.--Theories of business communication developed from the 1961 Syllabus, published by the American Business Writing Association.

Hypotheses

In this study, the following hypotheses were tested:

Ho_1: There is no significant difference between the pretest Cooperative English Test scores of the experimental and the control classes.

Ho_2: There is no significant difference between the posttest Cooperative English Test scores of the experimental and the control classes.

Ho_3: There is no significant difference between the pretest English ACT scores of the experimental and the control classes.

Ho_4: There is no significant difference between the pretest scores of the reaction-evoking letter of the experimental and the control classes.

Ho_5: There is no significant difference between the posttest scores of the reaction-evoking letter of the experimental and the control subjects.

Ho_6: There is no significant difference among the reaction-evoking letter scores of the students from the different classifications (grades.)

Ho_7: There is no significant difference among the reaction-evoking letter scores of the students who were enrolled in classes meeting at different times of the day.

Ho_8: There is no significant difference among the reaction-evoking letter scores of the students who were taught by different instructors.

Ho_9: There is no significant relationships among the variables of class attendance time, instructor, classification, English ACT scores, grade-point average, age, Cooperative English scores, and reaction-evoking letter scores.

Assumptions

The conduct and the results of this study were based on the following assumptions:

1. Communication ability is related to the Cooperative English Test scores and English ACT scores.

2. The Cooperative English Test (CET) is a valid and reliable measure of ability in grammar.

3. The American College Test (ACT) English score is a valid and reliable measure of English ability in grammar.

4. The research design chosen for this study adequately controls extraneous factors.

5. The statistical tests chosen for the analyses possess adequate power of discrimination.

6. The subjects enrolled in the eight sections (classes of Business Communication 323a at Central State University (Oklahoma) during the spring semester of 1971-72 constitute a normal population.

7. The samples taken for the control (n=80) and the experimental (n=80) are of adequate size from which to generalize results.

Organization of Report

Chapter I includes statement of the problem, statement of the purpose, population and sample, limitations, operational definitions, hypotheses, assumptions, and organization. Chapter II provides a review of related literature. Chapter III provides methodology and procedures. Chapter IV explains the collection and the analyses of data. Chapter V consists of the summary, the conclusions, the implications, and the recommendations.

CHAPTER II

REVIEW OF RELATED LITERATURE

A review of literature reveals that principles employed by a communicator in designing and arranging visual stimuli have not been identified. This review was limited to significant features of pictorial presentations that can be measured as a reinforcement of learning.

The material was classified into two groups: (1) published literature and (2) unpublished doctoral research studies. The basis for the division was twofold. First, a review of the published literature would present (1) those stuides in which particular aspects of a visual presentation are varied, and (2) those studies that are grouped in subject areas for comparison of the effect on learning in that particular area. Secondly, a review of selected research studies would lend support to the published literature.

Published Literature

The published literature reviewed in this section included textual materials, handbooks, articles, and reports. The specific sources used for the review were selected on the basis of their relevance to the problem being investigated.

Research indicates that all visual illustrations are not equally effective in complementing oral instruction. According to Fleming, audiovisual communication has pictorial aspects that defy analysis. He maintains that more predictable relationships between pictorial cues and learner responses must be found.[1]

An examination of books and articles in the audiovisual field showed a number of studies regarding the development of teaching materials that will increase the inputs of information and in turn, result in more efficient learning. On the other hand, data from other studies revealed that no significant changes were found in learning outcomes as a result of supplementing instruction with visuals.

In particular, these results of audiovisual experiments are discussed: (1) presentation comparing color with black-and-white, (2) presentation concerning format and method, (3) presentation concerning enbellishment, (4) presentation concerning simplification, and (5) presentation concerning technical subject matter.

Presentation Comparing Color with Black-and-White

Many studies have been undertaken to investigate the effect of color on the learning process. The simplest

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[1]Malcolm Fleming, "Pictorial Communication: An Essay On Its Plight," AV Communication Review, X, No. 4 (Fall, 1962), 237.

of these, and also, the most commonly undertaken, involves the study of learning from colored presentations in contrast to black-and-white.

The use of color in instructional materials is a controversial issue. Although color is an important variable in the design of these materials, the research concerning its effectiveness in increasing student learning has been inconclusive.

Lumsdaine contends that no really definite studies have been made on specific ways in which color in instructional media may contribute to learning.[1]

Otto and Askov, in reviewing several studies that investigated the color variable, came to the following conclusion:

> . . . color has been used to carry basic information, but very little has been done to make use of existing research, probably because the cue value of color in learning is still essentially unclear.[2]

Several controlled research studies have been conducted to investigate the color variable in films; however, these studies are not in agreement. Zuckerman's study of colored films indicated that color has an insignificant

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[1]A. A. Lumsdaine, "Instruments and Media of Instruction," Handbook of Research on Teaching, ed. by N. L. Gage (Chicago: Rand McNally, 1963), p. 582.

[2]W. Otto and E. Askov, "The Role of Color in Learning and Instruction," Journal of Special Education, II (1968), 155.

effect on learning,[1] whereas, the Peterson and Peterson study concluded that the addition of color facilitated learning.[2]

May and Lumsdaine compared a colored film versus a "rather different" black-and-white training film covering the same topic.[3] The black-and-white film was of inferior quality compared to the excellent kodachrome color version. Although no tests were given to measure the learning outcomes of the fifth- and ninth-grade students, no difference was found in either the interest or the satisfaction for either the entire group or any grade level. The conclusion from the evidence of this study is that the effects of color, if any, were not large enough to produce significant differences in learning.[4]

Vandermeer duplicated the essential features of the May and Lumsdaine study by measuring the differences in learning between groups viewing a black-and-white version and groups viewing colored versions of five training films.[5]

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[1]J. V. Zuckerman, "Predicting Film Learning by Pre-release Testing," AV Communication Review, II, No. 1 (Winter, 1954), 55.

[2]L. R. Peterson and M. J. Peterson, "The Role of Context Stimuli in Verbal Learning," Journal of Psychology, LIII (1957), 105.

[3]M. A. May and A. A. Lumsdaine, Learning From Films (New Haven: Yale University Press, 1958), p. 45.

[4]Ibid., p. 49

[5]M. A. Vandermeer, "Color vs. Black-and-White in Instructional Films," AV Communication Review, II, No. 2 (Spring, 1954), 121.

The subjects were 500 ninth- and tenth-grade students. Results were based on multiple-choice tests of conceptual and factual learning, as well as verbal tests involving the identification of material shown in the films. The films used in the studies presented material related to (1) geography, (2) identification of map symbols, and (3) identification of snakes. The same test was given immediately before and after the film showing. A delayed-recall test was given six weeks later.[1]

The results of the Vandermeer study did not indicate any consistent superiority for color film versions over black-and-white, although they did suggest that color may reduce the rate of forgetting. All five color films were preferred by the viewers over black-and-white films, but only one of these comparisons, retention power, was found to be statistically significant.[2]

The main implication of this study was that, although those who saw the colored film did not retain any more information immediately after reviewing the film than those who saw black-and-white versions of the film, they had forgotten less six weeks later.

The overhead transparency, the visual projection material frequently used by many teacher, has been found

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[1] Ibid., p. 134

[2] Ibid.

to lose some of the projected visual qualities when designed with color.

Richards and Macklin found that in transparencies with colored overlays the light loss of the color-coding reduced the contrast of the colored section by as much as 90 per cent and accounted for the loss of visibility of the message.[1] They concluded that unless properly used, the color-coding of transparencies may either be a source of confusion or not be seen by the audience. Studies indicated that the brightest color contrast in only 35 per cent of the black-and-white contrast.[2]

Several studies by Dwyer showed that color was an important instructional variable for improving student achievement of specific educational objectives.[3]

Dwyer investigated the relative effectiveness of several types of visual illustrations complementing oral instruction. Slides were utilized in the experiment. The visual illustrations evaluated were simple line illustrations (black-and-white and colored); shaded drawings (black-and-white and colored); and realistic photographs (black-and-white and colored.)[4]

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[1]Oscar W. Richards and Patricia Macklin, "Colored Overhead Transparencies: Contrast or Seeing Loss?" AV Communication Review, XIX, No. 4 (Winter, 1971), 434.

[2]Ibid., p. 436.

[3]Francis M. Dwyer, Jr., "Effect of Visual Stimuli on Varied Learning Objectives," Perceptual and Motor Skills, XXVII (Spring, 1968), 1069.

[4]Francis M. Dwyer, Jr., "Color as an Instructional Variable," AV Communication Review, XIX, No. 4 (Winter, 1971), 401.

The illustrations that were drawn for the experiment retained the same format, printed material, and size relationship as the original photograph.

The purpose of this experiment was to measure the relative effectiveness of different types of visual illustrations used to complement oral instruction, and to investigate the hypothesis that color is an important instructional variable for facilitating student achievement of specific educational objectives.[1]

The complete slide sequences with differing degrees of realistic detail were produced so that variations in visual stimuli could be assessed in terms of their ability to facilitate student achievement on five criterion measures.[2]

Dwyer suggested a number of conclusions to be considered in the preparation of visualized instruction at the college level:

1. For specific learning objectives, the addition of color in certain types of visuals appears to be an important instructional variable in improving student achievement.

2. The use of visuals (both black-and-white and color) to complement oral instruction does not automatically improve student achievement of all types of learning objectives.

3. Different types of colored illustrations differ in the effectiveness with which they facilitate

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[1] Ibid., p. 404.

[2] Ibid., p. 406.

student achievement of identical educational objectives.

4. Different types of black-and-white illustrations differ in the effectiveness with which they facilitate student achievement of identical educational objectives.[1]

In summary, one of the most common embellishments of audiovisual teaching devices is color; therefore, the effect of this characteristic on the learner is a matter of considerable importance. Although color adds to the attractiveness of a teaching aid and colored pictures are preferred by many students who participate in the experiments, research has shown that black-and-white visuals are as effective as colored visuals for instructional purposes.

Presentation Concerning Format and Method

A review of the literature revealed very little research dealing specifically with format design and methods of presenting overhead transparencies. In fact, only two studies were found. One study dealt with readable letter size for overhead transparencies.[2] The other study dealt with the effectiveness of three basic methods for presenting transparencies.[3] One basic style of the transparency was

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[1]Ibid., p. 414.

[2]Sarah Adams, Robert Rosemier, and Philip Sleeman, "Visibility for Overhead Projection Transparencies," AV Communication Review, XIII, No. 4 (Winter, 1965), 412.

[3]Galen L. Pearce, "Alternate Versions of Overhead Transparency Projectuals Designed to Teach Elementary Statistical Concepts," AV Communication Review, XXVIII, No. 1 (Spring, 1970), 65.

designed with overlays in which a concept was presented in sequential steps; another, an individual transparency was used for each concept that was presented by the overlay style, while the third style was a "cumulative transparency" that presented combined information on one transparency. Each style varied in terms of (a) colored or black-and-white images and (b) positive (white) or negative (black) backgrounds. Concepts in elementary statistics were chosen as the subject matter.

No significant effects of the transparency versions were found. Noncolored images produced more learning in terms of achievement than did colored images on transparencies. This study did not lend support to the assumption that sequencing of information for concept learning is superior to presenting the information as a complete whole.[1]

In another study, Travers and Alvarado emphasized that information presented through pictures perhaps has to be coded into words if it is to be readily retained.[2] They pointed out that the information provided by pictures should be tied to verbal information for maximum educational value.[3]

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[1] Ibid., p. 68.

[2] Robert M. W. Travers and Victor Alvarado, "The Design of Pictures for Teaching Children in Elementary School," AV Communication Review, XVIII, No. 1 (Spring, 1970), 62.

[3] Ibid., p. 63.

In summary, although the research reviewed failed to show that sequencing of information is superior to presenting material as a whole, the black-and-white transparencies accomplished significant differences in learning.

Presentation Concerning Embellishment

Pictorial embellishment or the addition of cartoons has been used as a variable in the development of visual instructional media. Researchers, through controlled experiments, have attempted to identify the qualities in instructional products that lead to increased learning.

A cartoon can translate ideas and principles with a few simple lines that convey relevant principles and ideas in a vivid manner. Sands, who supported the use of cartoons in the classroom, made the following recommendation:

> One or another form of cartoon can serve purposes of education in a great variety of fields--among them the principles and practices of hygiene, safety measures in the street . . . human relations, social and domestic; international relations; military affairs; economic and labor problems; science and applied science, and, of course, history.[1]

Baker and Popham concluded that further investigation should be conducted relevant to the question of pictorial embellishment.[2] Their experiment with preservice teacher

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[1]Lester B. Sands, AudioVisual Procedures in Teaching (New York: The Ronald Press, 1956), p. 250.

[2]E. L. Baker and W. J. Popham, "Value of Pictorial Embellishments in a Tape-Slide Instructional Program," AV Communication Review, XIII, No. 4 (Winter, 1965), 397.

education candidates contrasted the results yielded by embellished and unembellished versions of a tape-slide program. posttest scores indicated no difference between the two program versions with respect to cognitive measures, but affective differences favoring the cartoon-embellished version. Learners rated the embellished version significantly higher than the unembellished counterpart in terms of interest and enjoyment. The test results failed to show significant differences among the treatments.[1]

Guided to some extent by the results of the embellishment experiment of Baker and Popham, the Southwest Regional Laboratory for Educational Research, University of California, Los Angeles, developed instructional material for 100 graduate students at five different institutions.[2]

Three topics were organized into three programs and were made available in three forms, a written version, an unembellished tape-slide version, and a cartoon-embellished tape-slide version.[3]

An analysis of the data showed no consistent superiority on either the cognitive or the affective measures to favor any one of the three treatment conditions.[4]

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[1] Ibid., p. 403.

[2] W. James Popham, "Pictorial Embellishments in a Tape-Slide Instructional Program," AV Communication Review, XVII, No. 1 (Spring, 1969), 29.

[3] Ibid., p. 30.

[4] Ibid., p. 34.

Popham made the following conclusion:

> The results of the investigation do not support the contention that with this somewhat more advanced subject matter designed for more advanced learners, the use of embellishments significantly detracts from learner performance.
>
> On the other hand, no dramatic advantages were attributable to all three embellished versions, thereby, suggesting that for similar topics and similar learners, the cost of preparing embellished versions may not be justified by the results.[1]

Thus, in some cases, the irrelevant inputs that consist of devices and techniques may have value as aids to facilitate the establishment of concepts in learning principles. In other instances, however irrelevant attention-producing devices might distract the viewer. The evidence remains inconclusive.

Presentation Concerning Simplification

Pictorial material is introduced into learning situations to serve two main purposes. One function is motivational and the other is informative. With children of elementary school age, pictorial material appears to have arousal value. Preference studies show that the younger children prefer the simpler pictures, the older children, the more complex. Children prefer realistic pictures to more abstract representations. Research with adults demonstrates preferences for both reading material containing illustrations and pictures related to their own interests.

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[1] Ibid., p. 35.

The most comprehensive attempt to formulate a theory of the function of pictorial material is found in the work of Smith.[1]

The basic assumption of the realism theory established by Dale[2] and Carpenter[3] is that learning will be more complete as the number of cues in the learning situation increases. Their contention is that the more qualities a visual shares with the object or situation to be depicted, the more realistic the visual and, therefore, the easier the learning.

However, Miller has stated that it would be a mistake to assume that one cue added to another would increase learning by a linear increment.[4] His contention is that additional cues or excessively realistic cues may distract from the desired learning outcome.[5]

Moore and Sasse completed an investigation designed to examine the effects of a projected image by subjects of

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[1]K. U. Smith, Development of Audiomatic, Audiovisumatic, and Visumatic Teaching Machines, National Science Foundation Project Report, NWF, G-928, Perception and Human Matics, University of Wisconsin, 1959, cited in Travers, et al., Research and Theory, p. 36.

[2]Edgar Dale, Audio-visual Methods in Teaching (Rev. ed.; New York: The Dryden Press, 1950), p. 44.

[3]C. R. Carpenter, "A Theoretical Orientation for Instructional Film Research," AV Communication Review, I, No. 1 (Winter, 1953), 38.

[4]N. E. Miller, ed., "Graphic Communication and the Crisis in Education," AV Communication Review, V, No. 3 (1957) 84.

[5]Ibid.

different grade levels.[1] The study was designed to test the immediate recall of third-, seventh-, and eleventh-grade students. Each group was shown the same series of pictures described as line drawings, paintings, and photographs. The results of the tests showed a significant difference in the scores of the third-grade and the eleventh-grade students.

The findings were as follows:

1. At grades seven and eleven, line drawings had the highest mean scores.
2. At the third-grade level, paintings had the highest mean score.
3. At all grade levels, mean scores for photographs were the lowest.
4. For all types of pictures, the mean scores for the seventh grade were the highest.
5. For all types of pictures, the mean scores for the third grade were the lowest.[2]

This study seems to indicate that the type of picture presented makes a statistically significant difference in the amount of the subjects' recall of content from pictures. These results are consistent with studies by French[3] and Bloomer[4] in which the effectiveness of line drawings was reported.

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[1]David M. Moore and Edward B. Sasse, "Effect of Size and Type of Still Projected Pictures on Immediate Recall of Content," AV Communication Review, XIX, No. 4 (Winter, 1971), 438.

[2]Ibid., p. 445.

[3]J. E. French, "Children's Preference for Pictures of Varied Complexity of Pictorial Pattern," Elementary School Journal, LIII, No. 2 (October, 1952), 95.

[4]R. H. Bloomer, "Children' Preferences and Responses as Related to Styles and Themes of Illustration," Elementary School Journal, LX, No. 6 (March, 1960), 340.

In concluding a review of studies that have been conducted on properties of input event, Travers et al. have suggested that learners do not need a wealth of stimuli to recognize the attributes of an object or situation.[1] They made the following observation: "Merely confronting a person with stimuli identical to those emitted by the real environment is no guarantee that useful information will be retained."[2] They concluded that inputs of information are coded and most of the information available to the senses not only never enters the perceptual system, but is not retained by the system.[3]

Dwyer's experiment, in addition to measuring the effectiveness of the addition of color to slides, measured the effectiveness of visual illustrations with differing amounts of realistic detail and used in conjunction with oral instruction.[4] He reported that the reduction of realistic detail of the illustrations apparently did not necessarily reduce the instructional effectiveness, and in many cases improved it.[5]

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[1]Travers et al., Research and Theory, p. 13.

[2]Ibid.

[3]Ibid.

[4]Francis M. Dwyer, Jr., "Adapting Visual Illustrations for Effective Learning," Harvard Educational Review, XXXVII, No. 2 (Spring, 1967), 254.

[5]Ibid., p. 260.

In conclusion, research studies indicate that simplified illustrations are as effective as realistic reproductions in transmitting information.

Presentation Concerning Technical Subject Matter

Research has been conducted in science and languages to compare the results of supplementary visual aids; however, the studies provided no consistent pattern of results.

A review of the natural science studies reveals mixed conclusions in the evaluation of the effectiveness of the visual aids. Two studies revealed no significant differences between students taught by conventional methods and those taught by supplementary audiovisual aids. These studies included a study in general science by McCowen[1] and a study in physics by Wittich, Pella, and Wedemeyer.[2]

By contrast, the results of other studies determined that the use of films resulted in significant gains as compared to conventional methods. Two of these studies included a study in general science at Harvard by Rulon[3] and a study

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[1]M. C. McCowen, "A Controlled Experiment in Visual Education in General Science," Educational Screen, XIX, No. 4 (April, 1940) 143.

[2]W. A. Wittich, Milton Pella, and C. A. Wedemeyer, "The Wisconsin Evaluation Project," AV Communication Review, VIII, No. 3 (Fall, 1960), 156.

[3]P. J. Rulon, "The Sound Motion Picture in Science Teaching," Education, LIII (February, 1933) 337.

in dentistry by Yock and Erlandson.[1]

Bledsoe, Brown, and Michaels found that the use of film slides to supplement instruction had improved student understanding of concepts in the field of microbiology.[2] The experimental subjects were superior in three of the four criteria administered at the end of the course. The following conclusions were drawn from the study:

> Appropriately constructed and carefully used film slides can apparently make a definite contribution to student understanding of concepts and development of skills in the field of microbiology.[3]

Perlberg and Resh studied the effectiveness of the overhead projector as a teaching aid in descriptive geometry and hydrology.[4] They reported that the use of the overhead projector led to a significant improvement in the experimental class in geometry but that no improvement could be measured in the experimental class in hydrology.[5]

Kopstein and Roshal verified the superiority of a

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[1]Donald Yock and Forrest Erlandson, "The Effectiveness of Visual Aids in Dental Teaching," The Journal of Educational Research, LII, No. 1 (September, 1958) 11.

[2]Joseph C. Bledsoe, Dean R. Brown, and Gene E. Michaels, "The Use of Film Slides in Introductory Microbiology," The Journal of Educational Research, LX, No. 2 (October, 1969), 86.

[3]Ibid., p. 93.

[4]Arye Perlberg and Michael Resh, "Evaluation of the Effectiveness of the Overhead Projector in Teaching Descriptive Geometry and Hydrology," The Journal of Educational Research, LXI, No. 1 (September, 1967), 14.

[5]Ibid., p. 16.

pictoral stimulus over a printed stimulus in teaching Russian vocabulary.[1] The objective of their experiment was to replicate previous research showing that paired-associates learning is more rapid if pictures rather than words are used in the stimulus position of each pair. Two groups, consisting of 778 basic Air Force airmen viewed the films. The mean number of correct-pair responses was significantly greater for subjects trained with pictures.[2]

The results of this study indicate that a foreign vocabulary may be acquired more rapidly if pictures are used as cues.

In summary, appropriately constructed and carefully used visual aids can apparently make a contribution to student achievement for rote-association learning tasks.

Unpublished Doctoral Research Studies

Eight doctoral research studies employed transparencies to evaluate learning when conventional methods of teaching are complemented with visual material. These studies were concerned with pictoral stimuli for behavioral change in these four subject areas: (1) business education, (2) social studies, (3) mathematics and science, and (4) vocational education.

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[1] F. F. Kopstein and S. M. Roshal, "Learning Foreign Vocabulary From Pictures vs. Words," American Psychology, IX (Fall, 1954), 407.

[2] Ibid., p. 408.

Studies Conducted in Business Education

The Eckert Study - 1967

Eckert[1] used the scores of tenth-grade general business students to determine whether two randomly-selected groups would experience similar achievement and retention after being taught by two different methods of instruction; the traditional method and the experimental method that utilized specially prepared transparencies on the overhead projector to complement the traditional method techniques. The instructional units for the study were (1) Making Effective Use of Credit, and (2) Using the Services of Banks.[2]

A pilot study was conducted to validate two unit-achievement tests and to determine the effectiveness of the overhead transparencies used as the major variable of the study.[3]

The experimental group, taught by the researcher, received instruction supplemented by transparencies; the control group, taught by two business teachers of the regular staff, received the instruction in the traditional way. The total population in the study consisted of seventy-two students

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[1]Sidney Wayne Eckert, "The Effect of the Use of Overhead Transparencies on Achievement and Retention in General Business," (unpublished doctoral dissertation, The University of Minnesota, 1967).

[2]Ibid., p. 1.

[3]Ibid., p. 18.

who had been randomly divided equally on four ability levels into each of the groups.[1]

By using the analysis of variance and covariance techniques on the data to test the hypotheses, Eckert found that differences in achievement and retention scores were significant at the .01 level.[2]

The Cooper Study - 1969

The purpose of Cooper's[3] study was to determine the effect of teacher-prepared transparencies on achievement and retention in a unit of credit. Two intact groups of tenth-grade students were involved in the classroom experiment.

