

THE EFFECT OF TOPIC RELATED, NON-HOSTILE HUMOR
UPON RETENTION OF INFORMATION IN AN
INSTRUCTIONAL MESSAGE DELIVERED
BY VIDEO TAPE

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CHAPTER I

INTRODUCTION

Teachers have frequently conjectured that the use of humor can have beneficial effects in the educational environment. Scott (1976), for example, proposed that "humor can be highly effective in improving the functions of our mental faculties" (p. 18). Adams (1974) contended that instructional "materials spiked with humor can make lessons easier to grasp" (p. 365). Gilliland and Mauritsen (1971) suggested that humor made learning more enjoyable, while Welker (1977) reported that humor facilitated teacher/student rapport. Peter and Dana (1982) wrote in the Laughter Prescription that laughter in the classroom creates a positive emotional climate and makes teaching and learning easier and more effective (p. 5). Hight (1950), in describing humor as an important quality for a teacher, gave the following perspective for humor in the classroom:

One of the most important qualities of a good teacher is humor. Many are the purposes it serves. The most obvious one is that it keeps the pupils alive and attentive because they are not sure what is coming next. Another is the fact that it does help give a true picture of many important subjects (p. 59).

While there are a lot of assertions, there remains little empirical evidence about humor in the classroom. The opposite has been the case, as noted by Ziv, Gorenstein, and Moris (1986). They contend that there is a paucity of empirical research on humor in the educational setting. Most reports however have been little more than interesting conjecture

and opinion. According to Bryant, Comisky, Crane, and Zillmann (1980):

The contrasting degree of attention given to humor in teaching by students and teachers versus researchers suggests one of two alternatives: either students' and teachers' widely held beliefs about the importance of humor in teaching are incorrect, or researchers in educational psychology have had a research 'blind spot' as far as the place of humor in education is concerned (p. 512).

Most research shows that humor does not facilitate learning. Some limited research suggests that humor has a positive effect on learning. However, Markiewicz (1974) noted the miniscule empirical effort that has taken place has been flawed. It has used highschool (Ziv, 1976 and Taylor, 1964) or undergraduate college students as subjects (Gruner, 1967, Gibb, 1964, Kaplan and Pascoe, 1977, and Kennedy, 1972). Pretests have not been administered to the subjects (Gibb, 1964, Gruner, 1967, and Kaplan and Pascoe, 1977). The studies have been part of the students' regular classroom work yet, educational instruction efforts take place in environments other than high schools and colleges. There has been no reported experimental research studying the use of humor in teaching non-traditional students or adult learners such as those in a vocational education or in an organizational training and development learning environment.

The use of humor and its effect on information retention is an important variable to study because of both the large number of non-traditional students returning to college for additional schooling as well as the explosion of training and development efforts within organizations. The Commission on Higher Education and the Adult Learner (1984) stated that our nation's major resource is human capital and that this resource must be educated and trained more effectively.

Researchers have not given humor in education the attention that it deserves if all the assertions about its value to students and teachers

are an indication of its importance. Why add humor to something that is as serious as an educational message? There are several hypotheses. First, adding humor might make the source more credible and favorably received by the listeners. Secondly, humor might enhance the educational message and make it more interesting. Finally, if humor makes a message more interesting and the source more credible, then students might listen better and remember more. Prior research has done little to answer these hypotheses. Until more is definitely known, the literature will continue to be sprinkled with opinion and interesting conjecture about the effect of humor in the classroom.

Statement of the Problem

Most reports about the effect of humor upon information retention lack empirical support. The few studies that have been done have suffered methodological flaws which have restricted their generalizability.

Purpose of the Study

The purpose of this study is to examine the effect of topic related, non-hostile humor upon message retention.

Need for the Study

It is often claimed that humor is a desirable characteristic of teaching and learning. Typically, teachers have emphasized the positive results which can be obtained by incorporating humor into the instructional message. But published research pertaining to the effects of humor on message retention has been limited and inconsistent in its findings.

These limited findings cannot be generalized without further study. The idea of combining humor and education needs confirmation. The findings that have been reported might vary with adult students or in an organizational setting under more rigid design conditions. Confirmation, however, will come only from replication, according to Tukey (1969). He states that no single experiment can, by itself, establish a theory, principle, or generalization. Generalization can come only when studies in essentially the same area produce similar results.

Hypotheses

The following hypotheses were examined to achieve the purpose of this study.

1. The adult students treated with two humorous instructional messages containing topic related, non-hostile humor will not score differently on post-tests from those students who viewed the two humorless versions.

2. The adult students treated with two humorous instructional messages containing topic related, non-hostile humor will not score differently on a one week delayed post-test from those students who viewed the two humorless versions.

3. Teachers using topic related, non-hostile humor in their instructional messages will not receive different ratings on authoritativeness and character from teachers who gave the humorless versions.

Limitations of the Study

The study contains the following limitations:

1. The population used to draw a sample for this study was limited to employees of an insurance company located in Oklahoma City, Oklahoma.

2. The design called for administration of the treatments in one period. Treatments carried out in a series of message presentations might produce different results.

3. The Hawthorne threat (Drew, 1980) might have existed. Replication over a longer period of time is needed to confirm or refute this factor.

4. The laughter on the sound track of the humorous videos might have influenced the rating of the humor by members of the humorous group.

5. As the subjects did not participate in the study on a voluntary basis, there could have been some reluctance to participate with full enthusiasm.

6. The retention test items were not all based on humorously related material.

7. The retention test instrument was identical for the pretests, post-tests, and one week delayed tests.

8. Only one person delivered the messages. Another person delivering the identical messages might affect the subjects differently.

Assumptions

The following assumptions apply to this study:

1. The subjects who participated in this study were full-time employees and not traditional students.

2. The subjects responded to each question based on their perception of the correct answer.

3. The retention test administered to the subjects was an adequate assessment of the information retained.

Definitions

The following terms were used in this study:

Authority - A dimension of source credibility. A person with a high degree of authority is perceived as reliable, expert, informed, valuable, intelligent, and qualified.

Character - A dimension of source credibility. A person with a high degree of character is perceived as friendly, unselfish, honest, virtuous, pleasant, and nice.

Hostile Humor - Humor that denigrates, victimizes, humiliates, or disparages self or others.

Humor - Jokes, entertaining features, turns of phrases, or anecdotes which, when spoken, might amuse or arouse the interest of a listener or group of listeners.

Humorous Group - The group of subjects which viewed the video tape containing two instructional messages with topic related, non-hostile humor.