The researcher conducted a pilot study to determine the effectiveness of the transparencies.[4]

Cooper found no difference in either the achievement or the retention of the students in the experimental class as compared with the achievement of the students in the control class. Analysis of covariance was used to test the difference between the adjusted group means. Six weeks later, the same test was re-administered to measure retention.

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[1] Ibid., p. 33.

[2] Ibid., p. 69.

[3] Jerry A. Cooper, "The Effect of Teacher-Prepared Transparencies on a Unit on Credit in a General Business Class," (unpublished doctoral dissertation, Colorado State College, 1969).

[4] Ibid., p. 23

The same statistical tool was used to test for a difference between the adjusted group means.[1]

He found that the correlation of I. Q. scores with achievement was much higher than the correlation of their pretest scores with achievement.[2]

Cooper drew the following conclusions from his study:

1. When student retention is the goal of teaching a unit on credit, the traditional method and experimental method may be used with equal effectiveness.

2. When student achievement is the goal of teaching a unit on credit, the traditional method and experimental method may be used with equal effectiveness.

3. I. Q. scores are better than pretest scores for predicting the results of an achievement test administered after a four-week test on credit.[3]

The Madsen Study - 1969

The purpose of Madsen's[4] study was to determine whether high school bookkeeping classes would experience similar achievement after being taught by two instructional techniques, the traditional method and an experimental method utilizing transparencies.

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[1] Ibid., p. 47.

[2] Ibid.

[3] Ibid., p. 49.

[4] Russell DuWane Madsen, "The Effect of the Use of Overhead Transparencies on Achievement in High School Bookkeeping," (unpublished doctoral dissertation, The University of Minnesota), p. 1.

Scores from four objective examinations, plus one subjective examination, were the criteria used by Madsen to compare the learning rates of the 151 students.[1]

The study was conducted in three high schools with paired bookkeeping classes randomly selected at each school. Each of the paired classes, taught by the same teacher, possessed comparable ability.[2]

A three-way analysis of variance technique was used to compare treatment, sex, and ability among mean test scores of each sub-group. Based on the results of the study, Madsen drew the following conclusions:

1. There was a difference in achievement by students taught by the traditional method as compared to the experimental method in terms of achievement on objective-type test examinations at the .05 level of significance in favor of the experimental treatment.

2. There was no significant difference in achievement by students taught by the traditional and experimental method in terms of performance on problem-type examinations.

3. Students of average ability seemed to derive the most benefit from the experimental method in terms of achievement on objective-type examinations.

4. Girls achieved higher scores than boys on both objective-type examinations and problem-type examinations whether instruction was received by the traditional method or by the experimental method.[3]

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[1] Ibid., p. 20.

[2] Ibid., p. 14.

[3] Ibid., p. 71.

Studies Conducted in Social Studies

The McElroy Study - 1969

McElroy[1] compared two instructional techniques of employing visual illustrations as complements to large-class instruction of United States history.

A team-teaching approach was utilized to teach the 240 eleventh-grade students. The same visual illustrations were used to complement the instruction of both groups; however, in group one, the visual illustrations were presented by means of an overhead projector. Group two was given identical illustrations in the form of ditto sheets.[2]

The posttest data of the groups were analyzed statistically with a two-way analysis of covariance, with I. Q. scores and reading percentile rank as covariates.[3]

The analysis revealed that the overhead projector group outperformed the ditto sheet group at the .05 level. McElroy's conclusions were as follows:

1. Significant differences were found between the posttest scores of the overhead projector group and the printed ditto sheet group.
2. Students with lower I. Q.'s did not achieve significantly higher test scores from either of the two treatments.

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[1]James Carrol McElroy, "A Comparison of Two Techniques of Complementing Instruction with Visual Instruction," (unpublished doctoral dissertation, Rutgers University, 1969), p. 8.

[2]Ibid., p. 31.

[3]Ibid., p. 40.

3. Students in the lower range of reading ability did not achieve significantly higher test scores from either of the two treatments than did students in the higher range of reading ability.

4. The overhead projection group did not achieve significantly higher retention test scores than the printed ditto sheet group.[1]

Studies Conducted in Mathematics and Science

The Chance Study - 1963

Chance[2] analyzed the final course grade of four controlled classes to evaluate the use of 200 colored transparencies in teaching engineering descriptive geometry at the college level.

Four classes, two control and two experimental, were utilized with all known variables excluded except the teaching method. Both instructors taught both a control and an experimental class.[3]

In comparing group averages of the four groups, Chance reported that the students in the experimental group did significantly better, at the .05 level, than those in the control or non-transparency group. He pointed out that the students in the experimental group received a greater

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[1] Ibid., p. 58-59.

[2] Clayton William Chance, "An Evaluation in the Utilization of 200 Colored Transparencies for the Teaching of Engineering Descriptive Geometry," (unpublished doctoral dissertation, The University of Texas, 1963).

[3] Ibid., p. 25.

number and a larger percentage of A's in the course for the semester.[1]

Chance summarized the following advantages of the overhead transparency method.

1. Presentation made in more professional manner.
2. Improvement made in student attentiveness.
3. Review of course topics easily accomplished.
4. Reduction in formal lecture time.[2]

The Gallentine Study - 1965

Gallentine's[3] two-part study attempted to evaluate the effectiveness of instruction utilizing overhead projection in collegiate undergraduate biological science courses in (1) large lecture groups and (2) small laboratory groups as compared to conventional instruction using the chalkboard as a means of illustration.

The first part of the study utilized classes in general botany as the large lecture groups. The fall, 1963, lecture class of seventy-nine students, taught by the conventional method was compared with the fall, 1964,

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[1]Ibid., p. 68.

[2]Ibid., p. 69.

[3]Jerry Lynn Gallentine, "The Effects of Overhead Projection on Achievement in the Biological Sciences at the College Level," (unpublished doctoral dissertation, The University of Toledo, 1965).

lecture class of eighty-four students taught by the experimental method.[1]

Both the control and the experimental group were taught by the same instructor, in the same classroom, at the same hour of the day, and with lectures containing similar material. The experimental class lectures were complemented by overhead projection illustrations instead of chalkboard drawings.[2]

At the end of each instructional period, a factual examination was administered and the results were analyzed by a 2 X 3 factorial analysis of variance. From the results of this analysis, Gallentine concluded that there was no significant difference between the two methods of teaching.[3]

The second part of the study involved vertebrate embryology laboratory sections in testing the effect of overhead projection in small classes. The two laboratory sections, one containing nineteen students and the other twenty-four students, were taught in basically the same manner and covered the same material except that the instructor utilized the overhead projector to illustrate the lecture instead of the blackboard in the experimental class.[4]

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[1] Ibid., p. 14.

[2] Ibid., p. 15.

[3] Ibid., p. 42.

[4] Ibid., p. 21.

At the end of the instructional period, a battery of three examinations were administered to both laboratory groups in joint session. These three examinations were: (1) embryology laboratory practical, (2) association-transfer, and (3) Watson-Glaser Critical Thinking Appraisal (Form Ym). The test for homogeneity of variance and the t test for significant differences between means were applied to the results.[1]

Gallentine concluded from the analysis that there was no significant difference between the conventional and experimental groups based upon embryology practical achievement, association-transfer achievement, or critical thinking ability at the .05 level.[2]

Gallentine further indicated that instruction using overhead projection might increase the students' ability to think critically as compared to chalkboard instruction.[3]

Studies Conducted in Vocational Education

The Madison Study - 1962

Madison[1] studied two ways of visually teaching certain farm management information to high school agricultural

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[1] Ibid., p. 22.

[2] Ibid., p. 34.

[3] Ibid., p. 45.

[4] Eldon Harold Madison, "The Effectiveness of Visual Aids in Presenting an Analysis of Selected Farm Management Factors," (unpublished doctoral dissertation, The University of Minnesota, 1962).

students. The same information was presented to one group in the form of bar graphs and to the other group in the form of tables. All tables and graphs were prepared as overhead projection slides.[1]

Three identical experiments in three schools involved students who had previously studied the record keeping and analysis phases of farm management. Students in each school were randomly divided into two equal groups.[2]

When the posttest data of the groups were analyzed statistically by an analysis of covariance technique, with the effects of the pretest held constant, no significant difference was found in any of the groups.[3]

Madison concluded that (1) neither treatment proved to be superior to the other, and (2) both tables of numbers and bar graphs appear to be equally effective in presenting summary information.[4]

The Brooks Study - 1964

Brooks[5] collected data, using parallel-group technique, from 320 students representing eight junior high schools to

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[1]Ibid., p. 1.

[2]Ibid., p. 13.

[3]Ibid., p. 31.

[4]Ibid., p. 38.

[5]Weston Terrell Brooks, "An Experimental Analysis of the Effectiveness of Overhead Transparencies on Learning and Retention in Selected Units in Beginning Woodworking," (unpublished doctoral dissertation, Texas A & M University, 1964).

analyze the effect of overhead transparencies in a beginning course in woodworking.

The factorial analysis of variance of the 2,240 measures recorded supported the following conclusions:

1. Achievement of students in selected units of woodworking was significantly greater when special overhead transparencies are used to supplement conventional methods of instruction.

2. The experimental groups' over-all retention of the selected units was significantly greater than that of the control groups.

3. The lower intelligence-level groups of the experimental sections achieved .3 lower mean raw scores than the upper intelligence-level groups of the control sections.

4. Certain teachers and specific intelligence levels had highly significant effects upon student achievement.

5. Teachers favored overhead transparencies because of increased student interest, logical presentation of materials, reduced lecture time, and favorable review techniques.

6. Transparencies readily enable concrete principles of instruction to be presented and improve the professional presentation.[1]

Summary

The purpose of this chapter was to review the literature pertinent to the present study. This review was largely concerned with those studies in which particular aspects of a presentation were varied in order to determine the effect of those presentations on learning. Although several research

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[1] Ibid., pp. 104-105.

studies have been conducted to determine the effect of overhead transparencies on achievement, none related directly to the present study.

The review of the literature was divided into these two main sections: (1) published literature and (2) unpublished doctoral research studies.

The published literature was divided into these five main sections:

1. Presentation comparing color with black-and-white
2. Presentation concerning format and method
3. Presentation concerning embellishment
4. Presentation concerning simplification
5. Presentation concerning technical subject matter

The unpublished doctoral research studies were classified into the following groups:

1. Business education
2. Social studies
3. Mathematics and science
4. Vocational education

The review of the published literature concentrated primarily on those factors that influence the transmission of information by means of pictorial representation. The conclusions from the evidence of the studies investigating the addition of color to visuals reveal that the effects of color did not contribute significantly to learning. Other studies found that pictures were more effective in providing

learning when accompanied by sound or were verbally coded. Although visual instructional material may be designed with cartoons and other embellishments to improve instruction, the research revealed that there was no difference in achievement as a result of embellishment. Simplification or line drawings was found to be as effective as realistic reproductions in transmitting information.

The research seemed to illustrate a natural applications of the overhead transparencies as it was related to the content of the course, because subject fields in which the overhead transparencies have been used included those courses in which many diagrams, illustrations, and forms have been primarily in use. Furthermore, the unpublished doctoral research studies gave support to the conclusions reached by the researchers in audiovisual education.

CHAPTER III

DESIGN AND PROCEDURES

The major part of this study was concerned with determining the effect of complementing the teaching of business communication with audiovisuals, specifically transparencies, at the college level. These effects were checked on eight different classes of subjects, four experimental and four control groups. Differences among the groups were determined by a pre- and post-measure of the subject's business communication ability. The researcher had hypothesized earlier that classes receiving supplementary instruction by audiovisual materials will show a greater increase in their business communication ability than those classes taught by traditional instruction, utilizing the chalkboard, the text, and lecture.

The procedural section of this study was divided into these three sections or phases: (1) phase one, pre-experimental procedures, (2) phase two, experimental procedures, and (3) phase three, analysis of data.

Phase One, Pre-Experimental Procedures

The pre-experimental procedures for this study were

divided into these five parts: (1) selection of the research design, (2) selection of the instruments, (3) development of audiovisual materials, (4) selection and orientation of instructors in the use of the transparencies, (5) selection of population and sample, and (6) selection of raters.

Selection of the Research Design

The first of the pre-experimental procedures was the selection of a research design for the conduct of the study. In this study, "research design" refers to the plan or overall scheme of the research problem. Furthermore, the two basic purposes of the research design are (1) to provide the answers to research questions and (2) to control variance.

Kerlinger[1] stated that research is made effective through the design of the study. Kerlinger further stated:

> . . . Research designs set up the framework for "adequate" tests of the relations among variables. The design tells us, in a sense, what observations to make, how to make them, and how to analyze the quantitative representations of the observations . . . An adequate design "suggests," for example, active variables and which are assigned. We can then act to manipulate the active variables and to dicotomize or trichotomize or otherwise categorize the assigned variables. A design tells us what type of statistical analyses to use. Finally, an adequate design outlines possible conclusions to be drawn from the statistical analysis.[2]

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[1]Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1964), pp. 275-89.

[2]Ibid., p. 276.

The design chosen for this study was a Multiple Group, Pretest-Posttest true experimental design.[1] This design was chosen because of the ability of the test to control extraneous variances and to maximize the effects of experimental factors. In particular, the experimenter was interested in controlling the variances caused by the differences in instructors, the differences in student linguistic ability at the beginning of the study, the rate of student class attendance, and the transference of students from one class to another. Transferring is no real problem unless either a student transfers from an experimental group to a control group or a control student audits some of the experimental classes. In such instances, the subject would have to be dropped from the sample.

A schemata of the study design is shown in Table 1. In this schemata, the following symbols are used:

1. X = Experimental treatment
   (In this case, the use of overhead transparencies)
2. O = Observation taken or test given to the subjects
   (In this case, the observations included a pretest and posttest measure on both the English test and the stimulus letter)
3. R = Random selection of subjects from a population or sample
   (In this case, the random selection of participants from all eight of the classes, four experimental and four control)

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[1]D. T. Campbell and Julian C. Stanley, "Experimental and Quasi-Experimental Designs for Research," Handbook of Research on Teaching, N. L. Gage, ed. (Chicago: Rand McNally & Company, 1963), pp. 39-110.

TABLE 1.--Schemata of Multiple-Group, Pretest-Posttest Design

	Pretest		Experimental Treatment	Posttest		
	English	Letter		English	Letter	
Experimental$_1$	0	0	X	0	0	R
Experimental$_2$	0	0	X	0	0	R
Experimental$_3$	0	0	X	0	0	R
Experimental$_4$	0	0	X	0	0	R
Control$_1$	0	0	-	0	0	R
Control$_2$	0	0	-	0	0	R
Control$_3$	0	0	-	0	0	R
Control$_4$	0	0	-	0	0	R

Selection of Instruments

The second step of the pre-experimental procedures was the selection of the instruments used in measuring the dependent variable. In this study, the subject's business communication ability was measured by taking a pretest and posttest measure of his English ability, using the 70-minute Cooperative English Test (Usage, Spelling, and Vocabulary), Number 343-93-1, Form PM, and deriving a score from a reaction-evoking persuasive letter.

The Cooperative English Test has a reliability index of .85-.92 on the test-retest reliability index, while

the validity is reported to be from .73 to .84.[1]

The pretest and posttest stimulus letters were developed by the researcher and were written by every student in the eight classes or sections. The development of a valid and a reliable stimulus letter to be completed by the participants for the purpose of this study was part of the instrumentation procedures (Appendix A).

Both the pretest and posttest sales letters required the participating students to compose a reaction-evoking communication in the classroom under test conditions. The method and the sequence of the development of the sales communication were those suggested by Aurner and Wolf.[2]

The communication letter, composed in the classroom, was scored by three raters who used a rating scale to judge certain points about the communication.

A coefficient of concordance was computed to establish the reliability and the validity of the ratings given to the letters by the raters.[3] The results of this statistical test showed = .7479 ($p < .01$), which indicates a high degree of agreement among the letter ratings and establishes the reliability of the instrument. The ratings given to the letters are shown in Table 2.

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[1]Oscar Krisen Buros, ed., The Sixth Mental Measurement Yearbook (Highland Park, New Jersey: The Gryphen Press, 1965), p. 245.

[2]Robert R. Aurner and Morris Phillip Wolf, Effective Communication in Business (5th ed.; Cincinnati: South-Western Publishing Company, 1967), p. 256-257.

[3]Kerlinger, Behavioral Research, p. 267.

TABLE 2.--Ratings Given to the Letters by the Raters

Rater	Students									
	1	2	3	4	5	6	7	8	9	10
A	1.8	1.9	2.23	2.56	1.9	2.0	3.26	1.5	2.66	2.56
B	2.1	3.4	3.1	2.9	1.3	1.3	3.9	1.4	1.3	2.4
C	2.1	2.1	1.9	2.9	2.0	2.0	2.0	1.7	2.2	2.8
	11	12	13	14	15	16	17	18	19	20
A	3.2	3.2	2.8	3.5	2.9	3.1	3.5	2.2	2.7	3.1
B	2.5	2.6	2.7	3.2	3.0	2.8	2.8	2.4	2.4	3.0
C	4.0	4.4	2.1	3.1	2.5	2.1	4.5	1.2	2.4	3.0

Godshalk's investigation revealed that, when objective questions specifically designed to measure writing skills are evaluated against a reliable criterion of writing skills, they prove to be highly valid.[1] Furthermore, according to Godshalk, written material cannot be considered valid until the score is based on three readings. He also points out that the most efficient predictor of a reliable direct measure of writing ability is one which includes essay questions or interlinear exercises . . .in combination with objective questions.[2] He concludes that:

> When essay scores are combined with objective scores, they produce validity coefficients even

[1]Fred I. Godshalk, Frances Swinford, and William E. Coffman, The Measurement of Writing Ability (New York: College Entrance Examination Board, 1966), p. 40.

[2]Ibid., p. 41.

higher than those for the combinations which include an interlinear exercise.[1]

Development of Audiovisual Materials

To insure that all experimental groups of subjects received the same amount and quality of audiovisual instruction, the researcher developed the 134 transparencies used in the four experimental groups (Appendix I). The overhead transparencies were designed to present selected business communication principles by simple expository statements, illustrated with cartoons and line drawings.

These teaching aids illustrated the principles set forth in the AWBA Syllabus, 1961[2] (Appendix B). Using the AWBA Syllabus as a guide, the content of eight business communication textbooks were examined for the same principles (Appendix C). All the textbooks contained the selected principles found in the AWBA Syllabus.

Prior to the actual conduct of the study, it was necessary to conduct a pilot study to validate the audiovisual material. The conduct of this pilot study involved students who were enrolled in ten sections of Business Communication 323a for the fall semester of 1971-1972 at Central State University (Oklahoma.)

The transparencies were used for a full semester prior

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[1] Ibid.

[2] David M. Robinson, Chairman, et al., A Syllabus for Business Letter-Writing Courses (Urbana, Illinois: The American Business Writing Association, 1961).

to the conduct of the study, and the results were used to improve the audiovisual materials, to strengthen the controls over the independent variables, and to train the instructors in the use of the materials developed.

The nine hypotheses were subjected to a preliminary testing even though that was not the primary purpose of the pilot study. The summarized results are presented in Table 3.

TABLE 3.--Results of Hypothesis Testing in the Pilot Study

Hypothesis	Result
Ho_1	Not Significant; There was no significant difference between the pretest Cooperative English Test scores of the experimental and the control subjects.
Ho_2	Not Significant; There was no significant difference between the posttest Cooperative English Test scores of the experimental and the control subjects.
Ho_3	Not Significant; There was no significant difference between the pretest English ACT scores of the experimental and the control subjects.
Ho_4	Significant; The experimental subjects scored significantly lower on the pretest reaction-evoking letter than the control subjects.
Ho_5	Significant; The experimental subjects scored significantly higher on the posttest reaction-evoking letter than the control subjects.
Ho_6	Not Significant; There was no significant difference among the reaction-evoking letter posttest scores recorded for the subjects from the five different grade classifications.

Table 3--Continued

Hypothesis	Result
Ho_7	Not Significant; There were no significant differences among the reaction-evoking (posttest) letter scores of the students enrolled in classes meeting at different times of the day.
Ho_8	Not Significant; There were no significant differences among the reaction-evoking letter posttest scores of the students who were taught by the four different instructors conducting the experiment.
Ho_9	Several of the correlations were significant. Some of the more interpretable relationships were as follows: 1. LET_1 and CET_1; Served to establish the reliability of the reaction-evoking letter. 2. LET_1 and LET_2; Served to establish the test-retest reliability of the reaction-evoking letter. 3. ACT and LET_1; Served to validate the contents of the reaction-evoking letter. 4. GPA and LET_1; Served as a criterion reference for the reaction-evoking letter.

The basic purpose of this pilot study was not to test the hypotheses but rather to establish the feasibility of conducting a more comprehensive study under the same or comparable conditions. The pilot study accomplished this purpose but indicated that certain changes were necessary to enhance the findings of the research study. The following changes were made: (1) The audiovisual materials (transparencies) underwent considerable revision during the pilot study. The critique given to the researcher by the cooperating instructors and the students in the pilot study resulted in the elimination of some of the

transparencies and the simplification of others. (2) The pretest stimulus letter was revised. The original letter was apparently biased to favor male respondents and had to be altered to a more neutral position. (3) Instructor ratings were obtained from the students who were enrolled in the pilot study classes. These ratings were used as covariable measures in the final analysis of the data. (4) The pilot study served as a training session for the instructors.

Selection and Orientation of Instructors in the Use of the Transparencies

Three business education instructors were chosen to assist in the experiment (Appendix D).

To insure equal presentation and benefit of the audiovisuals prepared, several sessions of instruction were required for the instructors who assisted in the experiment. Materials and instructions for administering the tests, both the Cooperative English Test and the stimulus letter, were distributed (Appendix A). Other materials given to the instructors were (1) a set of directions for showing the transparencies (Schedule A, Exhibit 10), and (2) a schedule of presenting transparencies to coinside with class text materials (Appendix A, Exhibit 11).

Selection of Population and Sample

The next step in the pre-experimental procedure was the selection of classes, the random assignment of instructors to classes, and the selection of subjects to be used as

participants. The population used for selection of study participants was composed of eight sections or classes of Business Communication 323a, at Central State University, Edmond, Oklahoma, during the spring semester of 1971-1972. These eight classes were divided among three instructors. Each instructor had a control group and an experimental group, with the exception of Instructor No. 3 who supervised two control groups and two experimental groups (Appendix A, Exhibit 8)

The random selection of the specific twenty subjects was not made until the end of the experiment for the following reasons: (1) to avoid re-selecting the subjects who either dropped or added classes during the semester, (2) to avoid the "halo effect" by any or all of the instructors during the course of the experiment,[1] (3) to control attendance, and (4) to control for completeness of measures and biographical data on the subjects.

Students had to attend most, if not all, of the class sessions during the semester to receive benefit of classroom instruction both in the control groups and the experimental groups. At the end of the semester, those who did not attend at least ninety per cent of the class sessions were not considered as subjects for the sample.

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[1]Kerlinger, Behavioral Research, p. 516.

Selection of Raters

The stimulus letters, both pretest and posttest, were evaluated by a team of three raters, all of whom rated the correspondence independently according to a common letter evaluation guide. The raters represented similar areas of interest and experience. One rater is a former assistant professor of business administration at a large city university; one is an assistant professor business education; and the other rater--the author of this study--is an assistant professor of business administration (Appendix E). Each rater had a special interest in written communication and had taught a communication class on the collegiate level for a number of years. Their combined teaching experiences include general communication skills, literature, office management, business education, personnel management, and human relations.