Humorless Group - The group of subjects which viewed the video tape containing two instructional messages which did not have topic related, non-hostile humor.

Humorless Version - The video tape which contained the two instructional messages that did not have topic related, non-hostile humor.

Humorous Version - The video tape which contained the two

instructional messages with inserted topic related, non-hostile humor.

Manipulation Check - The procedure used to elicit a response from each subject as to their perception of the humorous aspect of their experimental condition.

Non-Hostile Humor - Humor which is devoid of hostility, aggression, humiliation, or denigration of self or others.

One Week Delayed Test (OWD Test) - The delayed retention test used to determine the amount of information loss by the subjects during the one week interval after the post-test.

Related Humor - Humor which was related to the message topic and the concepts presented in the message.

Retention Test - The instrument devised for this study which measured the subjects' knowledge about the concepts heard in the instructional messages and the amount of information retained after hearing the messages.

Topic - The subject of discourse in the video messages.

Unrelated Humor - Humor used in a message that was not related to the message topic or concepts presented in the message.

Organization of the Study

There is a need for more empirical evidence about the effect of humor upon information retention. Chapter I is the introductory chapter and contains sections which relate to the background for the need of more empirical evidence about the effect of humor in the learning environment. Chapter I also included the statement of the problem, the purpose of the study, the need for the study, the hypotheses, the limitations of the study, the assumptions of the study and definitions of specific terms used in the study.

Chapter II presents literature about the beneficial aspects of humor, humor and the classroom environment, humor and source evaluation, and humor's effect on information retention.

Chapter III includes the procedures used in the study, the population, the instrumentation, and an explanation of how the data were analyzed. The findings are presented in Chapter IV. Chapter V consists of the summary of the study, conclusions based upon the study results, recommendations for practice and for further research and implications of the study.

CHAPTER II

REVIEW OF LITERATURE

The first section of the literature review presents a review of literature to support the contention that a sense of humor is a desirable attribute. Evidence also is presented to support the notion that humor has numerous beneficial aspects for individuals and groups. The second section presents studies about humor and the classroom environment. Humor and its effect on source evaluation is presented in the third section. The Chapter closes with a review of literature about the effect of humor upon the retention of information.

Beneficial Aspects of Humor

Humor is important in public speaking because it supposedly holds the attention of listeners. One of the explanations for using humor is that information is more readily received and retained when it is presented in a humorous manner. In fact, Kruger (1970) claimed humor "helps the audience relax and get into a frame of mind favorable for listening" (p. 329). Monroe and Ehninger (1969) also presented a similar idea. They stated:

Few things hold attention as well as humor judiciously used. Quips and stories provide relaxation from the tensions created by some of the other factors of attention and prepare listeners to consider the more serious ideas that may follow (p. 232).

Humor has many other reported beneficial aspects in addition to enhancing public speaking. McGhee (1983), for example, observed that

humorous individuals have an interpersonal skill that is essential for attaining social goals. Moreover, McGhee reported that college students who were initiators of humor generally did not have a manipulative approach toward others (p. 124). Salameh (1983) concluded that substantial evidence existed to suggest that "highly functioning or self-actualizing individuals tend to possess a healthy sense of humor" (p. 81).

Eastman, as quoted by Omwake (1937), spoke cogently about a sense of humor in interpersonal relations:

Laughter is, after speech, the chief thing that holds society together. We are even more reluctant to admit a defective sense of humor than a poor ear for music, a lack of physical skill or endurance or even an inferior intelligence. So covetous and broad is the trait that to say a person has a good sense of humor is almost synonymous with, 'he is intelligent, he is a good sport, I like him immensely' (p. 692).

Considerable evidence has been compiled in favor of those persons having a sense of humor (Smith and White, 1965, Smith and Goodchilds, 1963 and Smith and Goodchilds, 1959). These studies suggested that group members who have a sense of humor display less defensiveness and participate more in their groups. Furthermore, the studies suggest that humorous group members are associated with greater problem solving efficiency and more positive descriptions of themselves and the group.

Research also shows that humor helps individuals adapt to stressful or threatening environments. Cohen, cited in Duncan (1962), in writing about the beneficial aspects of humor in stressful conditions, recorded the following observation about life in Nazi concentration camps:

The prisoners who had not yet adapted themselves and still found themselves in the midst of a struggle for daily existence, had little sense of humor. It was only the 'wholly or partly' adapted prisoner who could use humor (p. 408).

Humor has been found to be an important variable for group cohesion and the control of deviance by group members. Kogon (1958) suggested that humor played an important group cohesive role in concentration camps and in the civil rights movement (Arnez and Anthony, 1968). Torrence (1963) forwarded the idea that clowning, a form of humor, is a frequently used interpersonal technique used by individuals to remain in a group or thwart pressures toward group conformity. Humor also can serve as a technique to signal another individual about the impropriety of his behavior. Bormann (1969) addressed an individual's deviant behavior in the following manner:

Humor in all forms serves as a corrective mechanism. It creates and releases tension at the same time it tells the deviating member that his behavior does not have group approval in a way that allows a laugh to release the tension (p. 29).

Mechanic (1962) noted from his observation of graduate students preparing for doctoral examinations that humor was frequently used as a technique to combat anxiety associated with taking the examinations. Smith, Ascough, Ettinger, and Nelson's 1971 study presented findings similar to those of Mechanic. Their study with undergraduate students as subjects suggested that exposure to humor might reduce anxiety and improve task performance (p. 243). As Coser (1960) noted, "the use of humor...highlights group consensus at the same time that it permits all to withdraw together, for a moment, from the seriousness of the concerns that face the group" (p. 81).

Wagner and Goldsmith (1981) claimed that humor has healing value. According to their assessment, "it might cure such ailments as feelings of isolation and estrangement from students; exaggerated sense of one's own importance; and even career burnout" (p. 17). Wagner and Goldsmith's assertion about the positive healing value of humor is

supported by McGhee (1983). McGhee suggested that medical professionals have long recognized humor for its emotional therapeutic value as a coping behavior or as a catharsis for tension (p. 111). Humor also can provide some physical effects. Researchers have reported that laughter can have a salutary effect on the body because muscles in the face, shoulders, diaphragm and abdomen get a vigorous workout similar to that achieved through exercise (Tulsa World , April 11, 1987).

Humor can entertain, reassure, communicate information, draw people together, enhance group efforts, and relieve tension as well as provide therapeutic value to the body and mind. Literature strongly suggests that humor is a desired and admired interpersonal trait useful in ameliorating many situations to improve the quality of life. As Coser (1959) noted, humor may have more to contribute to a group than carefully planned lectures and discussions (p. 181).

Humor and the Classroom Environment

Literature is replete with assertions that humor is beneficial in establishing a supportive classroom climate where students feel comfortable and unthreatened. In human communication theory, people who feel supported and comfortable tend to be released from their defensiveness and listen better. Humor, therefore, is a positive attribute for a teacher to possess and benefits both the teacher and the students. Hight (1956) described the quality of a good teacher in creating a non-threatening classroom in the following manner:

When a class and its teacher all laugh together, they cease for a time to be separated by individuality, authority, and age. They become a unit, feeling pleasure and enjoying shared experiences. If that community can be prolonged or re-established, and applied to the job of teaching, the teacher will have succeeded (p. 56).

Many educators believe, as indicated by Highet's statement, that humor helps create a classroom atmosphere which is more conducive to learning. Other educators have similar beliefs. For example, Horn (1972) and Baughman (1979) saw humor as eliminating differences in status and viewpoint. These assertions gave further credence to Highet's claim that humor is a positive attribute for a teacher to possess. A study by Ziv (1979), cited in Powell and Andresen (1985), looked at how humor facilitates a positive classroom environment and concluded that:

the fact that children appreciate this trait [sense of humor] in a teacher, and that we are able to predict - and find - certain types of atmospheres in different classrooms based upon each teacher's sense of humor, is important and confirms beyond the doubt that it plays a significant role (p. 83).

Darling and Civikly (1984) claimed that humor which is not perceived by students as honest, spontaneous, and open does more harm to the communication climate than does the absence of humor. In a positive classroom climate students have good feelings about the teacher and retain more information from the instructional message than do students in a defensive climate (Gibb, 1961 and Hays 1970). Ziv (1976) found empirical evidence to support Gibb's and Hay's position. Ziv's findings suggested that those subjects in his study who listened to a humorous tape recorded lecture scored higher on a creativity test than those subjects in a control group who listened to the same message without humor. Ziv credited his finding to a more relaxed classroom environment and a reduction in anxiety due to the humor.

Psychologists and interpersonal communication scholars have long contended that defense mechanisms are used by individuals to adapt to threats. If Freudian reasoning is correct, threatening humor causes

students to try to determine the motives and emotions of the communicator in an attempt to defend themselves rather than concentrating on the message. With humor that is open and non-threatening, students are able to relax and concentrate on the instructional message's content and cognitive meaning.

Humor and Source Evaluation

Teachers need to be perceived as intelligent, honest, friendly and interested in students. In other words, teachers need to be viewed as credible. Source credibility is defined as the attitude and perception that exists in a person's mind toward another person at a given time. Credibility is, however, often a function of role expectations. For example, a medical doctor might have a great deal of credibility even before a patient's first interaction with him. This credibility comes either from the doctor's reputation or by virtue of being a doctor. On the other hand, a teacher may not have the same level of instant credibility and, therefore, has to earn it in some way.

Humor's effect on credibility is double edged. Some types of humor may amuse some people and increase a teacher's credibility but alienate others, thereby damaging the teacher's credibility. Stebbins (1980) addressed this point by saying that "using humor is like driving on a poorly maintained road; one does so at one's risk" (p. 94). The effects of humor on source evaluation have not been made clear.

Humor can be detrimental to a speaker if the audience has a perceptual set toward the speaker and his use of humor. For example, Mettee, Hrelec, and Wilkins (1971) asked students to rate a professor lecturing on video tape who either did or did not include a joke in the lecture. Half of the students were told in advance that the professor

was cold and aloof. The other half of the students were told that the professor tried too hard to be interesting and funny. The subjects who were told the professor was cold and aloof rated him low as a teacher if he told no jokes and rated him high when he told one. The "interesting and funny" professor was rated low when he told a joke and high when he did not.

Taylor (1964) conducted a study with students to determine if "listener supportive" humor in an informative speech had an effect on the speaker's evaluation. Taylor defined "listener supportive" humor as humor which served to augment an educational point. Taylor's findings suggested that the humorous speaker had lower credibility than did the non-humorous speaker. Gruner's findings differed dramatically from Taylor's. Gruner (1970) found that the speaker who used humor was rated significantly higher on character ($p < .01$).

Stocking and Zillmann (1976) manipulated disparaging (hostile) humor in an experiment involving 36 males and 36 females. The results of their study suggested that the "self-disparaging" storyteller was perceived to be less intelligent, less confident, and less witty than the humorous individual who did not discredit himself. Females enjoyed the self-disparagement more than did the males regardless of the storyteller's sex. Males enjoyed disparagement of enemies. Wandersee (1982) believed teachers who used self-disparaging humor impaired their credibility and teaching effectiveness.

Ziv, Gorenstein, and Moris' (1986) experimental study with highschool boys and girls also demonstrated that a teacher's use of humor influenced the teacher's evaluation. Their study suggested that the teacher who used self-disparaging (hostile) humor was rated lowest on power (the strong-weak dimension) while the "other disparaging"

teacher was rated higher. The self-disparaging teacher was also rated as the least appealing by the students.

Gruner (1967) used four groups of upper division students enrolled in Business and Professional Speaking at the University of Nebraska to test the hypothesis that humor would have a significant effect on the source's ethos. The experimental variable was an audio tape recorded speech about listening with topic related, non-hostile humor. The control stimulus was identical except for the humor. Gruner found a significant difference at the $p < .01$ level on the character of the source, i.e., how well the subjects liked the source.

Gruner (1970) did another study with audio tape recorded speeches to test the null hypothesis that there was no difference between subject ratings of the speaker ethos by adding humor to a dull or an interesting speech. The addition of humor to the dull speech increased "character" ratings twice as much as did the addition of humor to the interesting speech ($p < .01$).

Bryant, Comisky, Crane, and Zillmann (1980) found that males and females were evaluated differently on their overall effectiveness and appeal when they used hostile humor. The male teacher's use of humor was related to higher positive evaluations, regardless of the type of humor. Female teachers generally received lower evaluation scores on competence and teacher effectiveness when they used hostile humor.

The studies cited suggest that humorous material has an effect on the person to whom it is presented. Further, the type of humor used may influence the perceivers' ratings of the source.

Humor and Retention of Message

Textbook authors who write about public speaking frequently

proclaim that humor is an important variable for maintaining listener interest and attention. Brigrance (1961), for example, stated that "apt anecdotes and brief humorous stories heighten interest, and also reinforce points" (p. 446). If humor does heighten a listener's attention, the result should be greater message retention. Previous studies have presented contradictory and inconclusive results regarding the effect of humor on message retention.