Phase Two, Experimental Procedures

The experimental procedures consisted of those procedures used in the actual conduct of the experiment. Those steps were (1) the measurement of the covariable, (2) the administration of the pretest (Cooperative English Test and the reaction-evoking letter), (3) the collection of the biographical data, and (4) the administration of the posttest (Cooperative English Test and the reaction-evoking letter).

Measurement of the Covariable

The first step in the experimental procedures was to measure the variable to be treated as a covariable in the analysis of the data. The instrument is shown in Appendix F. This variable, the differences among the instructors, was measured prior to the beginning of the experiment because it is independent of the experimental treatment.[1] To record this measure for the pilot study, the researcher administered the rating instrument to ten former students of each instructor. These student responses were analyzed and used as the covariable in the pilot study. The rating instrument which was administered to all experimental and control classes at the end of the pilot study was analyzed and used as the covariable in the final analysis of the data.

Administration of the Pretest (Cooperative English Test)

The Cooperative English Test was administered during the first week of regular classwork to all eight classes, both experimental and control. To avoid any tester bias, all tests were given on successive days with a special testing session held for students who missed the regular session. Students were not informed that an experiment was being conducted because the knowledge of participation in an

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[1]William H. Hays, Statistics (New York: Holt, Rinehart and Winston, 1963), p. 511.

experiment might have introduced an extraneous variable of bias in favor of the experimental group that could have resulted in the "Hawthorne Effect."[1] (Appendix A, Exhibit 6)

Administration of the Pretest Direct Reaction-Evoking Letter

The pretest reaction-evoking (stimulus) letter was administered during the second week of regular classwork in the classroom under test conditions. (Appendix A, Exhibit 3)

Collection of Biographical Data

The third step of the experimental procedures was the collection of the biographical data about each subject. The personal records of each subject was examined to obtain his or her English score on the American College Testing instrument (ACT), age, accumulated grade-point average, and the number of college hours completed. The English ACT score was used as a second measure of the student's communicative ability, while the number of hours was used for classification of the student into one of the following five categories: freshman, sophomore, junior, senior, and graduate.

Administration of the Posttest Cooperative English Test

The posttest measure on the Cooperative English Test was taken during the final week of instruction during

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[1]John W. Best, Research in Education (2d ed.; Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 149.

the spring semester. The test was administered under the same circumstances and by the same instructors as the pretest.

Administration of the Posttest Direct Reaction-Evoking Letter

The posttest reaction-evoking (stimulus) letter was administered during the final week of classes. The letter was written during a session other than that used for the administration of the 70-minute posttest Cooperative English Test because the classes were scheduled at 50-minute intervals, and because of the fatigue factor that plays an important part in the subject's response to the letter.[1]

Phase Three, Analyses of the Data

The analysis of the collected data consisted of the scoring and the statistical computation of the quantitative results recorded. In particular, the following tasks were performed: (1) scoring of the instructor ratings made by the students, (2) scoring of the pretest and posttest Cooperative English Tests, (3) scoring of the pretest and posttest reaction-evoking letters, (4) selecting the participants, (5) posting all data on IBM cards, and (6) performing statistical analyses.

Scoring of the Instructor Ratings Made by the Students

The first step of phase three was to score the

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[1]J. P. Guilford and W. F. Zimmerman, Fourteen Dimensions of Temperament, Monograph PY (Washington: American Psychology Association, 1956), p. 5.

instructor on the basis of the forty student ratings. The ratings were obtained from the students in the pilot study prior to the experiment. A random sample of forty ratings were scored and averaged to produce a rating score for the specific instructor. This weighted score was used as the covariable in controlling the differences among the three different instructors conducting the study (Appendix F).

Scoring of the Cooperative English Tests

The second step of phase three was to score the Cooperative English Tests administered to the students in the experimental and the control classes. These tests were scored by the School Services Department of the Center of Continuing Education on the campus of the University of Oklahoma, Norman, Oklahoma. The scored results were in terms of raw scores and standard scores for each subject.

Scoring of the Pretest and Posttest Reaction-Evoking Letters

The stimulus letters were scored according to a technique developed by Knapper.[1] For the purpose of this study, modifications in the scale were made specifically for scoring a reaction-evoking letter. Organization and development were weighted more heavily than the other elements of the rating scale (Appendix G).

To avoid rater bias, each letter was masked to obscure the student's name, his class attendance time,

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[1]Knapper, "Written Communication," p. 170.

and his class section from the rater.

Selecting the Participants for the Final Contrasts and Analysis

The fourth step of phase three was to make the final selection of the twenty subjects from each of the control and experimental groups and to compare the effects of classes taught with audiovisuals with those taught without audiovisuals. For reasons stated earlier, the selection of the experimental and control participants were delayed until all tests had been given and all the data had been collected.

When all tests were completed, all subjects from the experimental classes and the control classes who met the following criteria were considered as a population for possible inclusion in the final analysis: (1) All test scores were recorded for the subject. These included the pretest and posttest scores of the Cooperative English Test, the pretest and posttest scores of the reaction-evoking letter, and the ACT English score. (2) All biographical and personal information was recorded for the subject. This information included the person's age, class time, classification, grade-point average, and attendance record.

Posting All Data on IBM Cards

The fifth step of phase three was the entry of the data that was collected on IBM cards for further analysis. Because the particular statistical tests involved

complicated statistical procedures a digital computer had to be used to expedite the procedure. The card format used in entering the data is shown in Table 4.

TABLE 4.--Card Format of Data Collected

	Information	Column(s)	Range of Possible Values
1.	Student Number.	1-3	001-200
2.	Class Time.	4	1-0
3.	Instructor.	5	1-3
4.	Classification	6	1-5
5.	ACT (English)	7-8	00-36
6.	CET Pretest Score	9-11	000-280
7.	CET Posttest Score.	12-14	000-280
8.	Pretest Stimulus Letter Score .	15-17	05-50
9.	Posttest Stimulus Letter Score.	18-20	05-50
10.	Attendance.	21-22	01-51
11.	Group	23	1-2
12.	Age	24-25	16-80
13.	Grade-point Average	26-28	000-400
14.	Instructor Rating Score	29-30	25-85

The data were punched and verified at the Merrick Computer Center located on the campus of the University of Oklahoma, Norman, Oklahoma. The Merrick center is equipped with an IBM 360-50 computer and accompanying configuration. Part of this configuration is composed of statistical packages of pre-written computer programs.[1] Several programs were utilized in making the necessary computations for testing the hypotheses. The specific hypotheses, the

[1]W. J. Dixon, ed., BMD: Biomedical Computer Programs (Berkley: University of California Press, 1970), pp. 1-212.

statistical tests, and the data involved in the computations are shown in Table 5.

Performing Statistical Analyses

All hypotheses were checked at the .05 level of significance.

TABLE 5.--Statistical Test Employed to Test Hypotheses

Hypotheses	Statistical Test	Data Used in Computation
Ho_1	Student's t test for two independent groups	Pretest CET scores from experimental and control classes
Ho_2	One-way Analysis of Covariance (ANCOVA)	Posttest CET scores from experimental and control groups (Teacher rating scores used as covariable)
Ho_3	Student's t test for two independent groups	English ACT scores from experimental and control classes
Ho_4	Student's t test for two independent groups	Pretest scores of reaction-evoking letter from experimental and control classes
Ho_5	One-way Analysis of Covariance (ANCOVA)	Posttest scores of reaction-evoking letter from experimental and control subjects (Teacher rating scores used as covariable)
Ho_6	One-Way Analysis of Covariance (ANCOVA)	Posttest scores of reaction-evoking letter from all five grade classifications (Teacher rating scores used as covariable)
Ho_7	One-Way Analysis of Covariance (ANCOVA)	Posttest scores of reaction-evoking letter from experimental and control subjects (Teacher rating scores used as covariable)

TABLE 5.--Continued

Hypotheses	Statistical Test	Data Used in Computation
Ho_8	Two-way Analysis of Variance	Posttest scores of reaction-evoking letter from the four different instructors' classes
Ho_9	Pearson's Product-Moment Correlation	For each subject in the experimental and control groups' class time, instructor, ACT English score, classification, age, grade-point average, CET pre- and posttest scores, and pre- and posttest reaction-evoking letter scores

CHAPTER IV

RESULTS

One hundred and sixty college students enrolled in business communication courses at Central State University, Edmond, Oklahoma, served as subjects in an experimental study designed to measure the effect of using audiovisual materials (transparencies) in teaching business communication. The subjects were equated on English scores, English ACT scores, and grade-point average.

Students were asked to compose a reaction-evoking letter in response to a classroom assignment given them on a pretest, posttest basis. The scores obtained from rating these reaction-evoking letters were used to test the nine hypotheses stated in Chapter 1.

Because the differences in the instructors were treated as a covariable, ratings of each instructor were obtained from students in the pilot study conducted prior to the experiment. From the ratings, a sample of forty ratings produced an average score for each instructor. These ratings were, in turn, used as a covariable in later analyses. The results of the instructor ratings are presented in Table 6.

TABLE 6.--Student Ratings of Instructors

Instructor	Number of Ratings	Mean Rating
A	N = 40	69
B	N = 40	69
C	N = 40	67

While the ratings of the three instructors were very similar, they were still considered to be different enough statistically to readjust each criteron score so that scores compensate for any disparity between the independent variable groups in the testing of the hypotheses.

The Dependent Measure: Posttest Scores from the Reaction-Evoking Letter

Each participant in the experimental and control groups prepared a letter in response to the reaction-evoking assignment presented in Appendix A and based on the knowledge and techniques gained in the business communication class. These responses were evaluated by three individuals who made independent assessments of the final product. However, the amount of agreement among the ratings of a particular participant's work had to be determined because complete disagreement would render all three evaluations meaningless. The amount of agreement was determined by computing a Coefficient of Concordance[1] among twenty ratings of the

[1]Kerlinger, Behavioral Research, p. 267.

posttest response. The results of this computation were as follows: W = .74. The W coefficient, significant beyond the .01 level, was a sound basis for concluding that one judge's ratings were commensurate with those of another.

Using these posttest scores as the dependent measure, the researcher tested the nine hypotheses stated earlier.

Results of Testing Hypotheses One (1)

Hypothesis one was extended as an attempt to control the differences in the English ability of the subjects in the experimental and control groups. The Cooperative English Test scores for all participants were compared prior to their participation in the experiment. The results of this comparison are shown in Table 7.

TABLE 7.--Student's t test between the CET Scores of Experimental and Control Subjects (Pretest)

Group	Mean	Standard Deviation	t-value
Experimental Group	144.82	36.81	1.353[a]
Control Group	162.19	44.08	

[a]Not Significant; $p > .05$

The results of testing hypothesis one show that the two groups of subjects, experimental and control, had statistically equal CET scores at the beginning of the experimental study. This finding was desirable because

significant differences could have confounded the results of the study.

Results of Testing Hypotheses Two (2)

Hypothesis two was tested to determine the amount of change in the participant's CET scores during the experiment. The researcher presumed that the business communication class would have a positive effect on the English ability of each subject and, therefore, would increase his CET scores. The results of testing this hypothesis appear in Table 8.

TABLE 8.--Analysis of Covariance of Posttest CET Scores of Experimental and Control Groups

Source of Variation	Degrees of Freedom	Adjusted Mean Square	F	p[c]
$SS_{Between}$	1	6.38	0.351	$>.05$
SS_{Within}	77	18.76		
SS_{Total}	78			

[c]Significance Level
Not Significant; $p > .05$

The results of testing hypothesis two, shown in Table 8, indicate that the differences in the CET scores of experimental and control subjects were not significant after the study had been conducted. This finding can be interpreted to mean that the CET scores were not significantly affected

by the use of audiovisual materials in teaching business communication material.

Results of Testing Hypothesis Three (3)

Hypothesis three, like hypothesis one, was extended and an attempt to control differences among the experimental and the control subjects. The results of the comparison of the English ACT scores are presented in Table 9.

TABLE 9.--Student's t test between the English ACT Scores of the Experimental and the Control Subjects

Group	Mean	Standard Deviation	t-value
Experimental Group	17.21	4.21	0.896[a]
Control Group	18.22	6.19	

[a]Not Significant: $p > .05$

Table 9 shows that the English ACT scores of the experimental and the control subjects were statistically equal. This finding, too, was desirable inasmuch as significant differences would have given an alternative explanation for significant differences in the reaction-evoking letter scores at the end of the study.

Results of Testing Hypothesis Four (4)

Hypothesis four was still another attempt to equate the experimental and the control subjects on as many variables

as possible prior to the conduct of the study. The pretest letter scores were compared to determine whether any such differences existed between the experimental and control groups. The results of the comparison are presented in Table 10.

TABLE 10.--Student's t test between the Experimental and the Control Subjects' Reaction-Evoking Letter Scores (Pretest)

Group	Mean	Standard Deviation	t-value
Experimental Group	2.45	0.614	
Control Group	2.64	0.466	1.104[a]

[a]Not Significant; $p > .05$

The results of testing hypothesis four, presented in Table 10, show that the experimental and the control subjects had statistically equal scores on the ratings given their responses to the reaction-evoking letter at the beginning of the study. While this condition was desirable at that time, the researcher attempted to increase the scores of the experimental group during the conduct of the experimental investigation. On the basis of previous studies and the learning principles stated in the literature section of this paper, the researcher believed that the use of transparencies would increase the letter-writing ability of the experimental subjects and would, therefore, reveal a significant

difference between the ratings given their posttest letters and those given the control group's posttest letters. The results of this hypothesis are presented in Table 11.

Results of Testing Hypothesis Five (5)

The fifth hypothesis concerning the posttest reaction-evoking letter scores is presented in Table 11.

TABLE 11.--Analysis of Covariance of Reaction-Evoking Letter Posttest Scores, with Instructors' Ratings Used as a Covariable

Source of Variation	Degrees of Freedom	Adjusted Mean Squares	F	p^c
$SS_{Between}$	1	12.14	5.27	$< .05$
SS_{Within}	77	2.30		
SS_{Total}	78			

[c]Significance Level

Table 11 shows that the stimulus letter scores of the experimental and the control groups were significantly different at the end of the experimental study. The mean rating of the experimental group, $\bar{X} = 3.29$, was significantly higher than the mean rating of the control group, $\bar{X} = 2.97$. The conclusion can be drawn that the differences among the letter scores were caused by the use of the transparencies.

Results of Testing Hypothesis Six (6)

Hypothesis six was tested to determine the differences in the posttest letter scores of the students from the five grade classifications. The results are shown in Table 12.

TABLE 12.--Analysis of Covariance of Reaction-Evoking Letter Posttest Scores for All Five Grade Classifications, with Instructors' Ratings Used as the Covariable

Source of Variation	Degrees of Freedom	Adjusted Mean Square	F	p[c]
$SS_{Between}$	4	2.47	0.196	$>.05$
SS_{Within}	74	12.60		
SS_{Total}	78			

[c]Significance Level

The results of hypothesis six were not significant in view of the fact that the posttest letter scores for the five grade classifications were statistically equal. While some of the grades made higher scores than others, the differences were not significant.

Results of Testing Hypothesis Seven (7)

Hypothesis seven was tested to determine whether the subjects who attended classes at different times of the day recieved significantly different ratings on the posttest

letter. The analysis of covariance performed on the posttest letter scores is presented in Table 13.

TABLE 13.--Analysis of Covariance of Reaction-Evoking Letter Posttest Scores for All Eight Time-of-Class Attendance Groups, with Instructors' Ratings Used as the Covariable Measure.

Source of Variation	Degrees of Freedom	Adjusted Mean Square	F	p[c]
$SS_{Between}$	7	161.45	1.92	$>.05$
SS_{Within}	71	84.35		
SS_{Total}	78			

[c]Significance Level. In this hypothesis the result was not significant. Therefore, $p > .05$

The results of the statistical analysis performed on the data in hypothesis seven showed no significant differences among the participants who attended class at various times of the day. The F value of 1.92 was somewhat better than mere chance but could be explained by possible self-biasing of the students during the enrollment process. For instance, the better students perhaps enrolled in a class that met at a particular time of the day.

Results of Testing Hypothesis Eight (8)

A two-way analysis of variance was performed on the posttest letter scores in an attempt to determine the effects

of the two independent variables of instructors, groups, and their interaction on the posttest letter ratings. In this case, there was no necessity for conducting an analysis of the covariance and controlling the differences among the three instructors because this variable was incorporated into the testing design of the statistic. The results of the ANOVA computations are presented in Table 13.

TABLE 14.--Analysis of Variance of Reaction-Evoking Letter Posttest Scores of Subjects from the Three Different Instructors' Classes

Source of Variation	Degrees of Freedom	Mean Square	F	p[c]
SS_A Instructor	2	6.291	2.510	$>.05$
SS_B Groups	1	20.574	8.210	$<.01$
SS_I Instructors X Groups	2	4.944	1.973	$>.05$
SS_{Error}	74	2.516		
SS_{Total}	79			

[c]Significance Level

The differences in the participant responses who were taught by the three different instructors were not significant although the F value of 2.51 was worth considering. However, a significant difference among the different

instructors would have been uninterpretable because every instructor had both an experimental and a control group as part of her teaching load.

An observed significant difference between the experimental and the control groups served to substantiate the findings of hypothesis five. Both tests of the hypothesis showed significant differences between the experimental and control groups, but the differences computed in hypothesis eight were significant at a more stringent level.

The interaction between the two independent variables, although not significant, did have some effect on the posttest letter scores recorded for the participants ($F= 1.973$, $df = 2/74$, $p > .05$.) The conclusion can be drawn that the major differences among the subjects were recorded for the two groups, the experimental and the control.

Results of Testing Hypothesis Nine (9)

Hypothesis nine was concerned with the relationships among the independent variables of class attendance time, instructor, grade classification, English ACT scores, grade-point average, age, Cooperative English scores (pre- and post), and reaction-evoking letter scores (pre- and post). The correlation matrix resulting from the relationship computations is shown in Table 15.

Popham points out that:

As in the case with many of the more complex

TABLE 15.--Intercorrelation Matrix[a] of Twelve Selected Independent Variables

	Class Time	Inst.	Grade	ACT	CET_1	CET_2	LET_1	LET_2	Group	Age	GPA	Inst. Rating
Class Time												
Inst.												
Grade	.324											
ACT			.423									
CET_1				.622								
CET_2		.372	.463	.471	.641							
LET_1				.315	.326	.411						
LET_2		.348		.420	.517	.326	.644					
Group												
Age			.513									
GPA				.804	.438	.357	.441	.316				
Inst. Rat.												

[a]Only those correlations which were significant at or beyond the .05 level were reported.

> statistical procedures, there are certain assumptions underlying the proper interpretation of the product-moment r. . . . In order to draw proper interpretations regarding the calculated r, the data must fulfill two important assumptions. First, the data must be distributed in a linear fashion, i.e., so that they are capable of being graphically represented by a straight line. This can be quickly ascertained by plotting the values on a simple correlation chart.
>
> A second assumption that the data must satisfy in order for r to be properly used required that for all values of one measure. . . be approximately equal in variability. This assumption . . . is known technically as the assumption of homoscedasticity (homo means equal, scedasticity means scattering).[1]

Only those correlations that were significant beyond the .05 level were reported so as to reduce the confusion caused by reporting all correlations regardless of their significance level.

Some of the correlations among the thirteen variables shown in Table 15 gave added meaning to the results observed in testing the other eight hypotheses. However, some correlations, although significant, were relatively uninterpretable and meaningless. Only those meaningful to the study were interpreted in this section of the study.

The first meaningful correlation was observed between the participant's English ACT score and his grade level (classification). The correlation value of .423 indicated that the subject with the highest grade classification also had the highest English ACT score.

The most meaningful correlations were observed among the English ACT scores and the CET_1, CET_2, LET_1, and LET_2.

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[1]W. James Popham, Educational Statistics (New York: Harper & Row, 1967), pp. 77-78.

Because ACT scores are a well-established measure, a high correlation of other variables with this measure indicate a certain degree of commonality and, consequently, a certain degree of validity and reliability of the measure(s) being related to the English ACT scores. The correlation of the CET and LET scores with the English ACT scores is indicative of a valid and reliable instrument.

The only other correlations that could be considered as meaningful to the study were those among the CET scores, the LET scores and the grade-point average (GPA) of the participants. GPA is as well established as a reference criterion as ACT scores, and serves to support the generalizations made about the correlations among the CET, LET, and English ACT scores.

Other significant correlations could be mentioned and expanded but their interpretation could add little to the value of this study. Therefore speculation about their importance is left to the discretion of the reader.

Summary of Hypothesis Testing

A student's *t* test, a one-way analysis of covariance, a two-way analysis of variance, and a Pearson's product-moment correlation were used to test the nine hypotheses concerning the changes caused in reaction-evoking letter scores of eighty experimental and eighty control subjects enrolled in business communication classes at Central State University, Edmond, Oklahoma. All subjects were equated on

English ACT scores, Cooperative English Test scores, and letter ratings.

The results showed that the use of overhead transparencies developed by the researcher and used by the three instructors to teach selected principles in business communication resulted in significant differences between subjects who were given instruction complemented with audiovisuals (transparencies) and those subjects who were not given instruction complemented with audiovisuals (transparencies).

Post hoc correlations among the independent variables in the study showed the reaction-evoking stimulus letter to be a valid and reliable measure of each student's writing ability.

The conclusion can be drawn that the transparencies developed for the study were effective teaching aids for business communication teachers.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Purpose

The purpose of this study was to determine whether 160 randomly selected collegiate students enrolled in business communication would experience similar achievement after being taught by two instructional techniques: (1) the traditional method, utilizing the chalkboard, the text, and lectures; and (2) the experimental method, utilizing specially prepared transparencies projected on a screen to complement the traditional method.

Procedures

An analysis of covariance statistical test was used to determine the differences in Cooperative English Test gain scores and differences in a reaction-evoking letter gain score recorded for 160 college students randomly selected from students enrolled in eight sections of Business Communication 323a at Central State University, Edmond, Oklahoma, during the spring semester, 1972.

The analysis of covariance tested the general hypothesis that the achievement of the experimental subjects

who received instruction complemented by the 134 specially prepared overhead transparencies would surpass the achievement of the control subjects as a result of the audiovisual materials.

Prior to the conduct of the study, a pilot study involving 100 randomly selected students enrolled in ten sections of Business Communication 323a at Central State University (Oklahoma) was conducted during the fall semester, 1971.

Using the facilities at the Merrick Computer Center on the University of Oklahoma Campus, the data collected from the test scores and the biographical history were processed to test the nine hypotheses at the .05 level of significance.

Results

Nine hypotheses stated in the null form were tested in this study using a student's t test, an analysis of variance, an analysis of covariance, and an intercorrelation matrix.

Statistical Findings Immediate Test

Ho_1: There is no significant difference between the pretest Cooperative English Test scores of the experimental and the control classes.

The computed t value between the pretest means of the two groups was not significant. There was no significant

difference between the experimental and the control groups on the pretest scores of the Cooperative English Test ($\underline{t}$ = 1.353, df = 78, $p > .05$). Therefore, the null hypothesis could not be rejected.

Ho_2: There is no significant difference between the posttest Cooperative English Test scores of the experimental and the control classes.