Studies performed by Lumsdaine and Gladstone (1958) and McIntyre (1954) suggested that humor was a detriment to the objective of instructional films. Subsequent efforts by Chapman and Crompton (1978) and Davies and Apter (1980) found that humorous slide presentations facilitated more learning in children than humorless slide presentations. Ziv (1979), as cited by Powell and Andresen (1985), proposed a linking between humor and the concepts presented. Ziv's results suggested that test performance could be improved if concepts were linked with humor. Research, however, for the most part has not corroborated Ziv's hypothesis.

Taylor (1964) has been credited as the first researcher to test the hypothesis that humor in an informative message assists a listener in retaining information. Taylor's subjects were two groups of highschool students who heard tape recorded speeches with and without humor. The speeches were identical, except for humor. Before hearing the messages, all of the students were pretested. Taylor found no difference in the beginning knowledge of the students nor did he find a difference in the amount of information retained between the two groups on the post-test. On a one week post-test, the group which heard the message with humor remembered more information than did the control group. Taylor did not recite the level of significance used in his study. He also failed to

specify the type of humor inserted in the message.

Gibb's (1964) findings contrasted with Taylor's. Gibb did a study with college freshmen as subjects to determine if a tape recorded lecture on biology containing humor was a more powerful stimulus than an identical lecture without humor. Gibb exposed two experimental groups to a lecture containing humor. Two other groups heard the humorless version and another control group heard the identical humorless version but with additional information to make its length the same as that of the humorous version. Gibb found that humor made a difference in retention of information among the humorless, lengthened humorless, and humorous versions ($p < .01$). A three week delayed post-test also suggested humor made a difference in retention of information. Gibb, however, did not have satisfactory control in his experiment in that the groups heard the messages at varying times. Gibb's experimental manipulation check of humor consisted of listening to the subjects' laughter on the audio tapes.

Gibb's works were supported by Ziv's (1982) idea that humor in communication would have more effect on information retention if given in a series of presentations than would exposure to humor in just one presentation. Ziv trained instructors to teach statistics with and without humor. At the conclusion of the semester those students who were taught by the humorous method scored 15% higher on examinations than did those students taught by the humorless method.

Gruner (1967) used upperclass speech students in his study to test the hypothesis that humor had an effect on retention of information. Gruner inserted 12 items of humor from his "tested material or from anthologies of humor" (p. 229) in a message about listening developed by Kibler (1962). The messages were delivered in a classroom setting.

Gruner failed to establish that humor in a tape recorded message aided information retention.

Gruner did another study in 1970 to determine whether humor enhanced information retention. This time he made four tape recorded versions of the message: one humorous-interesting, one humorous-dull, one serious-interesting, and one serious-dull. Gruner scattered 22 items of humor appropriate to the message topic throughout the two humorous messages. He again failed to establish that humor in a tape recorded message aided information retention.

Kaplan and Pascoe (1977) conducted an experiment with psychology students to determine the effect of humor and humorous examples upon the retention of lecture material. Intact classes of 508 subjects were randomly assigned to view either a video tape recorded serious lecture or one of three humorous versions. The humorous versions included humorous examples related to the concepts in the lecture, humor unrelated to the concepts, or mixed humor which contained both related and unrelated humorous examples. A test for retention was given immediately after the subjects heard the lectures. A delayed post-test was given six weeks later. The post-test that immediately followed the experiment suggested that retention of information was not facilitated by humor. The delayed post-test, however, suggested that those who had watched the version with humorous examples illustrating concepts remembered more information ($p < .05$).

Summary

The first section of the literature presented numerous reports about the beneficial aspects of humor. Most of the reports were anecdotal in nature without empirical support. The second section

presented limited empirical evidence that humor helps create a classroom climate where the learning environment is more positive and students feel unthreatened and amenable to listening to the instructional message.

The experimental literature in the final two sections, however, casts some doubt about the positive effects of humor. The majority of these studies suggested that humor does not facilitate information retention. These studies, however, were characterized by questionable methodology in design. Further research on the effect of humor is therefore important for the advancement of conclusive data about the effect of humor on information retention and source credibility.

CHAPTER III

METHODOLOGY

The purpose of this study is to examine the effect of topic related, non-hostile humor upon message retention. This chapter presents the methodology used to design the study and collect and analyze the data. The following sections will be included: (1) the type of research conducted, (2) population, (3) the instruments used in the collection of data, (4) pilot test, (5) experimental design, (6) laboratory setting, (7) collection of data, and (8) analysis of data.

Type of Research Conducted

Laboratory experiments in education are designed and executed to provide answers to research hypotheses. Without precision and maintenance of control over all extraneous variables, the results of an experiment might be confounded. Most research about the effect of humor has contained design flaws to the extent that the results have not been recognized as generalizable. Gibb (1964) and Gruner (1967), for example, did not control the time of day for their experiments. Taylor (1964), Gruner (1970), and Kaplan and Pascoe (1977) used intact classes of college psychology and speech students. The problem with subjects such as these is that they probably did not choose their classes in a random way. Consequently, even with random assignment to group, the subjects constituted a biased sample. The failure to pretest subjects (Gruner, 1967, and Kaplan and Pascoe, 1977) has also been a common flaw.

Gruner (1967) and Kaplan and Pascoe (1977) failed to perform manipulation checks to determine if the subjects perceived their messages as humorous.

The current study attempted to overcome some of the design errors that have been noted in experiments that utilized high school or college students. It also dealt with subjects in professional work rather than students who were in a primary learning environment.

Subjects

The 36 adult subjects who participated in this experiment were randomly selected from the employee files of a large nationwide insurance company located in Oklahoma City, Oklahoma. The parent company conducted a two hour Excellence in Service (excellence) seminar for four of its five subsidiary companies. The company randomly assigned 510 professional employees to six groups of 85 each for participation in this seminar. The ratio of female to male in this group of 510 employees was approximately five females to each male.

The purpose of the company's random assignment for seminar participation was to get homogeneous groups as opposed to groups formed by voluntary participation. The 85 member group that furnished the 36 subjects for the study was chosen by simple random selection, consisting of drawing one group from a box that contained a number denoting each of the six groups. The 36 subjects were then randomly selected, without replacement, from the 85 member group.

Assignment of the 36 subjects to the humorous or humorless condition was also done by simple random selection. The names of 36 subjects were randomly chosen from the 85 member group and assigned on an alternating basis to either the humorous or humorless condition. The

first subject assignment was made to the experimental condition based on a flip of a coin by an employee of the company. Subject assignment to group was made without replacement.

Each of the "excellence" seminars was conducted from 8:30 a.m. to 10:30 a.m. daily, Monday through Friday plus the subsequent Monday. Group assignment to a day of the week was arbitrary. The group which furnished the subjects for this study participated in the seminar on Thursday.

The 36 study subjects were informed prior to the excellence seminar that they were to return to a different training room for an additional seminar at 10:45 a.m. following their dismissal from the excellence seminar. They were not informed of the purpose for the additional seminar other than that a program would be presented by Oklahoma State University, one of the company's valued clients.

The ages of the subjects ranged from 19 years of age to 61. The average age for the entire group of subjects was 36.2. The standard deviation was 11.49. The group assigned to the humorous condition had an average age of 31.9 compared to 38.1 years of age for those subjects in the humorless condition. There were four males in the humorless condition and one in the humorous condition.

The choice of adults from a non-traditional educational setting for the experiment was inspired by Markiewicz's plea for more variability in subjects. All previous research on the effect of humor had been done with intact classes of highschool (Taylor, 1964) or college students as subjects (Gruner, 1967; Gruner, 1970; Gibb, 1964; Kaplan and Pascoe, 1977).

Independent Variable

The independent variable consisted of one video tape containing two instructional messages with imbedded topic related, non-hostile humor (Appendix A). These two messages were 23 minutes in duration. The video tape containing the two humorless versions of the messages was 18 minutes in duration and similar except that the humor was deleted. Video tape was selected as the message media for control purposes. Gruner's and Gibb's study used audio recordings.

The topics of the messages were Characteristics of Adult Learners (characteristics) and Effective Listening (listening). The "characteristics" message was developed by a graduate student and edited for speaking style by the writer. The "listening" message was originally developed by Kibler (1962) for his dissertation and used by Gruner (1967) in his study to determine the effect of humor on speaker authority and character and information gain by the audience..

The characteristics message explained four variables that impinge on an adult's ability to learn and also clarified how to overcome those variables. The listening message explained that listening is the communication skill most used but least practiced and suggested ways of improving listening skills. The humor for the characteristics messages was selected by the researcher. The humor in the message developed by Kibler was added by Gruner and came from his stock of "tested material or from anthologies of humor" (p. 229). There were two primary reasons for choosing these two topics for the experiment. First, the topics seemed to be ones about which the subjects would have little prior knowledge and, secondly, both seemed to be instructional messages of equal interest to the subjects.

The speaker chosen to deliver both the control and experimental messages was a professor of vocational and adult education. He was experienced as a public speaker and adept at using humor. He had vocal variety, facial expressiveness, appropriate hand gestures, articulation and a rate of delivery common to excellent speakers. With the exception of the humorous material, the speaker was instructed to make his delivery as similar as possible in the messages. Subsequent evaluation by a panel of five graduate students identified only minor differences in delivery and message content.

The messages were filmed with two cameras while delivered to an audience of seven adult employees of Oklahoma State University. Segments were taken from each film and edited into a complete video. The purpose of this splicing was to provide a variety of scenes, thereby preventing visual boredom that might have occurred if the subjects had viewed a single scene angle for too much time. The video tapes were filmed with a JVC Video Camera and recorded on a JVC Video Recorder. The video tape was industrial grade quality and produced on Polaroid Supercolor Video T-120 VHS Tape.

The panel of five graduate students which evaluated both videos for verbal and non-verbal consistency also rated the speaking quality of the characteristics and listening messages. A 100 point scale was used. The humorous characteristics message received a grade of 94 compared to 92 for the humorless version. The humorous video message about listening was rated at 92 compared to 89 for the humorless version. The evaluation instrument and instructions for its use were developed by a graduate speech communication student. The evaluators were trained in the use of the instrument.

The characteristics humorous message contained nine items of humor.

Eight items fit the message topic. One humor item that was used as an ice breaker and relaxer for the audience was judged by the evaluation panel as a non-related humor item. Two other items were judged as non-related but served as transition fillers between message segments. The other five items preceded concepts and were judged as introducing a variable. The intended purpose of these five items was to arouse the listeners' interest.

The 12 items of humor in the listening message were related to the topic of listening, but they were not judged as items that served as segment introducers or reinforcers for concepts presented. Four of the items were in the introduction and three were in the first part of the message. The other five were evenly distributed in the message. None of the humor items were judged by the panel as variable introducers.

The humor in the characteristics message script was previewed by a group of adult employees of Oklahoma State University. Four items were replaced because the adults did not think that the humor was funny. The five member evaluation panel conducted a pre-experiment evaluation of the humor which was subsequently placed in the script and in the videos. Previous researchers (Gruner, 1967 and Gibb, 1966) had not conducted a pre-experiment manipulation check.

According to Daly, Richmond, and Leth (1979), a manipulation check is any procedure that elicits a response from the subjects about their perception of one or more aspects of the experimental conditions. The purpose of the pre-experiment manipulation check was to determine the degree of humor and make changes to increase the funniness of the humor in the messages prior to the experiment. In the case of the subjects, the purpose of the check was to have evidence that the manipulation of humor worked.

Smith's (1959) valid and reliable seven point semantic differential scale for determining speech humor was used by the evaluation panel to determine the degree of humor in the humorous video. The humor in the characteristics message was evaluated at 6.2 (seven would have been extremely humorous) compared to 5.9 (0.1 away from quite humorous) for the listening message.

Collection of Data

Care was taken to develop the 21 item information retention measurement instrument (Appendix B). This instrument was used for the pretest, post-test, and one week delayed test (OWD test). In order to determine content validity of the instrument, the video messages were viewed by the evaluation panel to determine that each question on the retention test was answered in the videos. In his book, Foundations of Behavioral Research, Kerlinger (1973) wrote the following about content validation:

Content validation, then, is basically judgmental. The items of a test must be studied, each item being weighed for its presumed representativeness of the universe. This means that each item must be judged for its presumed relevance to the property being measured, which is no easy task. In many cases, other 'competent' judges must also judge the content of the items. The universe of content must, if possible, be clearly defined; that is, the judges must be furnished with specific directions for making judgments, as well as with specification of what they are judging. Then, some method for pooling independent judgments must be used (p. 459).

Observer agreement was used by the panel to determine validity of the test questions and their correct answers. Agreement was reached by viewing the videos and stopping action after the presentation of information needed to answer each question. Total group agreement was required for question validity. Any question that was found to be ambiguous or inappropriately asked was revised to the acceptance of the

entire group.