The F value resulting from the one-way analysis of variance of the two groups indicated that the two groups were not statistically different on their CET scores after the experiment had been conducted (F = 0.351, df = 1/77, $p > .05$). The evidence from these findings lead to the conclusion that the experimental treatment of supplementary overhead audiovisuals did not cause a significant increase in the CET scores of the experimental subjects. Therefore, the null hypothesis could not be rejected.

Ho_3: There is no significant difference between the pretest English ACT scores of the experimental and the control classes.

A student's $\underline{t}$ test was computed between the English ACT score means of the experimental and the control groups of subjects. The resulting value indicated that there was no significant difference between the two groups' scores ($\underline{t}$ = 0.896, df = 78, $p > .05$). There was no significant difference between the experimental and the control subjects'

ACT English scores at the beginning of the experiment. Therefore, the null hypothesis could not be rejected.

Ho_4: There is no significant difference between the pretest scores of the reaction-evoking letter of the experimental classes and the control classes.

The computed t value between the pretest means of the two groups was not significant ($t = 1.104$, $df = 38$, $p > .05$).

The evidence from these findings lead to the conclusion that the experimental and the control subjects were statistically equal on their reaction-evoking letter scores at the beginning of the experiment. Therefore, the null hypothesis could not be rejected.

Ho_5: There is no significant difference between the posttest scores of the reaction-evoking letter of the experimental classes and the control classes.

The one-way analysis of covariance value resulting from testing hypothesis five was significant beyond the .05 level ($F = 5.27$, $df = 1/77$, $p < .05$). On the basis of these results, hypothesis five was rejected, and led to the conclusion that there was a significant difference between the experimental and the control groups' scores on the reaction-evoking letter. Furthermore, on the basis

of these results, the conclusion may be reached that the differences in the posttest scores were caused by the experimental treatment of complementing business communication instruction with audiovisual transparencies.

Ho_6: There are no significant differences among the reaction-evoking letter posttest scores recorded for the students from the five different grade classifications.

The one-way analysis of covariance value resulting from testing hypothesis six was not significant. The results indicated there was no statistically significant difference among the five groups of subjects ($F = 0.196$, $df = 4/77$, $p > .05$).

The evidence from these results lead to the conclusion that the subjects from the five different grade classifications wrote reaction-evoking posttest letters that were similar in quality, and the variable of grade level was not significant in determining the differences among the groups of subjects. Therefore, the null hypothesis could not be rejected.

Ho_7: There are no significant differences among the reaction-evoking letter scores (posttest) of the students enrolled in classes meeting at different times of the day.

The analysis of covariance results computed in

eight different classes meeting at varying times of the day were statistically equal on their reaction-evoking letter posttest scores ($F = 1.920$, $df = 7/71$, $p > .05$). The evidence from these findings led to the conclusion that difference in time-of-day scheduling of classes did not affect the reaction-evoking letter posttest scores. Therefore, the null hypothesis could not be rejected.

Ho_8: There are no significant differences among the reaction-evoking letter posttest scores of the students who were taught by the three different instructors conducting the experiment.

A two-way analysis of variance was used to test hypothesis eight. The results of the computations led to the three following conclusions:

1. There was no significant differences among the three different groups of students taught by the different instructors in conducting the experiment. The reaction-evoking letter posttest scores were statistically equal.
2. There was a significant difference between the means of the experimental and control subjects as a result of the experimental treatment ($F = 8.210$, $df = 1/74$, $p < .01$). The evidence from these findings led to the conclusion that

the experimental treatment caused the experimental groups to perform significantly better than the control groups on the posttest version of the reaction-evoking letter.

3. There was no significant interaction between the two independent variables of instructors and groups (A X B) as a result of the experimental treatment ($F = 1.973$, $df = 2/74$, $p > .05$).

Therefore, the null hypothesis could not be rejected.

Ho_9: There are no significant relationships among the variables of class attendance time, instructor, grade classification, English ACT scores, grade-point average (GPA), age, Cooperative English scores (CET), and reaction-evoking letter scores (LET).

A Pearson's product-moment correlation was used to develop a correlation matrix consisting of all possible relationships among the variables listed in hypothesis nine. The resulting matrix, shown in Table 15, contains only those correlations that were significant beyond the .05 level. Based on the correlations shown in the table, the following conclusions were reached:

There is a significant correlation between the groups of measures shown on the matrix . . .

1. Class attendance time X grade classification

2.	Instructor	X	Cooperative English Test (posttest)
3.	Instructor	X	reaction-evoking letter (posttest)
4.	Grade classification	X	English ACT score
5.	Grade classification	X	Cooperative English Test (posttest)
6.	Grade classification	X	age of participant
7.	English ACT score	X	Cooperative English Test (pretest)
8.	English ACT score	X	Cooperative English Test (posttest)
9.	English ACT score	X	reaction-evoking letter (pretest)
10.	English ACT score	X	reaction-evoking letter (posttest)
11.	English ACT score	X	grade-point average
12.	Cooperative English Test (pretest)	X	Cooperative English Test (posttest)
13.	Cooperative English Test (pretest)	X	reaction-evoking letter (pretest)
14.	Cooperative English Test (pretest)	X	reaction-evoking letter (posttest)
15.	Cooperative English Test (pretest)	X	grade-point average
16.	Cooperative English Test (posttest)	X	reaction-evoking letter (pretest)
17.	Cooperative English Test (posttest)	X	reaction-evoking letter (posttest)
18.	Cooperative English Test(posttest)	X	grade-point average
19.	Reaction-evoking letter (pretest)	X	reaction-evoking letter (posttest)

20.	Reaction-evoking letter (pretest)	X grade-point average
21.	Reaction-evoking letter (posttest)	X grade-point average

Conclusions Concerning the Experimental Subjects' Opinions of the Audiovisual Material

The responses of 113 of the experimental subjects were analyzed to determine their opinions of the audiovisual materials presented in the experimental treatment (Appendix H). The results of the analyses are presented in Table 16.

The results from the opinionnaire indicate that the experimental subjects were favorably impressed with the instructors' use of the audiovisual materials and the overhead projector in the presentation of business communication material. Most of the participants could see very little difference between the clarity of the projected material and the chalkboard presentations; nor could they see any difference in the ease of learning the projected materials as compared with the chalkboard presentations.

On the other hand, the experimental subjects were favorably impressed in the following ways: (1) they were able to see the materials presented on the screen, (2) they were not disturbed by the overhead projector and the transparency presentations, (3) the transparencies held their attention better than a chalkboard presentation, (4) the transparencies were an effective review for an examination, and (5) 92 (82%) indicated that they liked the audiovisual

TABLE 16.--Experimental Subjects' Responses to the Opinionnaire about Audiovisual Materials

Essence of Question	N	%
1. Able to see material on screen?		
a. Yes	106	94
b. No	6	6
2. Projected material clear?		
a. Better than chalkboard	61	54
b. Worse than chalkboard	11	10
c. No difference	41	36
3. Disturbed by the overhead projector?		
a. Never	89	79
b. Sometimes	24	21
4. Learn more rapidly with projector?		
a. Faster with projector	56	50
b. Faster with chalkboard	8	7
c. No difference	49	43
5. Transparencies hold your attention?		
a. Better than chalkboard	59	52
b. Same as chalkboard	38	34
c. Worse than chalkboard	15	14
6. Transparencies hold your interest?		
a. Better than chalkboard	58	52
b. Same as chalkboard	33	29
c. Worse than chalkboard	15	19
7. Effective review for examinations?		
a. Better than chalkboard	59	52
b. Same as chalkboard	42	37
c. Worse than chalkboard	12	11
8. Like for instructor to use projector?		
a. Yes	92	82
b. No	21	18

presentation of the business communication materials.

Synthesis of Conclusions

The conclusions drawn from the results of the research can be synthesized in the following summarizing statements:

1. The use of audiovisual materials (overhead transparencies) in complementing the presentation of business communication materials does make a significant difference in the reaction-evoking letter scores of college students enrolled in business communication courses.
2. College students enrolled in business communication courses prefer the presentation of course materials complemented with overhead projection transparencies over chalkboard presentation of the same material.
3. The reaction-evoking letter scores of the experimental and the control subjects were not affected either by the type of instructor, class attendance time, or grade classification.

Recommendations

On the basis of data collected from the 160 college students who were enrolled in business communication courses

at Central State University, Edmond, Oklahoma, and who served as subjects in an experimental study designed to measure the effect of using audiovisual materials (transparencies) in teaching business communication, the following recommendations are made:

1. That further research be conducted with the same research paradigm as the one used in this study, but with comparison groups, one receiving instruction complemented by black-and-white transparencies and the other receiving instruction complemented by color transparencies.
2. That further research be conducted in which the grade classifications would be contrasted more than was done in this study.
3. That further research be conducted to compare the learning rates of students with low verbal ability with the learning rates of students with high verbal ability.
4. That instructors of business education method courses, particularly in connection with business communication, incorporate the transparencies in this study with the teaching techniques for more effective teaching methods.

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APPENDIX A

DATA-GATHERING INSTRUMENTS

EXHIBIT 1

DIRECTIONS TO STUDENT TO COMPOSE PRETEST DIRECT REACTION-EVOKING STIMULUS LETTER

Assume you are district manager for the Avalon Company. Your purpose in the following situation is to persuade readers to order your products by mail by returning the order blank that is enclosed.

Write the letter with the ultimate goal of:

> Selling by mail to housewives beauty aids and cosmetics that are not sold in any store.

EXHIBIT 2

DIRECTIONS TO STUDENT TO COMPOSE POSTTEST DIRECT REACTION-EVOKING STIMULUS LETTER

Assume you are owner of Camp Wakomas, a summer camp for boys from ages 10 to 14. Your purpose in the following situation is to persuade the reader to enroll his son or sons in summer camp by returning a reservation card that is enclosed.

Write the letter with the ultimate goal of:

> Persuading parents to send their sons to a four-week session of your summer camp.

EXHIBIT 3

DIRECTIONS TO STUDENTS FOR COMPLETING PRETEST STIMULUS LETTER

1. Write your name, (last name first), your social security number, your section number, and your instructor's name in the upper right-hand corner of the ruled paper handed you.

2. Please write your letter as legibly as possible on the ruled paper.

3. Please use pen to complete the letter.

4. You will have this period to complete your letter, so start thinking right now.
(Go back to the problem and silently read it as your instructor reads it to you.)

5. Appraise the following points in your mind before you write anything (or you may wish to use scratch paper to outline or jot down your thoughts): (a) plan, (b) tone, (c) choice of words, and (d) effect on recipient. Nothing will be written on these points, but time should be taken to consider the significance of these points.

6. Date the letter February 2, 1972.

7. The inside address should read as follows: Mrs. John A. Way, 1521 West Main Street, Oklahoma City, OK 70131.

8. If you write a second page, please ask your instructor for a second sheet.

9. Please use semi-block form with indented paragraphs for your letter style.

10. Sign the following name to your letter: James R. Hood, District Manager.

11. When you have completed your letter, hand to your instructor all materials, the completed letter, directions, the assignment sheet, and the notes you have made to aid you in composing your letter.

EXHIBIT 4

DIRECTIONS TO STUDENTS FOR COMPLETING
POSTTEST STIMULUS LETTER

1. Write your name, (last name first), your social security number, your section number, and your instructor's name in the upper right-hand corner of the ruled paper handed you.

2. Please write your letter as legibly as possible on the ruled paper.

3. Please use pen to complete the letter.

4. You will have this period to complete your letter, so start thinking right now.
(Go back to the problem and silently read it as your instructor reads it to you.)

5. Appraise the following points in your mind before you write anything (or you may wish to use scratch paper to outline or jot down your thoughts): (a) plan, (b) tone, (c) choice of words, and (d) effect on recipient. Nothing will be written on these points, but time should be taken to consider the significance of these points.

6. Date the letter May 3, 1972.

7. The inside address should read as follows: Mr. John A. Way, 1521 West Main Street, Oklahoma City, OK 70131.

8. If you write a second page, please ask your instructor for a second sheet.

9. Please use semi-block form with indented paragraphs for your letter style.

10. Sign the following name to your letter: James R. Hood, Camp Director.

11. When you have completed your letter, hand to your instructor all materials, the completed letter, directions, the assignment sheet, and the notes you have made to aid you in composing your letter.

EXHIBIT 5

DIRECTIONS TO COOPERATING TEACHERS

TO COOPERATING TEACHERS:

Please look at the sheets I have given you. You have the following:

1. Explanation of tests to be given

   Please read this explanation during the first class period. I hope the explanation will encourage the students to be present during the testing period.

   Remember, the testing for the experimental project should be handled as an ordinary classroom test.

2. Assignment of classes

   Assignment of your sections has been made and you each have an experimental class and a control class.

   The experimental group will be shown transparencies for reinforcement of selected principles, while the control group will not be shown these visual aids.

3. A summary of the principles on which the transparencies are based

4. Directions for administering the Cooperative English Test (CET)

CET will be administered to all groups, experimental and control. If possible, please try to complete the CET this week. The test is 70 minutes long and will require two class periods.

The stimulus letter will be administered in class next week and instructions will be given to you at that time.

I appreciate your cooperation. I think and hope that we are doing something that will help the students--and, in the long run, will help us.

Lou Mooney

EXHIBIT 6

EXPLANATION OF TESTS TO STUDENTS

BUSINESS COMMUNICATION TEACHERS:

Please read the explanation that follows to your students after you have gone through your regular introduction to your course. This instruction guide is given to you as a guide in order that all classes, control or experimental, will receive the same explanation for the administration of the diagnostic tests. Read in conversational tone--substitute "I" for "we" if you wish.

EXPLANATION OF TESTS

Students, our purpose here at Central State University is to try to give the best instruction possible to you. We are especially interested in improving our instruction in business communication.

During the past two years, the General Business Department has received approval to add other business communication courses in addition to 323a. As you know, Business Communication 323a is the first course in business communication and covers the principles of business communication. The other courses in business communication that are offered are: Interpersonal communication, Report writing, and Administrative communication.

In order to give you the very best instruction in business communication that we possibly can, we have decided to take steps to find out just what instruction is needed to meet your needs.

First, information must be gathered to determine the review that is necessary in English usage; therefore, two class periods will be used to complete an objective-type test. You will be furnished all materials.

Next week, you will complete more work in class to determine your writing ability.

Please help us to help you by attending class and completing the work given to you during these first two weeks. Only by knowing more about you can we give you the best instruction.

Will the diagnostic tools affect your grade? It is possible that your failure to cooperate will lower your

EXHIBIT 6-Continued

grade. Lack of cooperation on your part can be a contributing factor to a poor relationship between us.

(If your students ask more questions about grades, etc., just state, "These are my instructions," and close the conversation.)

EXHIBIT 7

DIRECTIONS TO COOPERATING TEACHERS FOR ADMINISTERING THE COOPERATIVE ENGLISH TEST

The Cooperative English test is divided into three sections:

I	English Usage	completion time - 40 minutes
II	Spelling	completion time - 10 minutes
III	Vocabulary	completion time - 20 minutes

The sections should be timed as suggested. Timing starts after everyone has the answer sheets and test booklet. (Of course, the answer sheet must have identification section completed before the timing starts.)

When students have finished the first test period, take up the answer sheets and test booklets. Both the answer sheets and test booklets will have to be used for the next testing period.

We will have to arrange to pass these test booklets from one class to another after each period on M-W-F classes.

You have the sample test, answer sheets, manual of directions, and a set of questions if you wish to refresh your memory.

The following change should be made in the information section of the answer sheet:

Substitute social security number for title of the course

EXHIBIT 8

CLASSES RANDOMLY ASSIGNED

Instructor A

8:30	MWF	Sec. 1324	Room B210	Experimental
9:30	MWF	Sec. 1332	Room C209	Control
2:30	MWF	Sec. 1333	Room B210	Control
5:30	TTh	Sec. 1334	Room B207	Experimental

Instructor B

10:30	MWF	Sec. 1326	Room B209	Experimental
12:30	MWF	Sec. 1330	Room B210	Control

Instructor C

9:30	TTh	Sec. 1325	Room B207	Experimental
11:30	MWF	Sec. 1329	Room B209	Control

EXHIBIT 9

DIRECTIONS TO FACULTY FOR ADMINISTERING THE REACTION-EVOKING LETTER

1. Take your stapler to class to use in the event that students use two pages for the letter assignment. There are extra sheets for a two-page letter; however, do not encourage a long letter by distributing the second sheets.

2. Ask students to use a pen.

3. Distribute the materials: letter assignment, directions, and ruled paper for the letter assignment. Ask students to keep the assignment face down until you go over it with them.

4. Start reading the directions, and wait for students to complete the information in the top right-hand corner. They should fill in name, social security number, section number, and instructor's name.

5. Ask for questions.

6. This letter is to be completed in one period.

7. Be certain that the assignment sheet, the letter, and the scratch paper used are turned in to you.

Thank you.

EXHIBIT 10

DIRECTIONS TO COOPERATING TEACHERS FOR SHOWING THE TRANSPARENCIES

Here is the first set of transparencies covering communication theory. You will notice they are numbered I_1, I_2, etc. After you have completed Chapter I, please go back and review this chapter by showing the illustrations to the experimental groups.

According to authorities, principles should be covered or introduced by lecture or explanation--then, these principles should be followed by illustrations.

The transparencies are to be shown only to the experimental groups. Please try, as much as possible, to transmit this same information from the transparencies to your control group. You can do so through chalkboard illustrations and lectures.

The procedure of showing the illustrations to the experimental group, then, following up with the same set of principles to the control group with blackboard illustrations and lecture should be done each time that the transparencies are shown.

I will have the transparencies for letter format next week.

Please take good care of the transparencies, as I may need them.

Thank you so much for your cooperation.

Lou Mooney

EXHIBIT 11

SCHEDULE FOR PRESENTING TRANSPARENCIES TO COINCIDE WITH CLASS TEXT MATERIAL

TEXTBOOK CHAPTER*	CATEGORY OF TRANSPARENCIES
Introduction Theory of Communication	I Process of Communication
Chapter I What Makes a Letter Effective	III Empathy
Chapter 2 Format	II The Effectiveness of Communication (1) Format
Chapter 3 Factual and Verbal Precision	II The Effectiveness of Communication (2) The C's
Chapter 4 Curing Bad Style Habits	II The Effectiveness of Communication (3) Word Usage
Chapter 5 Developing an Effective Style	II The Effectiveness of Communication (4) Sentences (5) Paragraphs
Chapter 6 Tone	III Empathy (Repeat)
Chapter 7 Routine Communication	IV Basic Letter Development V Specific Letter Development

*Wells, Walter, Communications in Business.

APPENDIX B

PRINCIPLES OUTLINED IN ABWA SYLLABUS

PRINCIPLES OUTLINED IN ABWA SYLLABUS[1]

I. The Process of Communication
   - Basic transmission of message
   - Symbols used to transmit message
   - Feedback

II. The Effectiveness of Communication
   1. Completeness, Courtesy, Correctness, Clarity, Conciseness, Consideration
   2. Physical precision
   3. Verbal precision
      - Word choice
      - Conversational tone
      - Jargon
      - Level of usage
      - Positivity
      - Parallelism
   4. Sentence development
      - Length of sentence
      - Shape of sentence
   5. Paragraph development
      - Length of paragraph
      - Emphasis
      - Variety

III. Empathy
   - Human needs
   - Psychology of tone

IV. Basic Letter Development

V. Specific Letter Development
   1. Direct reaction-evoking
      - Good news
      - Bad news
      - Persuasive
      - Demand
   2. Routine
      - Reply or exchange of information
      - Goodwill

---

[1]David M. Robinson, Chairman, et al., A Syllabus for Business Letter-Writing Courses (Urbana, Illinois: The American Business Writing Association, 1961.)

APPENDIX C

TEXTBOOKS EXAMINED FOR COURSE CONTENT

Exhibit 1

TEXTBOOKS EXAMINED FOR BUSINESS COMMUNICATION PRINCIPLES

Textbooks	Principles Outlined in ABWA Syllabus[1]				
	I Process of Communication	II Effectiveness of Communication	III Empathy	IV Basic Letter Development	V Specific Letter Development
Business Communication	X	X	X	X	X
Business Communications	X	X	X	X	X
Communicating Facts and Ideas in Business	X	X	X	X	X
Communicating Through Letters and Reports	X	X	X	X	X
Communications in Business	X	X	X	X	X
Effective Communication in Business	X	X	X	X	X
Resourceful Business Communication	X	X	X	X	X
Written Communication in Business	X	X	X	X	X

[1]David M. Robinson, Chairman, et al., A Syllabus for Business Letter-Writing Courses (Urbana, Illinois: The American Business Writing Association, 1961).

EXHIBIT 2

TEXTBOOKS EXAMINED FOR CONTENT OF BUSINESS COMMUNICATION PRINCIPLES OUTLINED IN AWBA SYLLABUS

Aurner, Robert R., and Wolf, Morris Philip. Effective Communication in Business. 5th ed. Cincinnati: South-Western Publishing Company, 1967.

Brown, Leland. Communicating Facts and Ideas in Business. 2d ed. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970.

Damerst, William A. Resourceful Business Communication. New York: Harcourt, Brace & World, Inc., 1966.

Himstreet, William C., and Baty, Wayne Murlin. Business Communications. 3d ed. Belmont, California: Wadsworth Publishing Company, 1969.

Lesikar, Raymond V. Business Communication. Homewood, Illinois: Richard D. Irwin, Inc., 1968.

Menning, J. H., and Wilkinson, C. W. Communicating Through Letters and Reports. 4th ed. Homewood, Illinois: Richard D. Irwin, Inc., 1967.

Shurter, Robert L. Written Communication in Business. 3d ed. New York: McGraw-Hill Book Company, 1971.

Wells, Walter. Communications in Business. Belmont, California: Wadsworth Publishing Company, 1968.

APPENDIX D

QUALIFICATIONS OF INSTRUCTORS

EXHIBIT 1

INSTRUCTOR A

Classes Randomly Assigned

Section		Time	Location
Experimental	No. 1324	8:30 M-W-F	Business Building 210
Control	No. 1332	9:30 M-W-F	Communication 209
Control	No. 1333	2:30 M-W-F	Business Building 210
Experimental	No. 1334	5:30 T-Th	Business Building 207

Biographical Information

Educational Background

Instructor A received a Bachelor of Science degree in Business Education from Central State University in 1964; a Master of Business Education degree from the University of Oklahoma in 1967; and has completed all course work required for a doctor's degree in education.

Business Experience

This instructor gained three years' experience as a secretary in industry.

Teaching Appointments

Instructor A has a total of five years' teaching experience. She was an instructor of business subjects, Altus Junior College, Altus, Oklahoma, 1965-68; Instructor, Department of Business Administration, Central State University, Edmond, Oklahoma, 1968-71; and Assistant Professor of Business Administration, Central State University, 1971 to present.

Teaching Experience in Business Communication

This instructor has taught several sections of business communication each semester during the past five years.

EXHIBIT 2

INSTRUCTOR B

Classes Randomly Assigned

Section		Time	Location
Experimental	No. 1326	10:30 M-W-F	Business Building 209
Control	No. 1330	12:30 M-W-F	Business Building 210

Biographical Information

Educational Background

Instructor B received a Bachelor of Science degree in Business Education from East Central State College, Ada, Oklahoma, in 1952; a Master of Business Education degree, from the University of Oklahoma, Norman, Oklahoma, in 1960; and a Doctor of Education degree, University of Oklahoma in 1971.

Business Experience

This instructor gained two years' experience as a secretary in industry and finance.