Smith's (1959) two valid and reliable scales were used to measure the subjects' perception of their messages' seriousness or humorousness. McCroskey's (1966) 12 item semantic differential scale, the validity and reliability of which has been established, was used to measure authoritativeness and character, two dimensions of credibility. Gruner used both Smith's and McCroskey's scales in his 1967 and 1970 studies.

Pilot Test

Conducting an experiment is such a complex undertaking that Tucker, Weaver, and Berryman-Fink (1981) admonish researchers to conduct pilot studies prior to conducting the actual experiment. A pilot study was done previous to conducting this study to ascertain problems that might have occurred during the experiment which would have threatened the study's internal validity.

The two graduate students who conducted the actual study also conducted the pilot study. Employees of Oklahoma State University were subjects for the pilot tests. Some minor problems were identified and corrected. The pilot study also enabled the determination of average times required by the subjects to complete the pretests and post-tests and other segments of the experiment.

Experimental Design

This experiment was conducted with a true experimental design. Campbell and Stanley (1963) state this type of design controls for all seven rival hypotheses that threaten internal validity.

The time sequence schedule set out in Appendix C was closely followed in the conduct of the study. The video containing the two

humorous messages was five minutes longer than the humorless versions. This five minute gap was filled at the end of the non-humorous group's session by the graduate student in charge who engaged in "small talk" with the subjects following their post-tests. The "small-talk" was unrelated to the experiment.

Laboratory Setting

The study was conducted in two of the company's training and development rooms. The facility was viewed one week prior to the experiment when the layout was devised. The humorless group was located in a training room approximately 60 feet from the humorous group. Neither group was aware of the other's activities. Illumination of both the humorless and humorous viewing rooms was equal. Identical monitors of equal display quality were used.

The 36 subjects were assigned to their rooms prior to the experiment with instructions to report to their rooms at 10:40 a.m. Subjects were counted as they entered the room. There were 18 subjects in each group. At precisely 10:45 a.m. each group of subjects was given the cover story, Appendix D, and then asked to complete the pretests that were at their seats. A plausible story was given to the subjects to enhance the realistic nature of the study and overcome reactive effects. Without the cover story, the subjects might have devised their own explanations about the purpose of the experiment and confounded the results (Tucker, Weaver, Berryman-Fink, 1980). At the expiration of four minutes, the pretests were gathered and the video players started.

Following the video message, post-tests were distributed in a folder. The subjects were asked to refrain from opening the folder until all tests were distributed. After the distribution, the subjects

were told that they would have five minutes to complete the tests. An extra minute was given on the post-test for completion of Smith's (1959) and McCroskey's (1966) scales. Both scales are contained in Appendix E. Gruner used Smith's and McCroskey's scales in his 1967 and 1970 studies. The subjects were instructed about the correct way to complete the semantic differential scales. They were not allowed to leave the training rooms until all tests and scales were completed.

The subjects were administered the OWD test the subsequent Thursday at 10:30 a.m. The subjects were told that the purpose for this session was for a briefing about the results of the previous week's session. Consequently, they were not aware that the intended purpose of the meeting was to conduct the OWD test. They received notice one day prior to the day of the OWD test.

There was a loss of four subjects in the humorous group and three in the humorless group. These seven subjects failed to attend the OWD test session. One subject's humorless OWD test was invalidated for data analysis because it could not be matched with a pretest or post-test. The 29 subjects were administered the four minute OWD test previous to a debriefing about the intended purpose of the study. Once debriefed, the subjects were informed about the preliminary results of the data gathered the previous week. Only one subject indicated disbelief in the cover story.

Analysis of Data

The research design utilized a 2 X 3 factorial experiment. There were 18 subjects assigned to each group. The first factor was humorous and humorless. The second factor was pretest, post-test and OWD test. The data collected were reduced with the ANOVA procedure. ANOVA is a

robust parametric technique to compare groups for experimental effect (Kerlinger, 1973).

Tukey (1960) suggests that there is no grave need for the artificial limitations of the 0.01 or the 0.05 level of significance. In the testing of a new drug, the 0.001 level would be suitable for the life safety factor. In educational environments, the 0.10 or some other level might be just as appropriate as the widely used 0.05 level. Even so, this study used the 0.01 level of significance for consistency with previous studies.

A two tailed test was used. Huck, Cormier, and Bounds (1974) recommend a two tailed test when the direction of the difference between the populations is not known.

Research Hypotheses

The following hypotheses were investigated to achieve the purpose of this experiment.

1. The adult students treated with two humorous instructional messages containing topic related, non-hostile humor did not score differently on post-tests from those students who viewed the two humorless versions ($p < .01$).

2. The adult students treated with two humorous instructional messages containing topic related, non-hostile humor did not score differently on a OWD test from those students who viewed the two humorless versions measured from the post-test ($p < .01$).

3. Teachers using topic related, non-hostile humor in their instructional messages did not receive the same ratings on authoritativeness and character as did teachers not using topic related, non-hostile humor ($p < .01$).

Summary

This study was conducted with a true experimental design. Great care was taken to overcome design errors that have limited generalization of previous works about the effect of humor. Adults from a large insurance company were randomly selected as subjects and randomly assigned to experimental conditions. The instructional messages were controlled by means of a video tape.

The comparability of the humorous and humorless versions of the video messages was evaluated by a panel of graduate students. They also performed a pre-experiment manipulation check of the humor contained in the humorous videos and determined the content validity of the dependent variable questions. The videos and dependent variables were used in a pilot test to identify and correct errors that could have occurred during the actual experiment. The graduate students who conducted the experiment also conducted the pilot study.

The experiment was conducted on a Thursday at 10:45 a.m. The 36 subjects were given a cover story, took the pretests and received the stimulus. Following the administration of the stimulus, the subjects were post-tested and completed three semantic differential scales. Smith's two scales were used for a manipulation check of humor and to measure message interest. McCroskey's 12 item scale was used to measure the teacher's authority and character. An OWD test was administered one week later. Seven subjects missed the OWD test. One OWD test was invalidated because it could not be matched with a pretest or post-test. The data collected with the 2 X 3 factorial design were analyzed by the ANOVA procedure in the SAS System (SAS Institute). The results obtained from using this experimental design are discussed in Chapter IV.

CHAPTER IV

PRESENTATION OF FINDINGS

The purpose of this study was to examine the effect of topic related, non-hostile humor upon message retention. This chapter is devoted to the presentation of the study findings. It is comprised of the following sections: (1) the description of the statistical technique employed for analyzing the data, (2) analyses and results of the study, and (3) summary.

Statistical Technique

Parametric techniques allow greater flexibility in types of research questions to which they may be applied. Parametric techniques are also particularly useful in complex studies in which more than one variable is under investigation. The ANOVA technique was chosen for data analysis in this study because of its robustness as a parametric procedure, the need for generalization of the data, and its ability to examine more than one variable. The ANOVA technique is a frequently used and generally accepted multivariate technique included in statistical reference works such as Popham and Sirotnik (1973) and Kerlinger (1973).

The ANOVA technique can be used to identify the component sources of variation. The variation among subjects within a group (Error a component) was used as an error term for testing the differences between the humorous and humorless groups in this study. The differences among

the pretest, post-test, and one week delayed test (OWD test) periods were tested by using subject by date within groups as the error term (Error b component). The group by period interaction was tested by the subject by period within groups as the error term (Error b component).

Four subjects were discarded from each of the two groups for the OWD test comparison. Of the total, seven subjects failed to attend the OWD test session and one OWD test was invalidated because it could not be matched with a pretest or post-test. If the loss of the number of subjects in each group had not been equal, the regular ANOVA procedure could not have provided the appropriate analysis. The ANOVA procedure in the SAS system (SAS Institute, 1985) can, however, provide the appropriate analysis because an equal number of subjects was lost in each group.

Pretest Results

Pretests were used to determine each group's beginning knowledge about the message topics. The humorous group's average pretest score, as shown in Figure 1, was 14.8 compared to 14.7 for the humorless group. As displayed in Table I, Line 3, the F value for testing the difference was 0.001. This F value is so small that it suggests there was no difference between the means of the humorous and the humorless groups. The two groups possessed essentially the same beginning knowledge about the message topics prior to the start of the experiment.

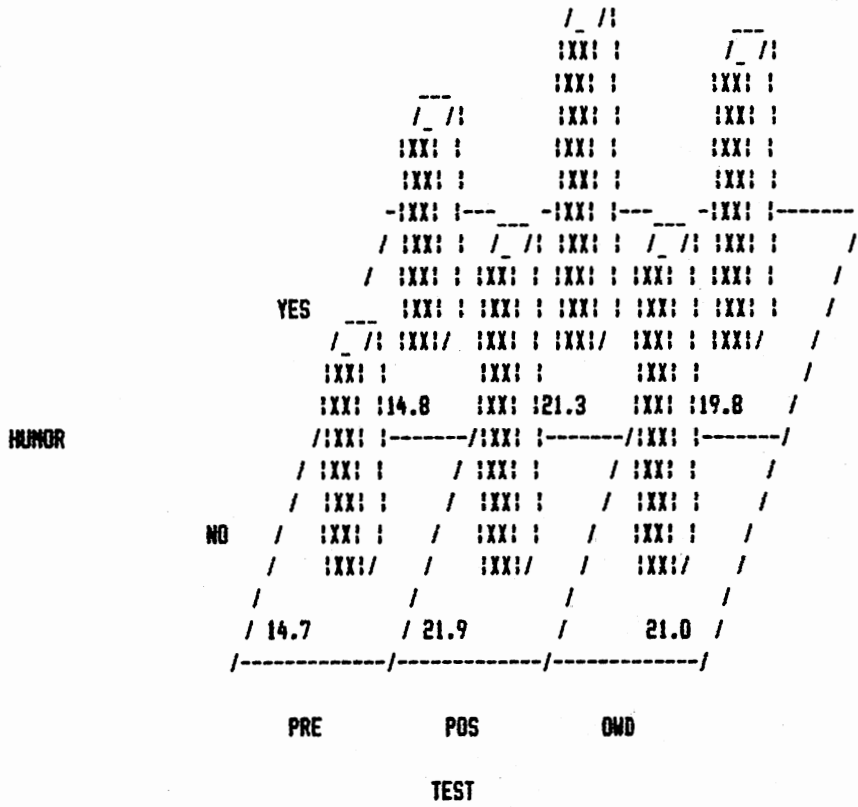


Figure 1. Means of Two Groups on Information Retention

TABLE I
ANALYSIS OF THE EFFECT OF HUMOR UPON MESSAGE RETENTION

Line	Source	DF	SS	MS	F
1.	Total	99	2045.39		
2.	Test Period - Humor Combinations	5			
3.	Humorous vs Humorless in Pretest	1	0.03	0.03	0.001 NS
4.	#Humorous vs Humorless in Post-Test	1	3.36	3.36	0.016 NS
5.	Humorous vs Humorless in OWD Test	1	10.32	10.32	0.483 NS
6.	Pretest Period vs OWD Test (Humorous)	1	197.50	197.50	33.475 **
7.	##Post-Test vs OWD Test (Humorous)	1	18.86	18.86	3.197 NS
8.	Pretest vs OWD Test (Humorless)	1	310.36	310.36	52.603 **
9.	Post-Test vs OWD Test (Humorless)	1	7.02	7.02	1.191 NS
10.	Subj in Humorous (Error a)	34	725.77	21.35	
11.	Subjects x Period in Humorous (Error b)	60	354.26	5.90	

Use Error a to test Humorous vs Humorless in lines 3, 4, & 5
Use Error b to test Periods in lines 6, 7, 8, & 9

NS = Not Significant at P = 0.01
* = Significant at P = 0.05
** = Significant at P = 0.01

Post-Test Results

Post-tests were used to evaluate the effects of the humorous and humorless stimuli. The humorous group received an average post-test score of 21.3 compared to the humorless group's average score of 21.9. These averages are displayed in Figure 1. The F value for testing the hypothesis was 0.016 (Table I, Line 4). This extremely small F value suggests there was no difference between the means of the humorous and humorless groups. The difference between groups was small even though knowledge about the message topics increased in both groups. The null hypothesis that the two group's post-test scores would not be different could not be rejected.

OWD Test Results

The delayed retention effect of each group's message stimulus was measured by comparing the OWD average test scores between groups. As shown in Figure 1, the humorous group received an average test score of 19.8 compared to humorless group's 21.0. The $F = 0.483$ (Table I, Line 5) indicates that there was no difference between the groups in the loss of information even though both groups lost information about the message topics during the interim from the post-test to the OWD test. The null hypothesis that the two group's OWD test scores would not be different could not be rejected.

Humorous Test Results

The pretest and OWD test scores of the humorous group were used to evaluate the retention effect of the humorous messages. The humorous group's average pretest score as shown in Figure 1 was 14.8 compared to

19.8 for the OWD test scores. The $F = 33.475$ (Table I, Line 6) was significant at $P = 0.01$. There was a great difference between the pretest mean and OWD mean test scores, implying that the humorous group of subjects retained a substantial amount of information from viewing their video.