Teaching Appointments

Instructor B has a total of twenty years' teaching experience. She was a business education teacher in the Oklahoma Public Secondary Schools, 1952-62; Instructor, Departments of Business Education and Business Administration, Central State University, Edmond, Oklahoma, 1962-65; and Assistant Professor of Business, Central State University, 1965 to present.

Teaching Experience in Business Communication

This instructor has taught several sections of business communication and report writing each semester of her ten years' teaching appointments at Central State University.

EXHIBIT 3

INSTRUCTOR C

Classes Randomly Assigned

Section		Time	Location
Experimental	No. 1325	9:30 T-Th	Business Building 207
Control	No. 1329	11:30 M-W-F	Business Building 209

Biographical Information

Educational Background

Instructor C received a Bachelor of Science degree in Business Education from the University of Oklahoma, Norman, Oklahoma, in 1961; a Master of Business Education degree, from the University of Oklahoma in 1962; and has completed all course work required for a doctor's degree in education.

Business Experience

This instructor gained thirteen years' experience as a secretary in industry.

Teaching Appointments

Instructor C has a total of twelve years' teaching experience. She was a graduate assistant, Department of Administrative Services, University of Oklahoma, Norman, Oklahoma, 1960-61; Instructor, Department of Administrative Services, University of Oklahoma, 1961-62; Instructor, Departments of Business Education and Business Administration, Central State University, Edmond, Oklahoma, 1962-65; and Assistant Professor of Business, Central State University, 1965 to present.

Teaching Experience in Business Communication

This instructor has taught several sections of business communication and report writing each semester of her ten years' teaching appointments at Central State University.

APPENDIX E

QUALIFICATIONS OF LETTER RATERS

EXHIBIT 1

LETTER RATER A

Biographical Information

Educational Background

Letter Rater A received a Bachelor of Arts degree in English from East Texas State University, Commerce, Texas in 1925.

Business Experience

Her experience has been related to the teaching field: consultant to leading Oklahoma City firms, television teaching, seminars, and military advisor. This extra-curricular experience has been over a period of fifteen years.

Teaching Appointments

Letter Rater A has a total of thirty-two years' teaching experience. She was a public school teacher in the State of Texas for thirteen years; Instructor, Hill's Business University, Oklahoma City, Oklahoma, 1938-42; Instructor, Business Education Department, Oklahoma City University, Oklahoma City, 1957-65; and Assistant Professor in the Department of Business Administration, Oklahoma City University, 1965-71.

Teaching Experience in Business Communication

This rater has taught classes in English, business communication, and report writing for her entire teaching career of thirty-two years.

EXHIBIT 2

LETTER RATER B

Biographical Information

Educational Background

Letter Rater B received a Bachelor of Science degree in Business Education from Central State University, Edmond, Oklahoma, in 1949; a Master of Business Education degree from the University of Oklahoma, Norman, Oklahoma, in 1953; and has completed additional graduate work in Business Education at the University of Oklahoma.

Business Experience

This rater gained three years' experience employed as a secretary in industry.

Teaching Appointments

Letter Rater B has a total of twenty years' teaching experience. She was a business education teacher in the Oklahoma Public Secondary Schools, 1951-58; Instructor in Business Education and Business Administration, Central State University, Edmond, Oklahoma, 1959-62; and Assistant Professor of Business Education, Central State University, 1962 to present.

Teaching Experience in Business Communication

This rater has taught classes in business English, business communication, and report writing for her entire teaching career of twenty years.

EXHIBIT 3

LETTER RATER C

Biographical Information

Educational Background

Letter Rater C received a Bachelor of Science degree in Business Education from the University of Oklahoma, Norman, Oklahoma, in 1961; a Master of Business Education degree from the University of Oklahoma in 1962; and has completed all course work required for a doctor's degree in education.

Business Experience

This rater gained thirteen years' experience employed as a secretary in industry.

Teaching Appointments

Letter Rater C has a total of twelve years' teaching experience. She was a graduate assistant, Department of Administrative Services, University of Oklahoma, Norman, Oklahoma, 1960-61; Instructor, Department of Administrative Services, University of Oklahoma, 1961-62; Instructor, Departments of Business Education and Business Administration, Central State University, Edmond, Oklahoma, 1962-65; and Assistant Professor of Business, Central State University, 1965 to present.

Teaching Experience in Business Communication

This instructor has taught several sections of business communication and report writing each semester of her ten years' teaching appointments at Central State University.

APPENDIX F

STUDENT RATING SHEET TO EVALUATE INSTRUCTOR

Date_____Instructor_____

This is a student-opinion questionnaire designed to furnish information which will be helpful to the individual instructor. It will be examined by the instructor and then destroyed. DO NOT SIGN YOUR NAME OR OTHERWISE IDENTIFY YOUR COPY. Please do not be flippant or unkind--your answers must be selected in a spirit of fairness if they are to be of value.

INSTRUCTOR RATING BY STUDENT

(Underline the word or phrase which most accurately expresses your opinion.)

1. Friendliness..Very friendly, average, distant
2. Personality..Above average, average, below average
3. Knowledge of Subject..Excellent, good, average, poor, inferior
4. Thoroughness of Preparation.. Thorough, average, inferior
5. Ability to Hold Interest..Excellent, good, average, poor, inferior
6. Willingness to Explain in Detail..Good, fair, average, poor, bad
7. Clarity of Explanations..Good, average, poor
8. Personal Mannerisms..Pleasing, unnoticable, distracting
9. Personal Attitude..Sympathetic, cool, caustic
10. Grading Policies..Too easy, about right, too hard
11. Speaking Voice..Pleasant, average, unpleasant
12. Vocabulary and Choice of Words..Excellent, good, average, poor, inferior
13. Extra Study Demands..Too much, about right, not enough
14. Delivery..Fascinating, interesting, average, dull, monotonous
15. Enjoyment of Teaching..High, average, low
16. Amount of Lecture..Too much, about right, too little
17. Ease of Examinations..Too easy, average, too hard
18. Number of Examinations..Too many, about right, too few
19. Attitude toward Mistakes..Tolerant, about right, sarcastic
20. Classroom Discipline..Too authoritarian, about right, too lax
21. Professionalism..Too aloof, about right, approachable
22. Attitude toward Cheating..Too strict, about right, too lax
23. Monitor of Testing Sessions..Too watchful, about right, too lax
24. Interest in Progress of Student..High, average, low
25. Respect Paid by Students..Very high, high, average, low

What is your candid honest opinion of this instructor? (be specific)

_____

_____

_____

_____

_____

DO NOT SIGN YOUR NAME OR OTHERWISE IDENTIFY YOUR COPY!!!

APPENDIX G

LETTER EVALUATION GUIDE

LETTER EVALUATION GUIDE

	No	Negative	Neutral	Positive	Yes	No Evidence
Tone						
1. Does the message sound sincere?						1.xxx
2. Is the letter friendly?						2.xxx
3. Is the letter reader-centered?						3.xxx
4. Does the letter show appreciation of reader's problems?						4.xxx
5. Are negative ideas subordinated to positive attitude?						5.___
6. Are courtesy expressions handled sincerely?						6.___
7. Are the facts known by the reader subordinated?						7.___
8. Does the closing statement have positive appeal?						8.xxx
Total for Tone						
Choice of Words						
1. Are simple words used in place of big words?						1.xxx
2. Is the reader's language used?						2.xxx
3. Is the word meaning precise?						3.xxx
4. Do the words connote intended meanings?						4.xxx
5. Have unnecessary words been eliminated?						5.xxx
6. Is a fresh, vivid vocabulary used? (concreteness)						6.xxx
7. Are trite, hackneyed expressions eliminated?						7.xxx
8. Is active voice used in place of passive voice?						8.xxx
9. Is conversational English used?						9.xxx
Total for Choice of Words						
Sentence and Paragraph Structure						
1. Is parallel sentence structure used?						1.xxx
2. Are paragraphs of appropriate length?						2.xxx
3. Are pronoun references clear?						3.___
4. Are modifiers properly placed?						4.___
5. Do subjects and verbs agree?						5.xxx
6. Do sentences flow smoothly?						6.xxx
7. Is transition easy from sentence to sentence, paragraph to paragraph?						7.xxx
Total for Sentence and Paragraph Structure						
Organization						
1. Does the letter move quickly to the point? (First para: attention)						1.xxx
2. Does one idea logically follow another?						2.xxx
3. Is information in logical order of presentation?						3.xxx
4. Does body of letter create interest?						4.xxx
5. Does body of letter create desire?						5.xxx
6. Is repetition minimized?						6.___
7. Are all facts provided the reader?						7.xxx
8. Does last paragraph call for action?						8.xxx
Subtotal for Organization						9.xxx
x2						
Total for Organization						
Total Items rated in columns						

Rating value	1	2	3	4	5	0
Rated columnar totals						xxx
Gross score (Sum of rated columnar totals)						
Average score (Gross score divided by items rated)						

APPENDIX H

STUDENT RATING SHEET OF OVERHEAD PROJECTOR

EVALUATION OF OVERHEAD PROJECTOR

CHECK ONE ITEM FOR EACH QUESTION

In answering each question always compare your communication class (where the overhead projector was used) with any other classes where the usual chalkboard method was used.

1. As a rule were you able to see the material projected on the screen?
   Yes_____
   No _____

2. Was the projected material more clear than the material presented on the chalkboard?
   The screen image was more clear_____
   The chalkboard was more clear _____
   They were equally clear _____

3. Were you inconvenienced or disturbed by the presence of the projector in your classroom?
   Never _____
   Sometimes _____
   Constantly_____

4. Did the use of the projector enable you to learn the new material and lessons more rapidly?
   Faster with the overhead projector _____
   Faster with the chalkboard _____
   There was no difference _____

5. How well did the use of the projector and transparencies hold your attention?
   Better than chalkboard presentations_____
   Equal to chalkboard presentations _____
   Less than chalkboard presentations _____

6. How well did the use of the projector and transparencies hold your attention?
   Better than chalkboard presentations_____
   Equal to chalkboard presentations _____
   Less than chalkboard presentations _____

7. How effective was the overhead projector in reviewing for examinations?
   Better than chalkboard presentations_____
   Equal to chalkboard presentations _____
   Less than chalkboard presentations _____

8. Did you like the use of the overhead projector?
   Yes_____
   No _____

APPENDIX I

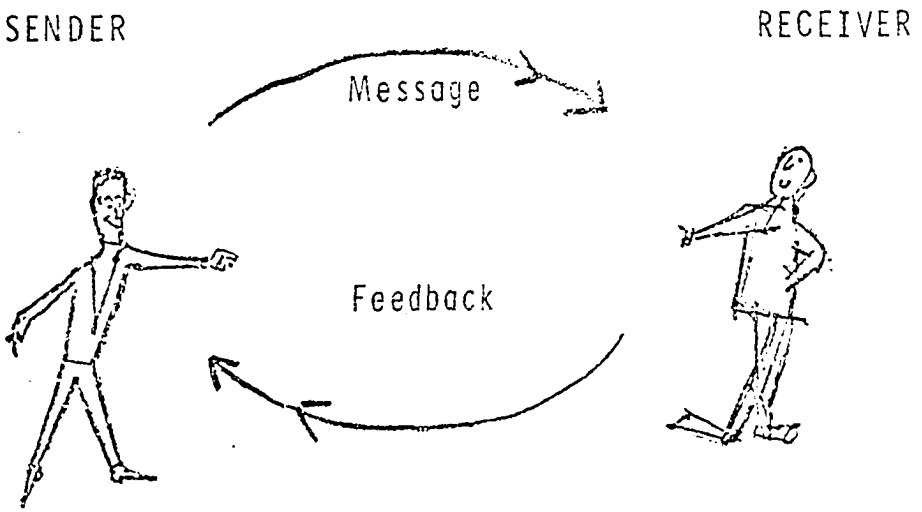
TRANSPARENCIES

THE PROCESS OF COMMUNICATION

Transparency 1

THE PROCESS OF COMMUNICATION

(A Two-Way Process)



Transparency 2

Feedback is information that comes back from receiver to sender

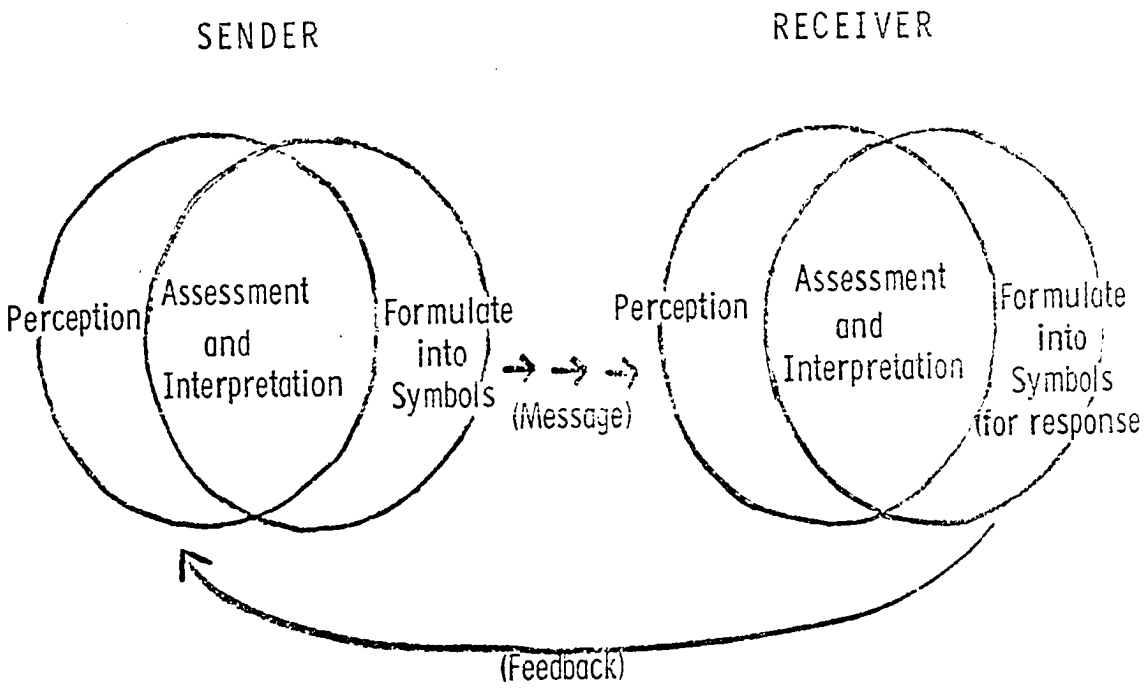
Did receiver get the message?

Did receiver accept the message?

Did receiver reject the message?

Transparency 3

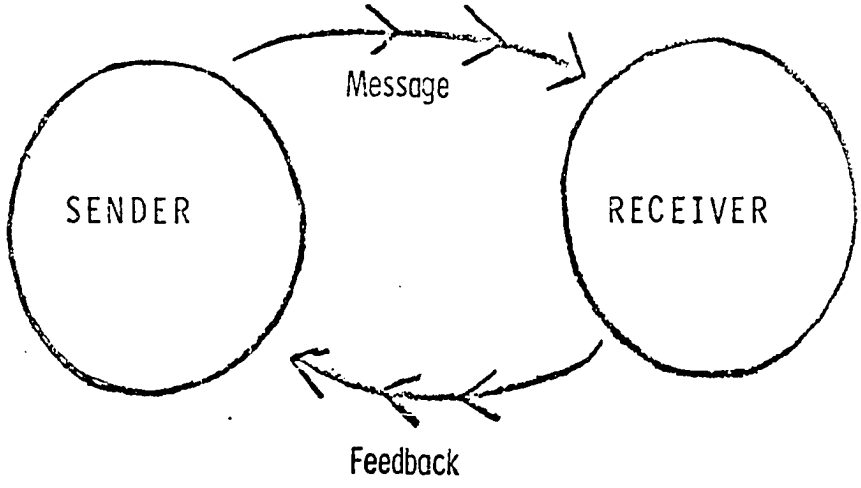
ELEMENTS OF COMMUNICATION



Sender's purpose in sending message is to produce an action or reaction (feedback)

Transparency 4

TWO OR MORE PEOPLE ARE NEEDED TO COMPLETE THE COMMUNICATION CYCLE



THE TOTAL PROCESS OF THE CYCLE INCLUDES:

Talking

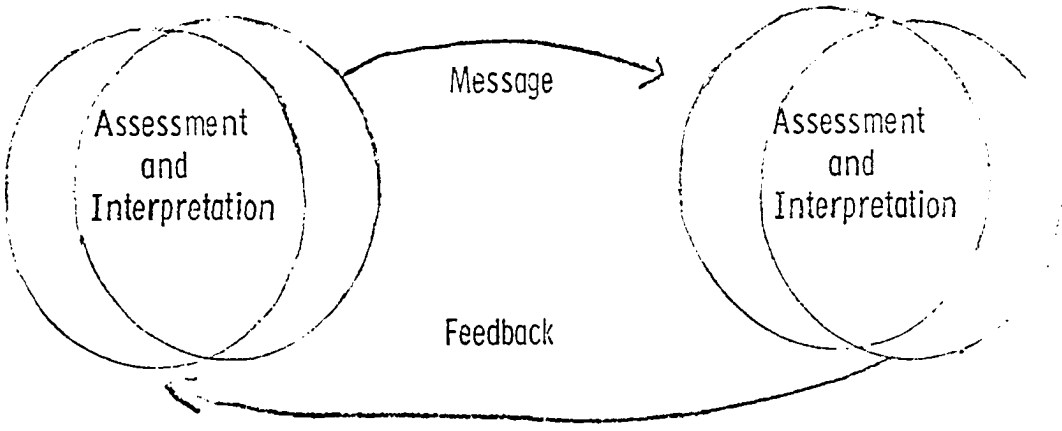
Listening

Writing

Reading

Transparency 5

ASSESSMENT AND INTERPRETATION OF COMMUNICATION



Transparency 6

Assessment and interpretation of message by sender or receiver made from own viewpoint that is based on following:

1. His communication skills
   (must be able to speak, write, and think)
2. His attitude
   (toward self, toward message, or toward sender)
3. His emotions at time of communication
4. His knowledge level
5. His culture
6. His social system

Transparency 7

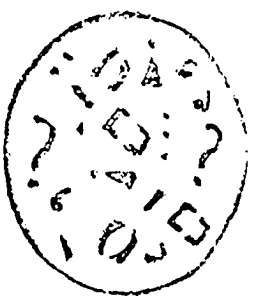
Symbols used for message must stand for same thing in minds of both sender and receiver for success of communication effort



I PROCESS
5

Transparency 8

SYMBOLS USED IN THE COMMUNICATION CYCLE



ORAL COMMUNICATION

Spoken words are symbols

WRITTEN COMMUNICATION

Written words and figures are symbols

NON-VERBAL COMMUNICATION

Body movements are symbols

A lack of any response to communication is a symbol

Transparency 9

COMMUNICATION BETWEEN INDIVIDUALS IS IMPERFECT

BECAUSE SENSORY RECEPTORS ARE LIMITED

AND SELECTIVE

The eyes detect only a part of the total spectrum



The ears detect only a part of the total spectrum



The ability to taste, to smell, and to feel are limited to a part of the total spectrum



Transparency 10

COMMUNICATION BETWEEN INDIVIDUALS CAN BE ACCOMPLISHED IN SEVERAL WAYS

BY PHYSICAL CONTACT



A pat on the back
A handshake
A kiss

Transparency 11

BY A MOVEMENT OF THE BODY

A smile
A pointed finger
A clenched fist
A nod of the head
A raised eyebrow



BY WORDS

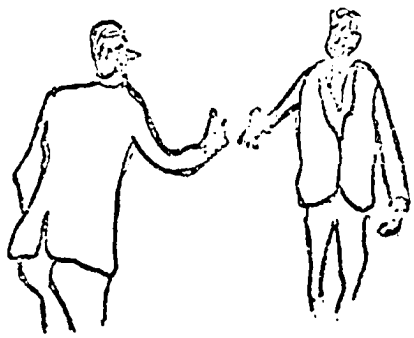
Spoken words
Written words

Words
Words
Words
Words

Transparency 12

EFFECTIVENESS OF COMMUNICATION

MOST EFFECTIVE



Face-to-face conversation

Oral and physical symbols are apparent to both sender and receiver

Immediate feedback clarifies inaccuracies

Transparency 13

SECOND MOST EFFECTIVE

Two-way, but not face-to-face
(As in telephone call)

Oral symbols used, but
physical symbols not possible

Immediate feedback clarifies
inaccuracies

Transparency 14

LEAST EFFECTIVE



One-way communication
(As in letter or radio program)

Oral and physical symbols not possible

Immediate feedback not possible

I PROCESS
9c

THE EFFECTIVENESS OF COMMUNICATION

Physical Precision

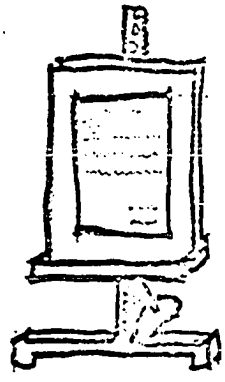
Transparency 15

HOW DOES YOUR MESSAGE LOOK?



Frame your letter

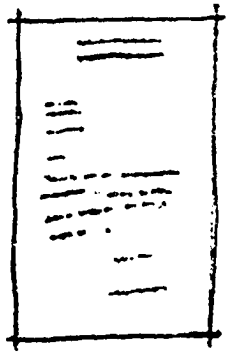
I like a picture frame



Keep the sides and bottom margins

equal in width

Transparency 16



THE PAPER

Is it good quality?

THE LETTERHEAD

Does it have a pleasing design?

Does it take up about 2 1/2 " space?

THE TYPING

Is it correct?

Is it neat?

THE WORDS

Did you write an individual message?

Transparency 17

INTERCOLLEGIATE DESIGNS, INC.

128-168 32nd ST., BROOKLYN, N.Y. 11232
PHONE 212-499-8400



LETTERHEADS

Checklist

1. Does your letterhead tell
   who you are?
   (Your name)

2. Does your letterhead tell
   where you are?
   (Full address)

3. Does your letterhead tell
   what you are?
   (Your business)

Transparency 18



HEADING December 23, 1972

Mr. Herman R. Bryant
1446 Ziegler Avenue INSIDE ADDRESS
Wheaton, IL 60187

Dear Mr. Bryant: SALUTATION

II EFFECTIVENESS
Format
4a

Transparency 19

You will be happy to know that May 22 is the delivery date for your new 12-foot "Starbrite" cruiser.

BODY

The factory representatives assure me that the special options can be worked into their production schedule without difficulty. The total price of $30,000 is payable at the time the title is transferred.

You have selected a fine boat. I hope you will spend many enjoyable hours aboard.

II EFFECTIVENESS
Format
4b

Transparency 20

Yours very sincerely,

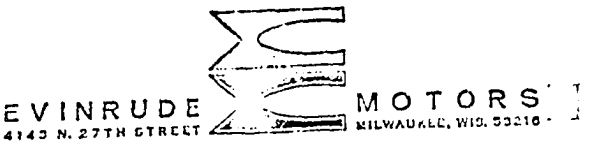
SIGNATURE BLOCK

J. R. Swartz, President

JRS/lm IEC BLOCK

II EFFECTIVENESS
Format
4c

Transparency 21



December 23, 1972 HEADING

Mr. Herman R. Bryant
1446 Ziegler Avenue INSIDE ADDRESS
Wheaton, IL 60187

Dear Mr. Bryant SALUTATION

II EFFECTIVENESS
Format
5a

Transparency 22

You will be happy to know that May 22 is the delivery date for your new 12-foot "Starbrite" cruiser.

BODY

The factory representatives assure me that the special options can be worked into their production schedule without difficulty. The total price of $30,000 is payable at the time the title is transferred.

You have selected a fine boat. I hope you will spend many enjoyable hours aboard.

II EFFECTIVENESS
Format
5b

Transparency 23

Very truly yours

SIGNATURE
BLOCK

J. R. Swartz, President

JRS/lm
cc: Sales Office IEC BLOCK

II EFFECTIVENESS
Format
5c

Transparency 24



December 23, 1972 HEADING

Mr. Herman R. Bryant
1446 Ziegler Avenue INSIDE ADDRESS
Wheaton, IL 60187

DELIVERY DATE FOR YOUR CRUISER

II EFFECTIVENESS
Format
6a

Transparency 25

BODY

You will be happy to know that May 22 is the delivery date for your new 12-foot "Starbrite" cruiser.

The factory representatives assure me that the special options can be worked into their production schedule without difficulty. The total price of $30,000 is payable at the time the title is transferred.

You have selected a fine boat. I hope you will spend many enjoyable hours aboard.

Transparency 26

J. R. SWARTZ, PRESIDENT SIGNATURE BLOCK

jrs IEC BLOCK

II EFFECTIVENESS
Format
6c

THE EFFECTIVENESS OF COMMUNICATION

The C's

Transparency 27

ESSENTIALS FOR EFFECTIVE COMMUNICATION

COMPLETENESS

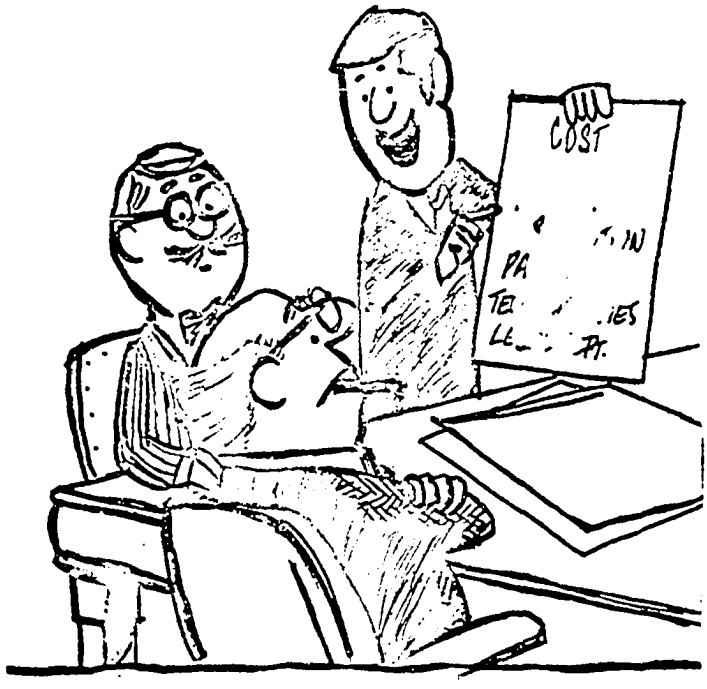
CORRECTNESS

CLARITY

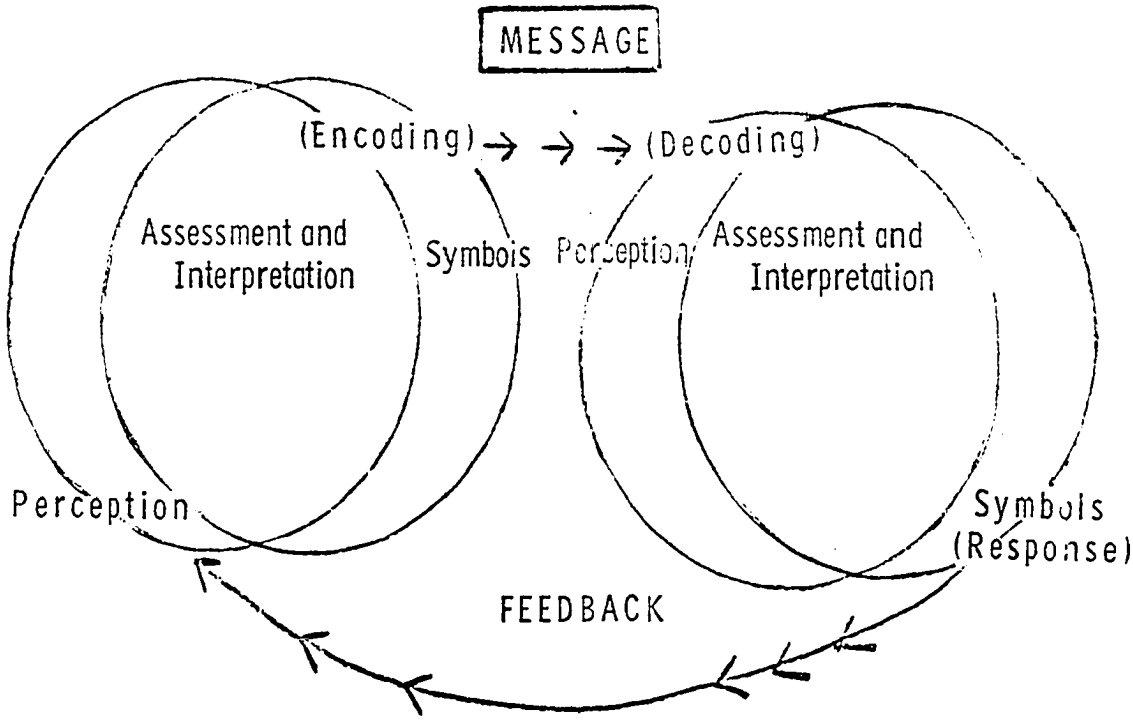
CONSIDERATION

CONCISENESS

COURTESY



Transparency 28

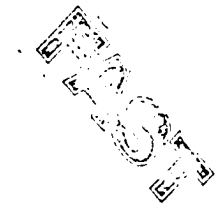


II EFFECTIVENESS
C's
2a

Transparency 29

Message should be written so that it can be easily and quickly read

Task of reading should be made easy for receiver



II EFFECTIVENESS
C's
2b

Transparency 30

COMPLETENESS

Are all facts given to insure completeness of message?

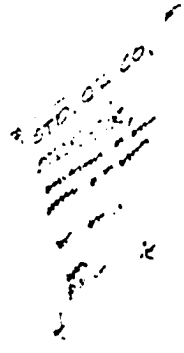
Are all details included to insure completeness of message?

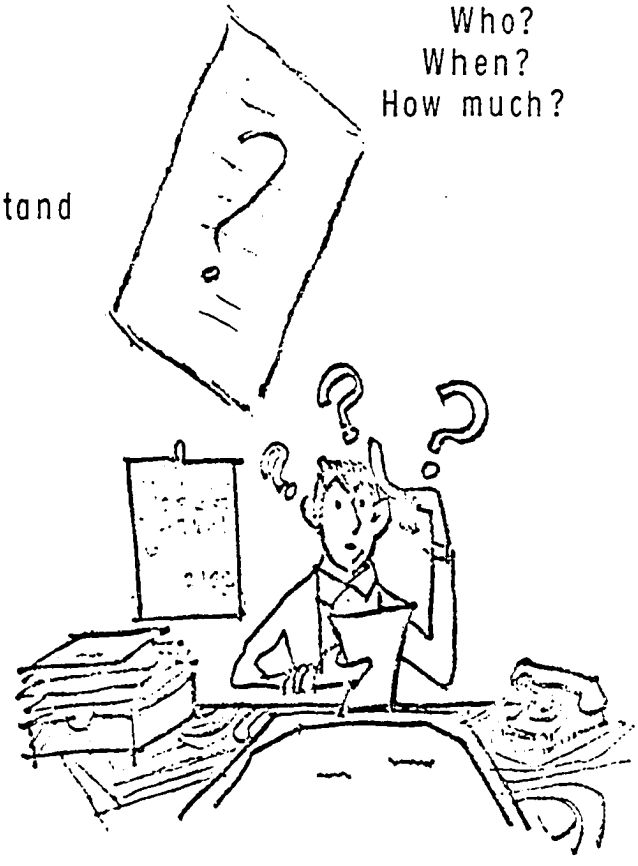
Transparency 31

Who?
When?
How much?

Does receiver understand

the message?





II EFFECTIVENESS
C's
3b

Transparency 32

IS MESSAGE COMPLETE AND SPECIFIC?

I have a pet at home



Oh! What kind of a pet?



I have a cat



What kind of a cat?



Siamese



Grown up or kitten?



A kitten



What color is it?



White with black ears





Why didn't you say you had a black and white Siamese kitten as a pet in the beginning?

Transparency 33

CLARITY

Are statements presented in logical sequence?

Is feedback required for clarity?

Do ideas in message have common purpose or oneness?

Does receiver have to play the role of detective to understand the message?



Transparency 34

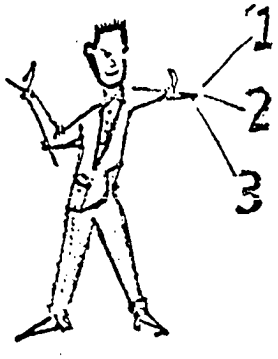
CHECK FOR CLARITY AND COMPLETENESS

Can message be correctly understood by receiver?

II EFFECTIVENESS
C's
6a

Transparency 35

Plan to Include All the Facts



Which one comes first?

Which one comes second?

Which one comes third, etc.

Transparency 36

Assign Numbers to Ideas

In our letter of March 1, we asked you to send us the following:

1. A financial statement
2. A list of credit references
3. A letter of credit from a wholesale firm

II EFFECTIVENESS
C's
6c

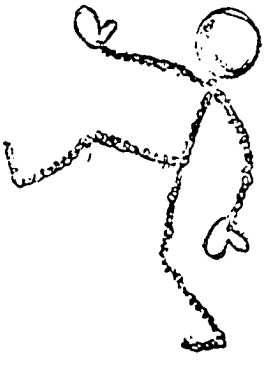
Transparency 37

Conciseness

Unnecessary words and ideas eliminated?

Filler words and phrases avoided?

Indefinite words avoided?
(it, this, that)



Transparency 38

WORDY	CONCISE
At a price of $50	At $50
The color of the dress is blue	The dress is blue
Hold a meeting	Met
That is the situation at this time	That is the present situation
If it is possible, let me have	If possible, let me have

Transparency 39

Exactly identical	Identical
Made that announcement	Announced
In regard to	About
Cooperate together	Cooperate
Ten in number	Ten
Consensus of opinion	Consensus

11 EFFECTIVENESS
C's
7c

Transparency 40

COURTESY

Has message given the following impression:

Respect for other person's point of view?

Helpful?

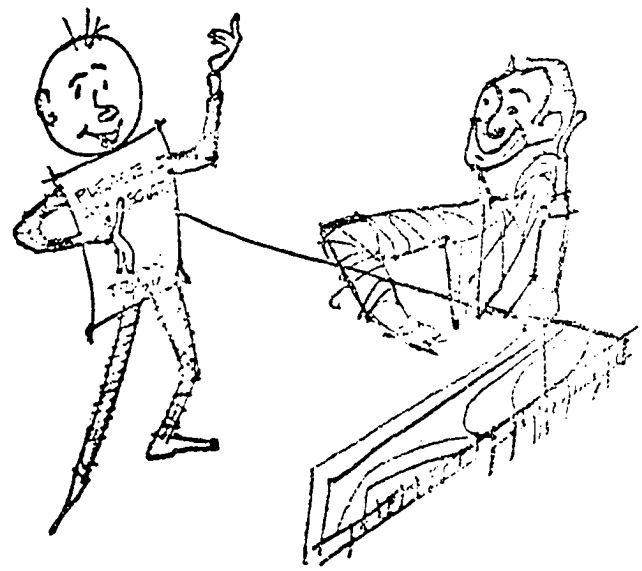
Friendly?

Appreciation?

Transparency 41

Thank you for your cooperation.

Good luck with your new program.



I appreciate

Thank you

Please

II EFFECTIVENESS
C's
8b

Transparency 42

CORRECTNESS



Is letter accurate?

Are all amounts right?

Are all numbers right?

Are the receiver's name and address correct?

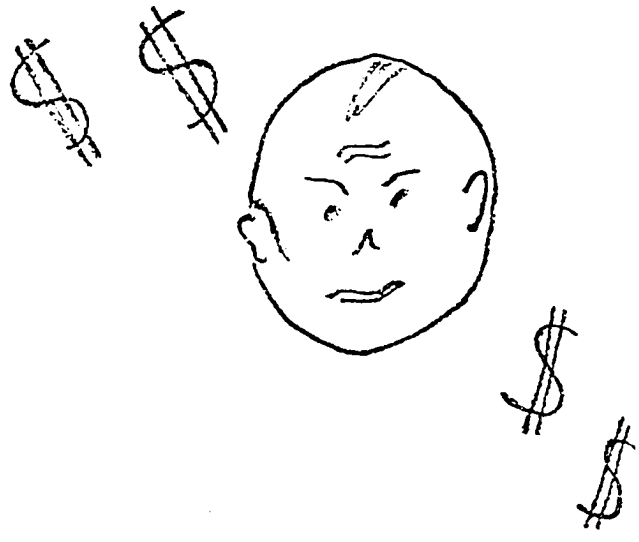
Has faulty grammar been corrected?

CHECK AND VERIFY ALL STATEMENTS BEFORE LETTER IS MAILED

II EFFECTIVENESS
C's
9a

Transparency 43

MISTAKES COST MONEY



I don't think that I can afford you, Miss Brown.



II EFFECTIVENESS
C's
9b

Transparency 44

Consideration

Is your letter considerate?



Thank you

Your bill

Your interests

Your inquiry

Your note

Your call

Transparency 45

Have you used - - - - - -

You will see

You are familiar with

You will find

Or, have you used - - - -

We announce

In our opinion

We think that

YOU

YOU

YOU

II EFFECTIVENESS
C's
10b

Transparency 46

Can you pass the You-We Test?

Have you used we and I more often than you and yours?

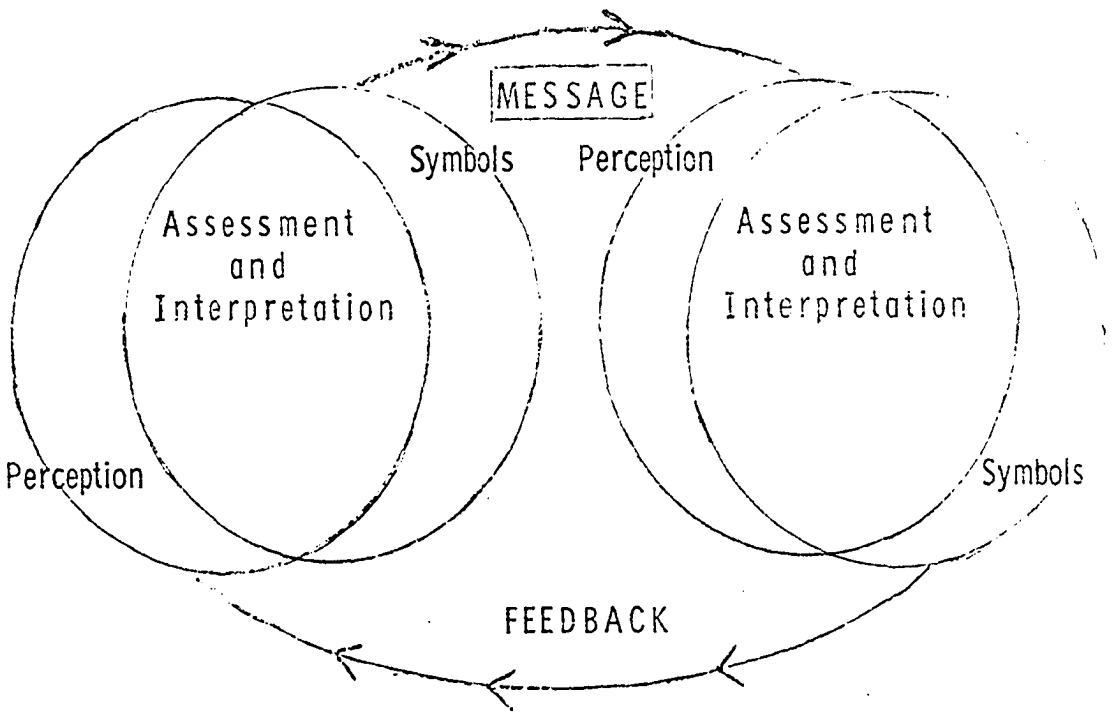
II EFFECTIVENESS
C's
10c

THE EFFECTIVENESS OF COMMUNICATION

Verbal Precision

Transparency 47

THE EFFECTIVENESS OF COMMUNICATION



Transparency 48

Is right word chosen?

Will reader understand the message?

Could reader misunderstand the message?

(Simple word)

Assist . . . . . help

Accomplished . . . . . done

Procure . . . . . get

Purchase . . . . . buy



II EFFECTIVENESS
Usage
1b

Transparency 49

USE SIMPLE PHRASES

	Simplified Words
Report to the effect that	report that
Encounter difficulty in	had trouble with
In accordance with	the same as
Commensurate with	equal to

Transparency 50

The price remains firm at	the price is
Investigation ensued	investigation followed
A quotation in the amount of . .	a quotation of $10
During the preceding year	last year
Terminate the business.	quit business



Transparency 51

USE VARIETY IN WORD CHOICE TO AVOID MONOTONY

Synonyms

Words with similar meanings

Substitute words to avoid monotonous repetition

Transparency 52

EXAMPLES - - - - - -

Apology . . . . . plea or alibi

Appreciate . . . prize or value

Contract. . . . arrangement

Discount . . . . undersell

Error. . . . . mistake

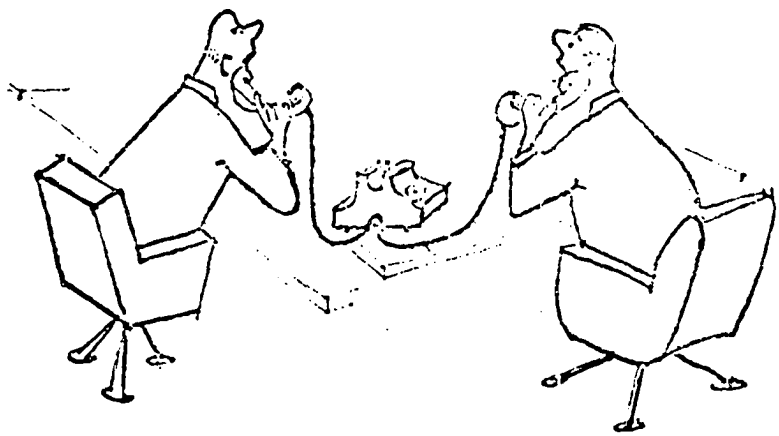
Observe . . . . . notice

Refund . . . . . repay



Transparency 53

USE CONVERSATIONAL TONE IN MESSAGE



ELIMINATE PUFFERY - - -

"I desire to assure you that you have my utmost appreciation for your generous offer."

WRITE NATURALLY - - -

Say - "Thank you for your offer."



Transparency 54

TRITE EXPRESSIONS - - - - -

Worn-out figures of speech

RELICS FROM THE PAST

Yours of the 10th received

Humbly beg

Wish to advise

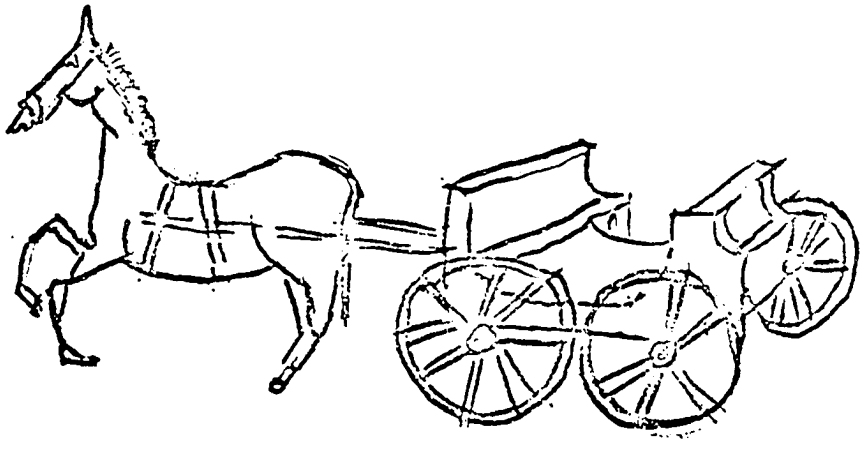
As per your report

Permit me

Attached herewith

Under separate cover

In regard to same



II EFFECTIVENESS
Usage
5

Transparency 55

OTHER RELICS FROM THE PAST

Cliches

A rolling stone gathers no moss

To make a long story short

Gone but not forgotten

Happy as a lark

Busy as a bee

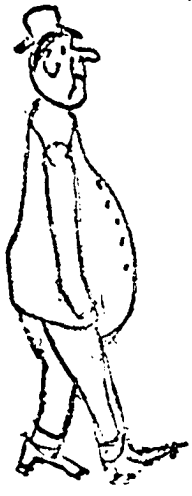
Pretty as a picture

A fate worse than death

Almighty dollar

Let's get the show on the road

Pass with flying colors



Transparency 56

ACTIVE VERBS FOR EMPHASIS

Is subject acted upon or does it act?



(active) Smith sent us a message.

(passive) A message was sent to us by Smith.

Transparency 57

(The subject performs the action)

The president signed the bill.

(The subject receives the action)

The bill was signed by the president.

II EFFECTIVENESS
Usage
7b

Transparency 58

CHOOSE CONVERSATIONAL TONE - but use right level of usage for receiver of message

SLANG

To a friend - - (your own age) ."He squealed on me."



INFORMAL

To a customer "He told the others about my error."



FORMAL

To a newspaper reporter "He informed the group of my error."

Transparency 59

CHOOSE CONVERSATIONAL TONE -- but use the right level of usage for the receiver of the message.

Formal

Informal

Slang

II EFFECTIVENESS
Usage
9a

Transparency 60

SLANG - Seldom used in business correspondence

INFORMAL ENGLISH - The most appropriate level of usage for correspondence and ordinary speech

FORMAL ENGLISH - Used in legal, formal terms - Generally inappropriate for business correspondence

II EFFECTIVENESS
Usage
9b

Transparency 61

Substitute positive words for negative words and the message will promote a good relationship between the sender and the receiver of the message

POSITIVE

appreciate	reliable
benefit	success
capable	faith
recommend	careful



Transparency 62

Eliminate the negative words - -

ACCENTUATE THE POSITIVE WORDS

NEGATIVE (When used with you or your)	
abuse	you ignored
blame	not our responsibility
dispute	you claim
wrong	blunder
fraud	careless
failure	unsatisfactory



Transparency 63

Give PARALLEL ideas PARALLEL form

Give ideas that are listed the same form



1. We obtain
2. We establish
3. We have
4. We submit

Transparency 64

Place related ideas in the same sentence in parallel form:

We have three objectives to accomplish this school year: (1) to improve our image, (2) to maintain our excellent rapport with the students, and (3) to produce qualified students.

Transparency 65

Correlatives or joining words can be used for parallel structure:

either . . . . . or

not only . . . . . but also

neither . . . . . nor

II EFFECTIVENESS
Usage
12c

Transparency 66

TO MAINTAIN PARALLEL IDEAS

FORM SENTENCES AND PARAGRAPHS TO RETAIN

The same voice

The same tense

The same person

The same number

Transparency 67

VOICE . . . (Shows if subject acts or is acted upon)

TENSE . . . (Denotes time of action)

"Jones uses sugar in his coffee, while Smith prefers his without sugar."

PERSON . . (Denotes first or second person)

(Wrong) "I should like to know the name of a store where you can get service."

NUMBER . . (Denotes reference to one or more than one)

"A manager must be well trained or they will not be able to hold a job."

Right or wrong?

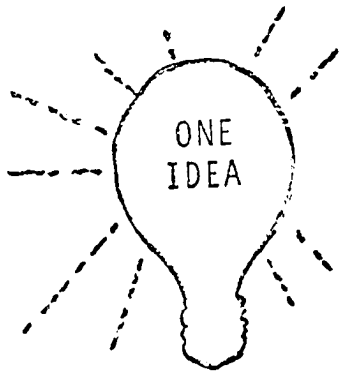
Why?

THE EFFECTIVENESS OF COMMUNICATION

Sentence Development

Transparency 68

EFFECTIVE SENTENCES



= ONE SENTENCE

Each sentence represents a

complete thought

Transparency 69

ELEMENTS ARE:

SUBJECT + VERB + OBJECT

or

PREDICATE NOMINATIVE

or

PREDICATE ADJECTIVE

Transparency 70

FOR EFFECTIVE SENTENCES - WRITE IN THOUGHT UNITS

For correct word picture -

Write words that belong with each thought unit together

(Incorrect)

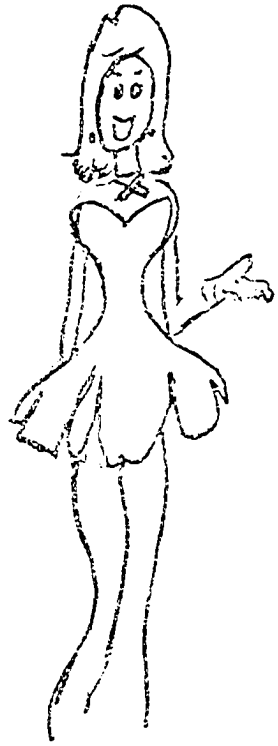
Long ladies' gloves on sale Saturday.

Transparency 71

Short ladies can't take advantage of sale

Correct

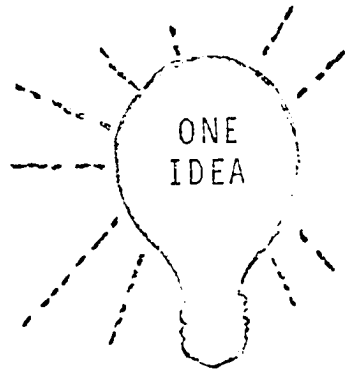
Ladies' long gloves on sale Saturday



II EFFECTIVENESS
Sentences
2b

Transparency 72

FOR SENTENCE UNITY



= ONE SENTENCE

Avoid breaking ideas into . . . . .

short . . . . choppy . . . . . sentences

Transparency 73

Subordinate to show relationship of less important ideas to main idea

Subordinating Words:

while	when
because	unless
after	until
since	although
as	if

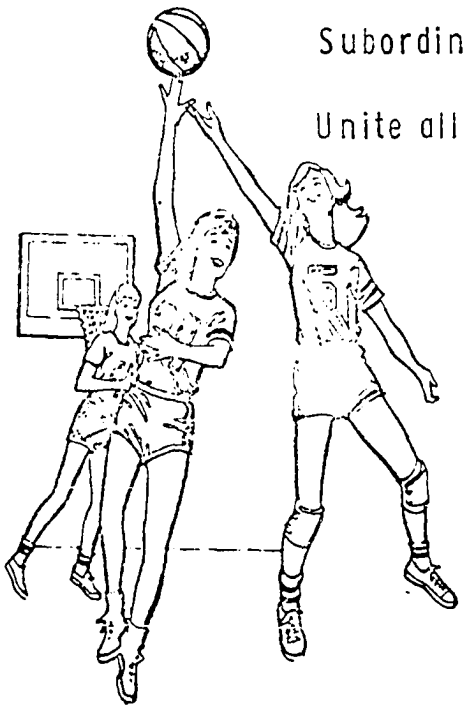
When that girl dances, <u>everyone stops to watch</u>.

II EFFECTIVENESS
Sentences
3b

Transparency 74

FOR SENTENCE UNITY

Combine short sentences . . . . . .



Subordinate less important related ideas

Unite all parts to give one clear idea

Transparency 75

ARRANGE SENTENCE TO GIVE EMPHASIS TO MAIN IDEA

Every detail in sentence should contribute to single idea

"Although my term paper was handed in late, I passed the course."

Transparency 76

EXAMPLES:

Choppy . . . . . This is the usual procedure. There is no reason why we cannot modify it.



Transparency 77

For sentence unity . . .

This is the usual procedure, although there is no reason why we cannot modify it.



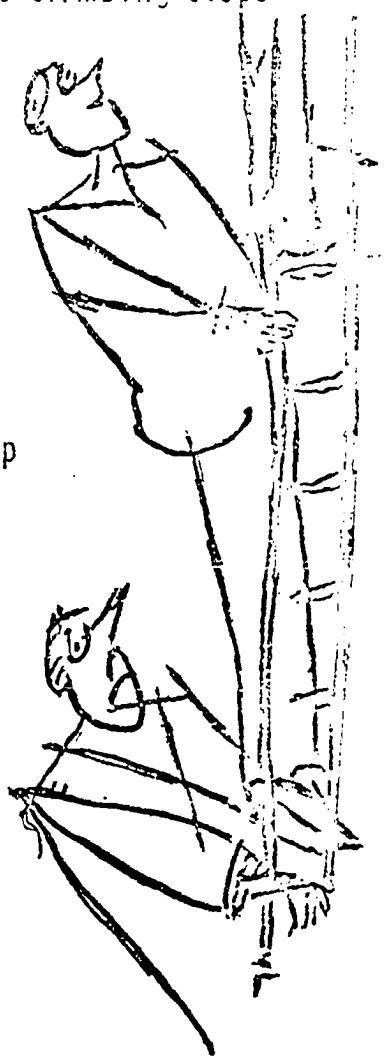
Transparency 78

COHERENCE FOR EFFECTIVE SENTENCES

(All parts interrelated)

Writing of sentences can be compared to climbing steps

Every word leads to another step



Transparency 79

EXAMPLES:

School Board Bans Sex Behind Closed Doors

Do not photograph the entertainers while they are performing, shoot them as they take their bows.

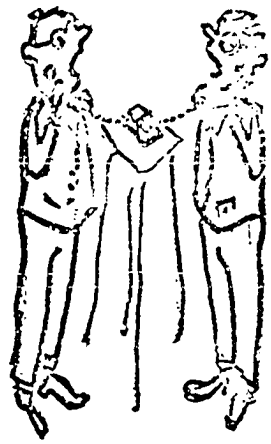
Transparency 80

FOR COHERENCE

Meaning cannot be misunderstood - - -

Words and ideas hang together

Words are orderly and logically connected



Transparency 81

Modifiers placed near words they modify - - - -

She said that she loved only him. (loved no one else)

She said that only she loved him. (no one else loved him)

She said only that she loved him. (she said nothing else)

Only she said that she loved him. (no one else said it)

Transparency 82

FOR COHERENCE

Avoid shift in tense - - -

The boy closed his book and hurried (not hurries) away to work.

Avoid shift in person - - -

We have reached a point where we (not one) ought to face the possibility of a change.

or

One must work if one (not you) would succeed.

Transparency 83

Avoid shift in voice - - - - - - - - -

In winter the file clerks freeze with the cold, and in summer they suffer with the heat.

(not they are stifled with the heat)



Transparency 84

ACHIEVE EMPHASIS IN SENTENCES - - - - -

By position of words in sentences

Headline your letter

Place most important idea first-- most important idea in most important place

CITY HALL:——

WHAT A PLACE

FOR A CLASSROOM!

Transparency 85

ACHIEVE VARIETY IN SENTENCES

Vary the Length

Too many short sentences - - - - -

tiresome and primary

Majority of sentences in business - - -

short and direct



Transparency 86

Average sentence - - - - -

12 - 17 words

Too many short sentences - - - - -

tiresome and primary

Transparency 87

Vary the Sentence Structure

Simple Sentence (one independent clause)

"The insurance covers fire damage only."

Compound Sentence (two simple sentences)

"Your insurance covers fire damage only and
you can take extra insurance for hail damage."

Complex Sentence (one independent clause and
one or more dependent clauses)

"Since your insurance covers fire damage only,
you must take extra insurance for hail damage."

Transparency 88

Vary Placement of Emphasis in Sentence

Periodic Sentence (main thought not given until end of sentence reached)

"Today, as never before in the history of the world, we need leadership."

Transparency 89

Loose Sentence (main thought given first - - - - details follow)

Example:

"We need leadership today as never before in the history of the world."

Transparency 90

Vary Placement of Subject and Verb

S
Subject

V
Verb

"The professor walked in."

V
Verb

S
Subject

"In walked the professor."

Transparency 91

S	V	O
Subject	Verb	Object

"Henry scorned honest men"

O	S	V
Object	subject	Verb

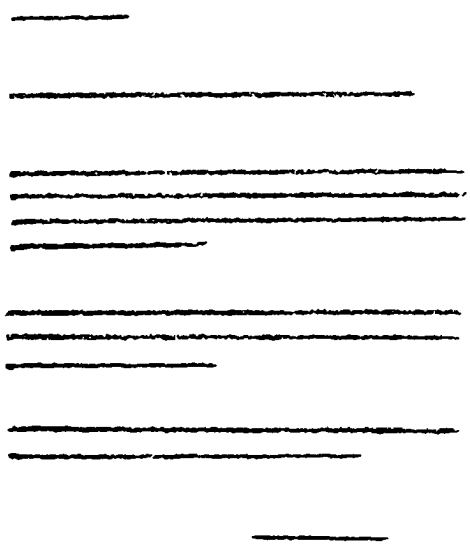
"Honest men Henry scorned"

THE EFFECTIVENESS OF COMMUNICATION

Paragraph Development

Transparency 92

PARAGRAPH DEVELOPMENT



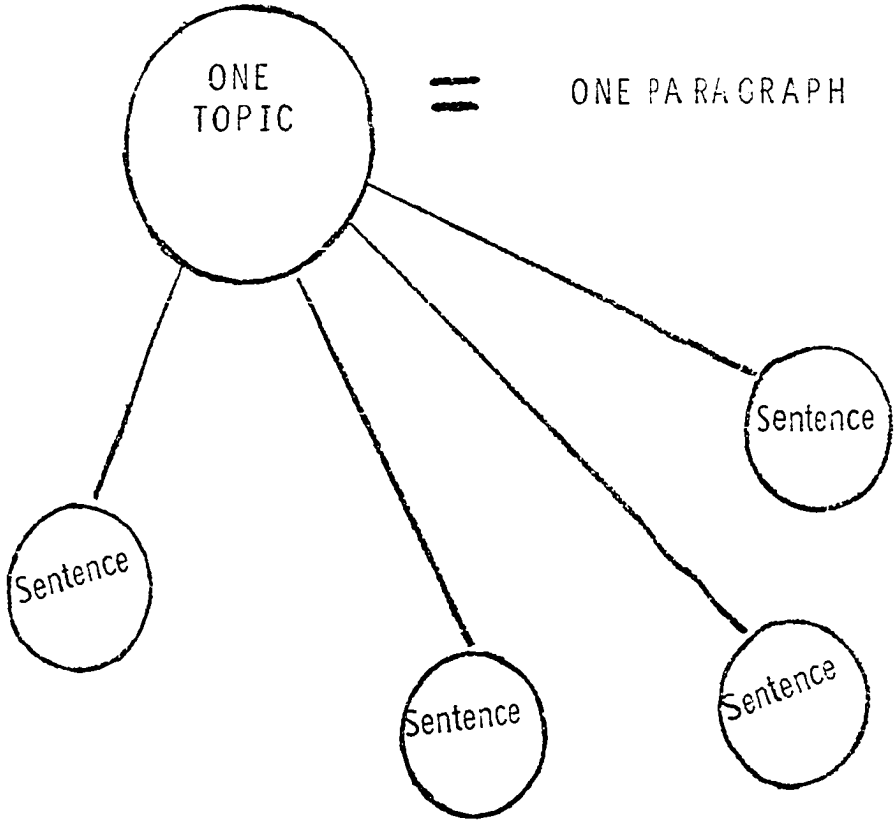
Devote as many paragraphs as needed to complete total message

Transparency 93

TO DEVELOP PARAGRAPHS - - - - -

Link sentences to main paragraph topic

Expand distinct unit of thought

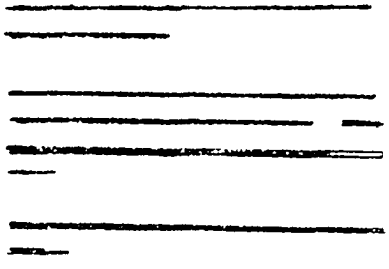


Transparency 94

EMPHASIS GAINED IN PARAGRAPHS BY - - - - - -

Varying length of paragraphs in total message

Showing open space between paragraphs



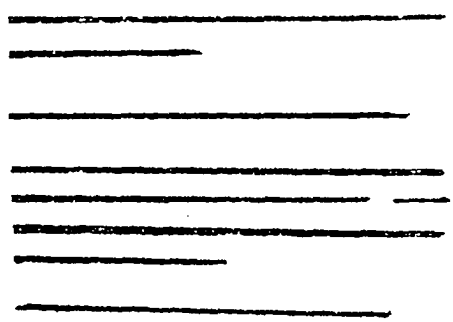
Transparency 95

PARAGRAPHS CAN BE - - - - -

One or more lines - - -

or

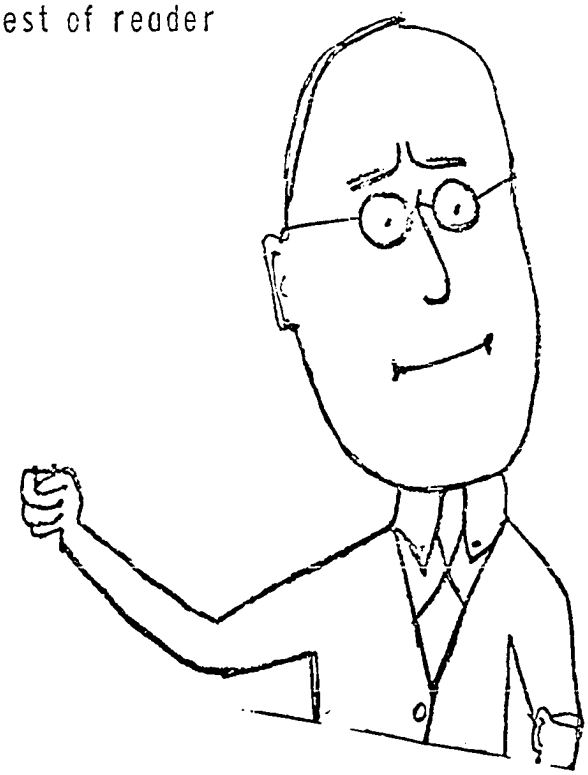
One or more sentences



Transparency 96

SHORT PARAGRAPHS GAIN EMPHASIS - - -

by holding interest of reader



IF ONE SENTENCE COVERS TOPIC - - -

go to next paragraph

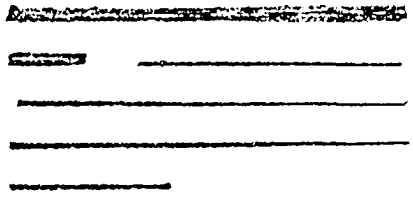
or

expand paragraph unit until topic is covered

Transparency 97

THE TOPIC SENTENCE IS SUBJECT OR MAIN IDEA OF PARAGRAPH

Paragraphs are built around core



Transparency 98

TOPIC SENTENCE

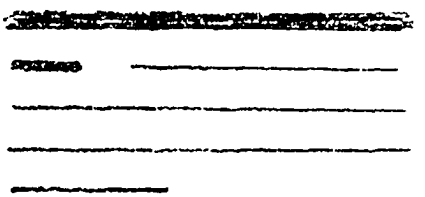
Provides core for building paragraph

Unifies paragraph

Arouses interest in details that follow

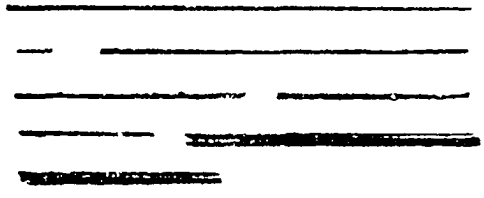
Transparency 99

TOPIC SENTENCE can be at beginning of paragraph



Transparency 100

TOPIC SENTENCE can be at end of paragraph



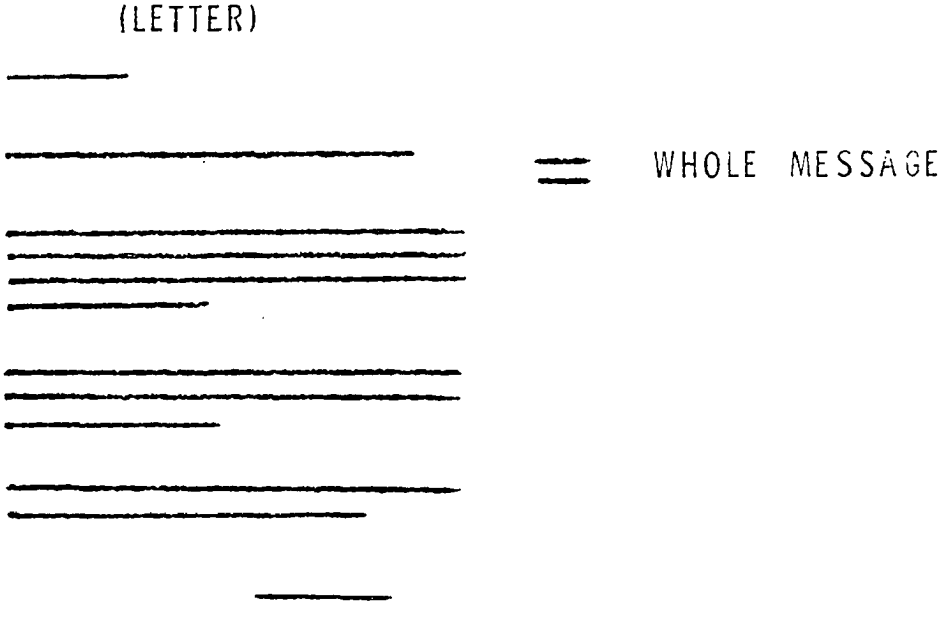
Transparency 101

FOR COHERENCE IN LETTER OR WHOLE MESSAGE

Each paragraph - - -

a complete thought unit

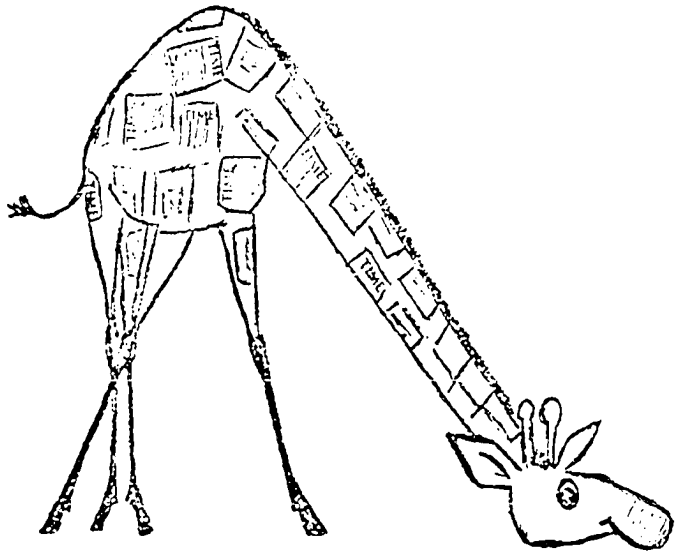
a contribution to whole message



EMPATHY

Transparency 102

EMPATHY



I want to think your way



See the situation from receiver's standpoint

rather than from your own

Transparency 103

RECEIVER IS HUMAN BEING



Receiver has physical needs common to all people

Needs food and drink

Needs rest

Needs shelter

Transparency 104

RECEIVER HAS SOCIAL NEEDS COMMON TO ALL PEOPLE *

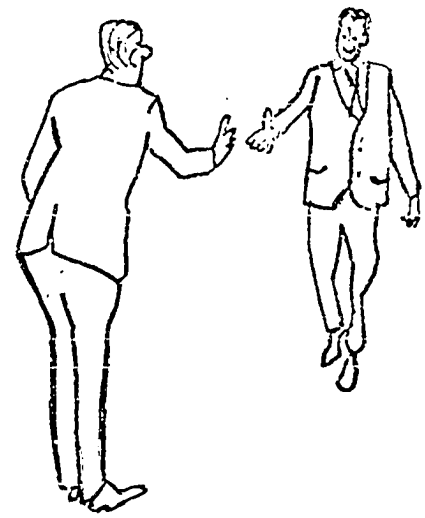
Needs esteem from others

Acceptance

Appreciation

Attention

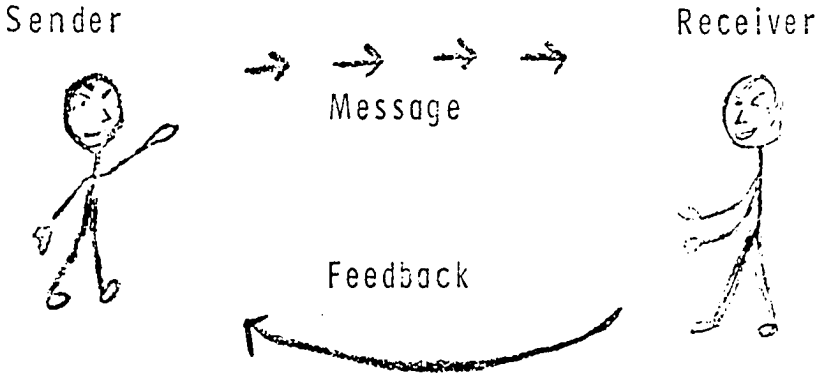
Recognition



* A. H. Moslow

Transparency 105

EMPATHY IS ATTAINED THROUGH INTERACTION



Interaction between sender and receiver

affected by - - - -

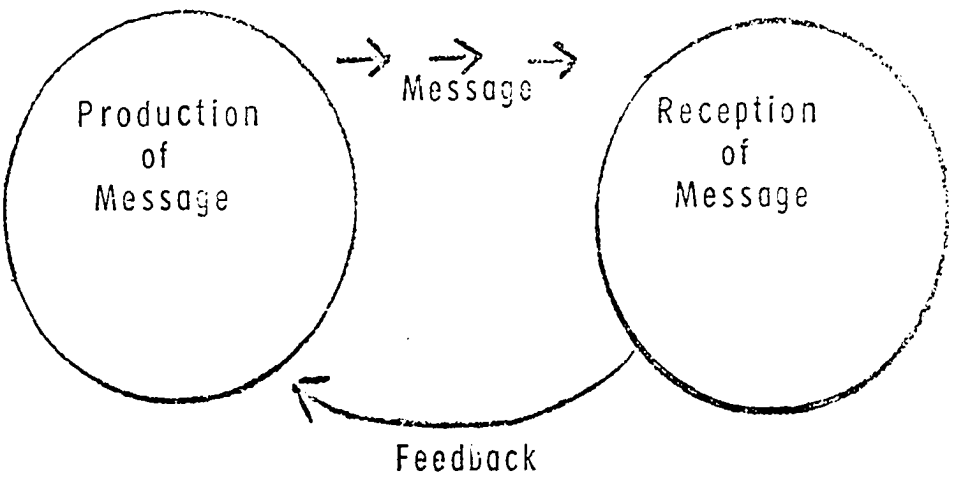
social system

cultural context

Transparency 106

INTERACTION BETWEEN TWO PEOPLE IS GOAL

OF HUMAN COMMUNICATION

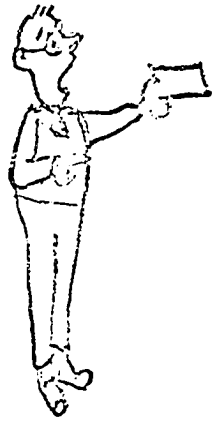


Transparency 107

TO INTERACT WITH EMPATHY

- Anticipate actions
- Predict actions
- Behave in harmony with joint needs of self and others
- Identify with receiver
- Submerge own ego - adopt point of view of receiver

Transparency 108





TO INTERACT

WITH EMPATHY

Two people try to project selves into each other's personalities

Two people try to predict each other's response

Transparency 109

RECEIVER IS PLEASED - - - -

When his competence is acknowledged



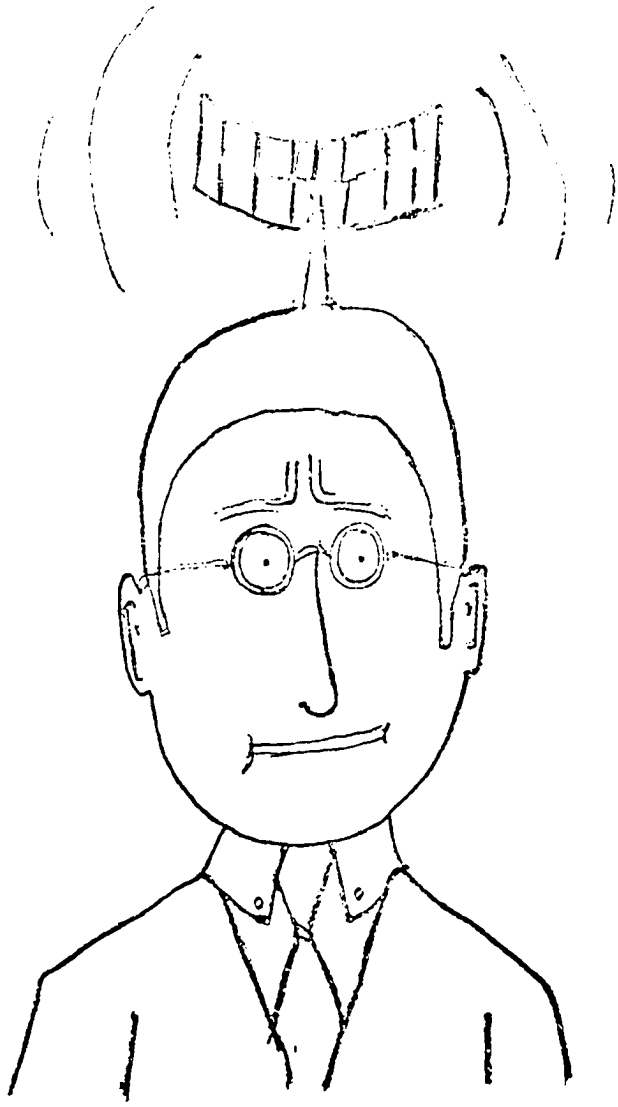
RECEIVER IS DISPLEASED - - - -

When is competence is questioned



Transparency 110

TO INTERACT WITH EMPATHY



IDENTIFY RECEIVER'S NEEDS

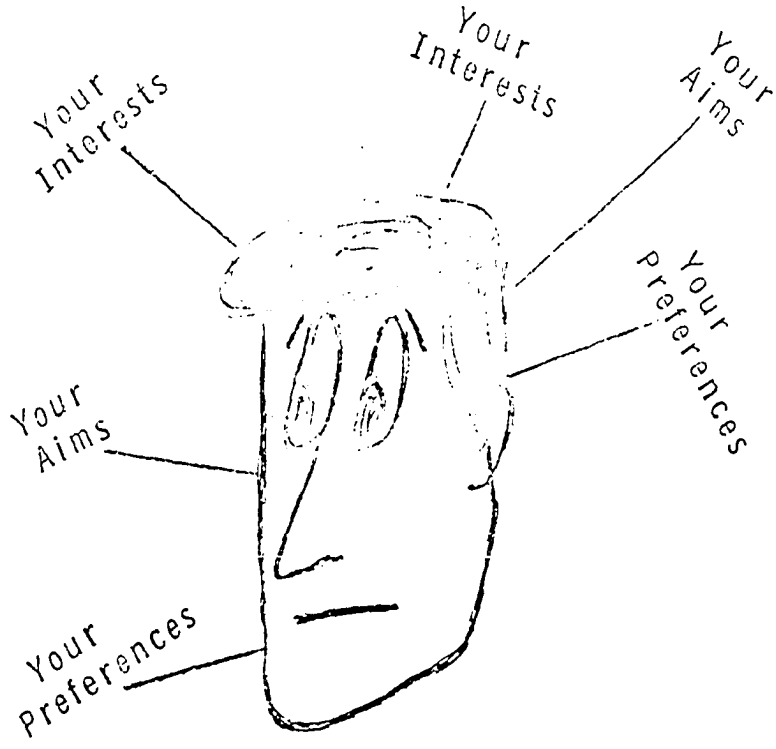
Then

Personalize message

(language adapted to receiver's ability to understand)

Transparency 111

PLACE RECEIVER IN CENTER OF MESSAGE



IDENTIFY HIS NEEDS - - - - - -

Then

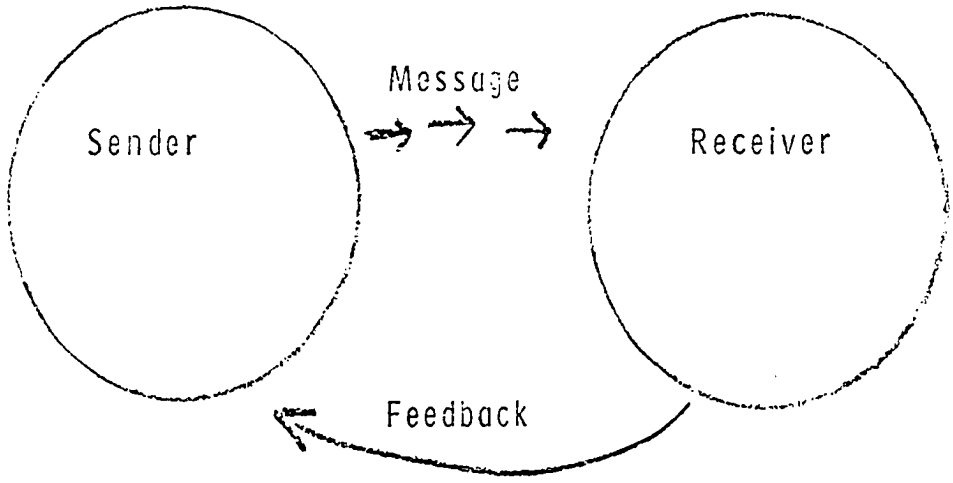
Emphasize his interests

Emphasize his aims

Emphasize his preferences

Transparency 112

FEEDBACK ESTABLISHES A BOND BETWEEN SENDER AND RECEIVER



Feedback is used to correct and adjust message to take into account the - - -

perceptions - values - wishes - feelings of the other person

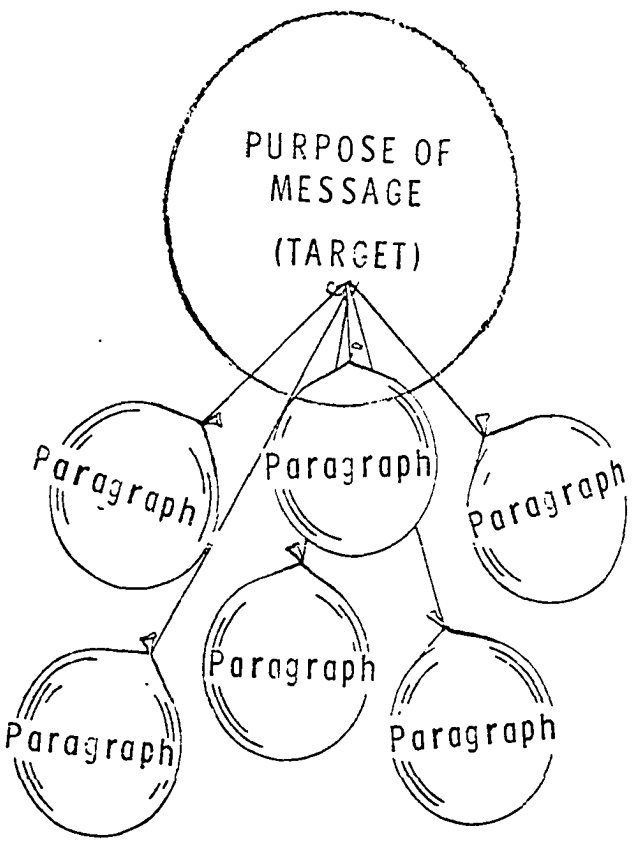
BASIC LETTER DEVELOPMENT

Transparency 113

BASIC LETTER DEVELOPMENT

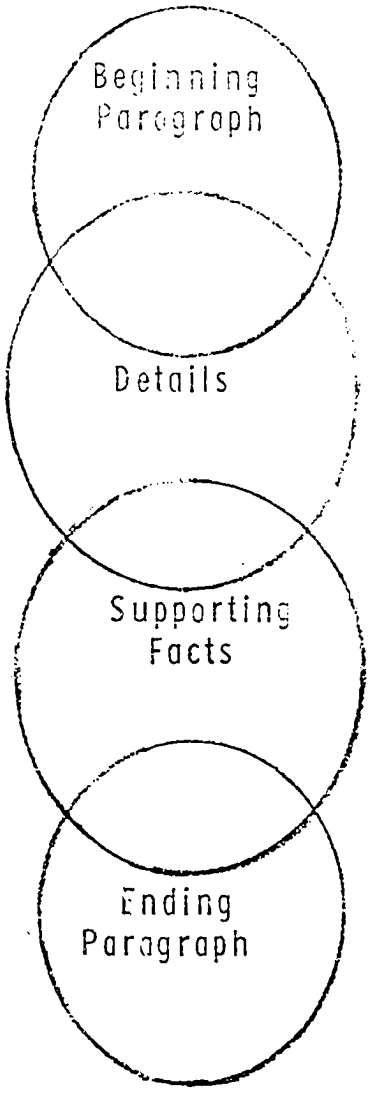
Message restricted to a single target - -

PURPOSE OF MESSAGE



Transparency 114

BASIC PLAN FOR LETTER DEVELOPMENT

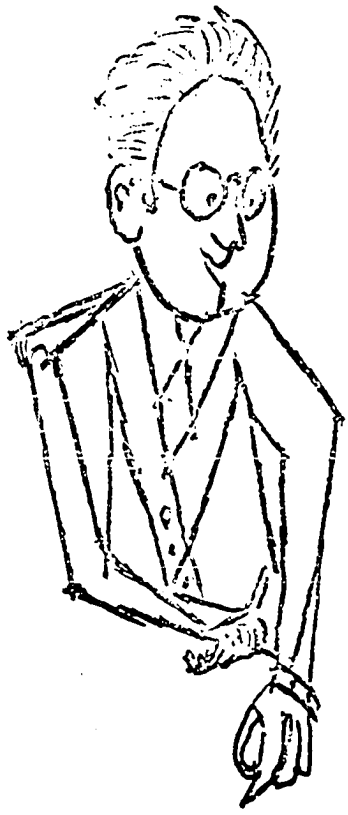


Short
Vital
Specific
Provides direction for letter

Short
Pleasant
Courteous
Action or reaction urged

Transparency 115

KEEP TARGET IN SIGHT



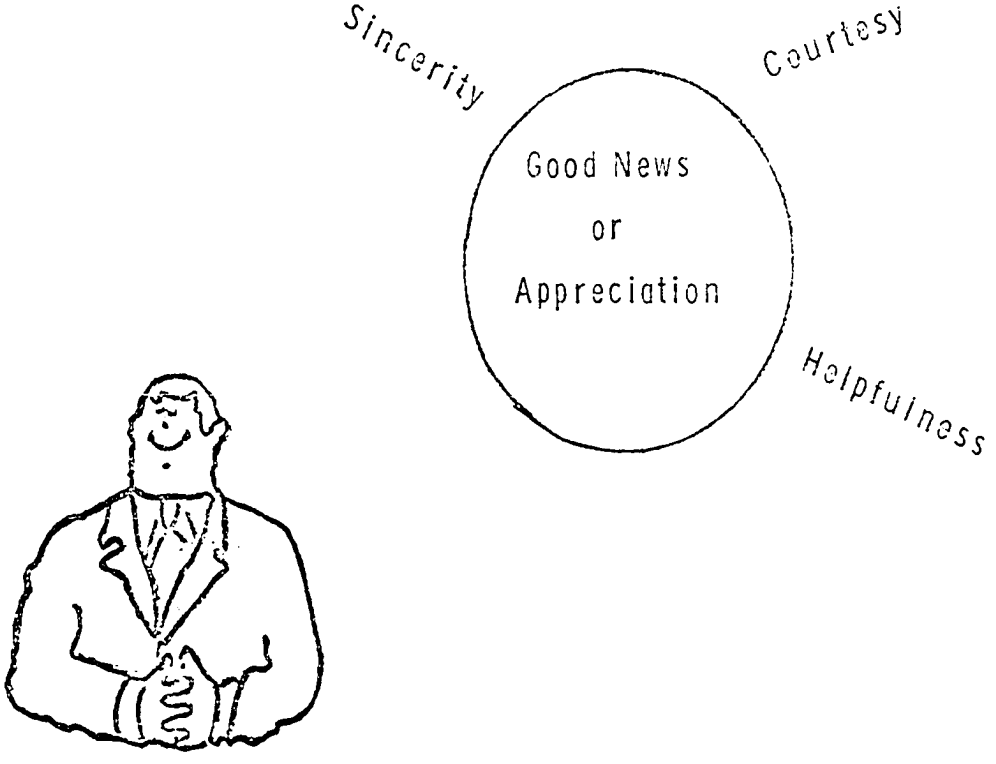


Set friendly and courteous tone for whole message in first paragraph

Transparency 116

FIRST PARAGRAPH - - - -

Start reader on right path to provide direction toward target



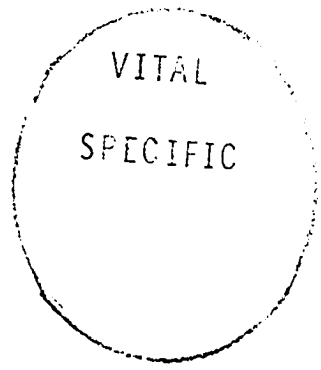
Transparency 117

FOR EFFECTIVE MESSAGE - - - -

First line - indicate subject of letter

Identify in subordinated manner reason for writing

FIRST PARAGRAPH



Transparency 118

IDENTIFY DATE - - -

"The mahogany end table that you ordered December 31 is being shipped today."

IDENTIFY NUMBER REFERENCE - - -

"Your order No. 2022 is being shipped 'Rush' as you requested."

IDENTIFY AND NAME SPECIFICS - - -

"The booklet, 'Friends,' that you sent me on August 5 has given me a number of good ideas."

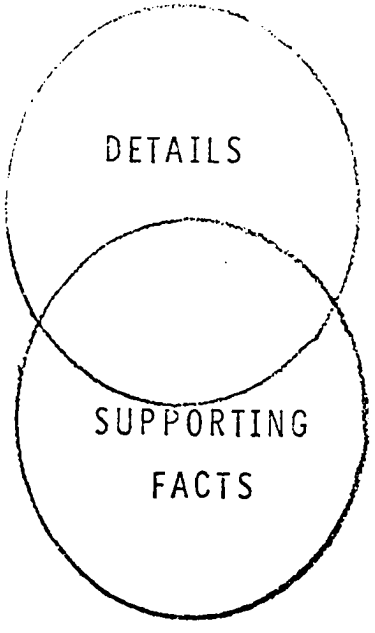
Transparency 119

INTERNAL PARAGRAPHS - - -

Stimulate interest and create desire for favorable action or reaction

Details in natural sequence

Facts to complete purpose of letter



Transparency 120

ENDING PARAGRAPH

Stimulate action or reaction



Leave receiver with pleasant feeling about sender

Radiate confidence that action or reaction will be favorable

SPECIFIC LETTER DEVELOPMENT

Transparency 121

SPECIFIC LETTER CATEGORIES

Decision must be made as to purpose of message or communication



Is primary objective of message to

evoke action or reaction?

Present factual information?

Transparency 122

AFTER DECIDING PURPOSE OF MESSAGE - - - -



Plan message to influence receiver to take action

Plan message to influence receiver to adopt attitude desired by sender of message

Transparency 123

LETTERS THAT SAY "YES"

Purpose - Communicate information that is pleasant to receiver

Acceptance given

Adjustment made

Request answered

Order sent

Credit granted



Transparency 124

BASIC PLAN FOR "YES" LETTERS - - - -

Headline letter with good news -

In first sentence, tell receiver what he wants to know

Follow with details or facts



End with courtesy -

Build good will

Show appreciation

Request action

Mention resale

Mention continued service

Transparency 125

LETTERS THAT SAY"NO"

Purpose - Communicate information and retain goodwill of receiver



Subordinate refusal to a positive feeling or constructive action

Transparency 126

BASIC PLAN FOR "NO" LETTERS - - -



Make letter beginning tactful

Indicate empathy for receiver

Show agreement with some part of request, if possible

Show interest

Show concern

Show appreciation

Transparency 127

In internal paragraphs, state reasons before saying "No"

Review facts, if possible

Explain refusal in positive words

Emphasize what can be done

Make constructive suggestion or counter offer

End on positive note - -

Continued interest

Resale

Service

Goodwill



Transparency 128

LETTERS THAT ARE ROUTINE

Purpose - Evoke action or reaction

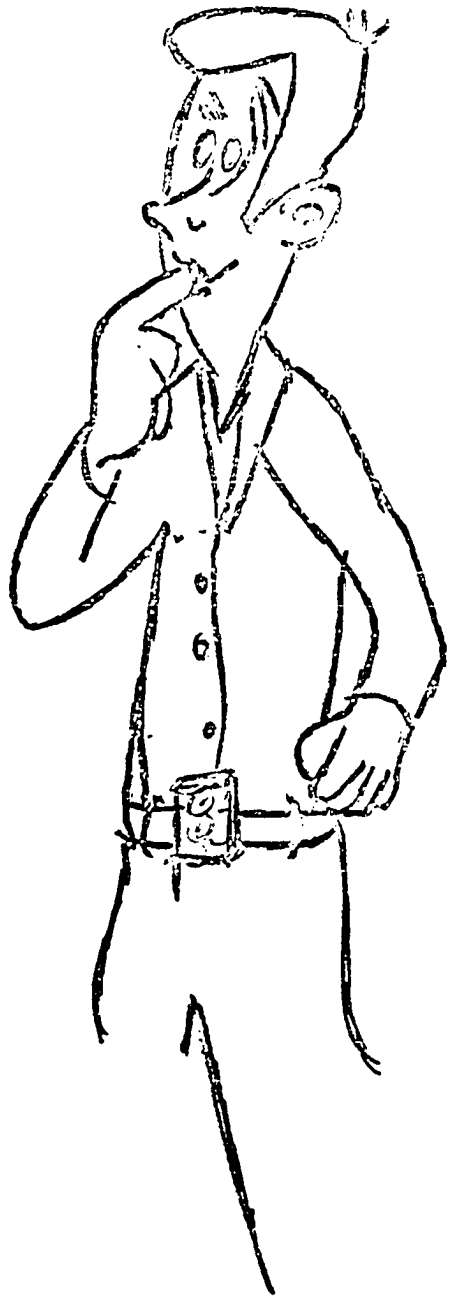
Transmit information neither pleasant nor unpleasant

Routine order letters

Routine requests

Routine claim letters

Routine credit requests

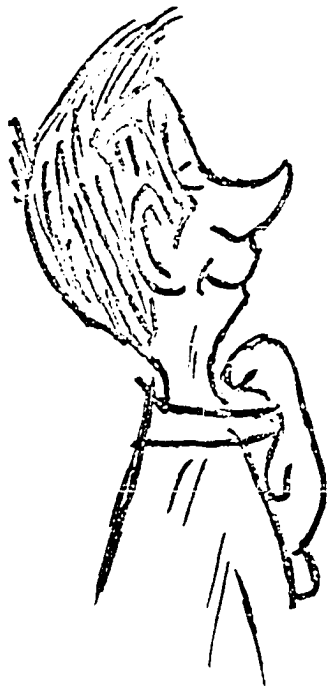


Transparency 129

BASIC PLAN FOR ROUTINE LETTERS - - -

(Very similar to "Yes" letter)

Headline letter with important idea in first sentence



In internal paragraphs, include details to clarify points

End with definite statement of action or reaction expected

Transparency 130

LETTERS THAT PERSUADE (SALES LETTERS)

Purpose - to evoke action or reaction

SALES LETTERS HAVE DEFINITE PATTERN

ATTRACT ATTENTION - - - - - Opening Paragraph

Ask a question (phrase it so that answer will be "yes")

Start with a slogan

Start with interesting fact

Make agreeable assertion



Transparency 131

AROUSE INTEREST - - - - - Internal paragraph

Select appeal compatible with receiver's needs

Appeal to emotions

Present points in terms of reader's interests

CREATE DESIRE - - - - - Internal paragraph

Present concrete details

Show product value to reader

Attach enclosure



Transparency 132

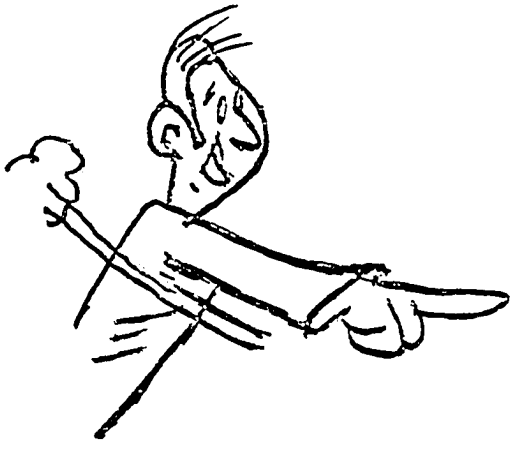
ACTION - - - - - Ending paragraph

Call for action

Make action easy

Suggest action at once





Transparency 133

COLLECTION LETTERS

Purpose - To persuade receiver to pay account - retain his goodwill



Consists of series of letters - - - -

Each letter progressively stronger in request for payment

Transparency 134

STEPS IN COLLECTION LETTER SERIES

4. Demand

3. Stronger Reminder - Discussion and review of transaction

2. Gentle Reminder - "May we remind you"

1. Statement - Reminder