A comparison of the humorous group's post-test and OWD test scores was evaluated to determine the delayed effect of the humorous stimuli. The post-test mean score was 21.3 compared to the 19.8 OWD mean test score (Figure 1). The $F = 3.197$ (Table I, Line 7) was not significant at $P = 0.05$. There was very little difference between the humorous group's post-test and OWD test scores, implying that the humorous group suffered little information loss during the one week following the post-test.

Humorless Test Results

The pretest and OWD test scores of the humorless group were used to evaluate the effect of stimuli in the humorless messages. The average pretest score as shown in Figure 1 was 14.7 compared to the 21.0 OWD test score. The F value for testing this difference was 52.603 (Table I, Line 8). The difference was significant at the $P = 0.01$ level, suggesting that there was a great difference between the pretest and OWD means. This finding implies that the humorless group retained a lot of information from viewing the video tape.

The delayed retention effect of the message stimuli of the humorless group was also evaluated. As shown in Figure 1, the information retention average score dropped from 21.9 to 21.0. The $F = 1.191$ (Table 1, Line 9), $P = 0.05$ indicated that the loss was not significant. This finding implies there was little information loss

during the interim between the post-test and the OWD test.

Authority and Character

The subjects also completed McCroskey's 12 item semantic differential scale to measure their perceptions of their teacher's authority and character. The data were analyzed to determine whether the humor which was added to the two message versions affected authority and character differently than did the two versions that did not contain any humor. The data shown in Tables II and III, respectively, suggested that there was no difference in the two groups' perceptions of their teacher's authority or character. The group means are displayed in Figure 2. The null hypothesis that the teacher using humor would not score differently on authority and character from the teacher who gave the humorless versions could not be rejected ($P = 0.01$).

TABLE II
SUMMARY TABLE OF TWO GROUP'S RATINGS OF TEACHER AUTHORITATIVENESS

Source	DF	SS	MS	F
Humor	1	1.3611	1.3611	0.09*
Subjects (Humor)	34	541.6111	15.9297	
Total	35	542.9722	17.2908	

* = Not Significant at P = 0.01

TABLE III

SUMMARY TABLE OF TWO GROUP'S RATINGS OF TEACHER CHARACTER

Source	DF	SS	MS	F
Humor	1	0.4444	0.4444	0.02*
Subjects (Humor)	34	830.1111	24.4150	
Total	35	830.5555	24.8590	

* = Not Significant at $P = 0.01$

Variable	N	Authority	Character
Humorless	18	31.722	30.500
Humorous	18	31.333	30.722

Figure 2. Means of Two Group's Ratings of Teacher Authority and Character

Humor Manipulation

An analysis of variance as shown in Table IV revealed an $F = 36.61$, significant at $P = 0.01$ level of confidence for the humor in the humorous messages. The group means are shown in Figure 3. This finding validated the evaluation panel's rating of the humor in the humorous messages. This F value also means that the group of adult subjects which viewed the video with the humorous messages perceived them to be humorous.

Message Interest

A popular notion exists that the addition of humor to a message makes it more interesting. This was not demonstrated by the data as shown in Table 5 and Figure 3. The $F = .081$, $P = 0.01$ indicated that the group of subjects which viewed the humorless video perceived their messages to be as interesting as did the group which viewed the versions containing humor.

TABLE IV

SUMMARY TABLE OF TWO GROUP'S HUMOR RATINGS ON TWO MESSAGES

Source	DF	SS	MS	F
Humor	1	54.5410	54.5410	36.61*
Subject (Humor)	29	43.2008	1.4896	
Total	30	97.7410		

* = Significant at P = 0.01

TABLE V

SUMMARY TABLE OF TWO GROUP'S INTEREST RATINGS ON TWO MESSAGES

Source	DF	SS	MS	F
Humor	1	1.6680	1.6680	0.81*
Subject (Humor)	29	59.8803	2.0648	
Total	30	61.4483		

* = Not Significant at $P = 0.05$

Variable	N	Serious- Humorous	Interesting- Uninteresting
Humorless	18	2.389	3.778
Humorous	13*	5.077	3.308

*Five subjects failed to complete their scales

Figure 3. Means of Two Group's Ratings of Message Humor and Interest

Summary

Pretests indicated that the two groups had begun the experiment with essentially the same knowledge about the message topics. The message stimulus was effective for each group, as indicated by the substantial increase in average test scores from the pretest to the post-test. The humor stimulus added to the humorous message versions did not produce superior retention of information on the post-tests. The null hypothesis that the group which viewed the two humorous messages with topic related, non-hostile humor would not score differently on the post-tests from the group which viewed the humorless versions could not be rejected.

The OWD test contained eight fewer subjects. Seven subjects failed to attend the OWD test session and one OWD test was discarded because it could not be matched with a pretest or post-test. Four subjects were lost in each group. There was no difference between the humorous and humorless groups in the amount of information retained on the OWD tests. Therefore, the null hypothesis that the humorous group would not score differently from the humorless group was not rejected. Neither group, however, lost as much information during the interim between the post-tests and OWD tests as they retained between the pretests and post-tests.

The topic related, non-hostile humor in the humorous instructional messages did not negatively affect the humorous group's perception of their teacher's authority and character. The humorous group's perception of their teacher's authority and credibility was no different than the humorless group's perception. A scale completed by the subjects in the humorous group indicated that the humor variable was

effective. This finding validated that the subjects perceived their messages as humorous. The humor did not make the humorous messages more interesting than the versions which did not contain humor.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

The purpose of this study was to examine the effect of topic related, non-hostile humor upon message retention. This chapter presents the summary, conclusions, recommendations for practice and for further research, and the implications of the study.

Summary

The literature is replete with assertions that information retention can be enhanced by including humor in a message. The insertion of humor in an instructional message supposedly arouses interest and enhances listening by students. But there is little empirical evidence to support the notion that humor enhances information retention. The limited studies which have been done have failed to provide conclusive evidence. Each of them (Taylor, 1964; Gibb, 1964; and Gruner, 1967 & 1970), however, contained methodology which could have made the findings spurious.

Taylor has been credited as the first researcher to study the relationship between humor and the retention of information. He used an intact class of highschool students without random assignment to condition. Taylor's stimulus was an audio recording. The experiment was also part of the students' regular instruction.

Gibb's (1964) study is the only one which has found humor to affect message retention. He, like Taylor, used an intact group of students in

his experiment. Gibb failed both to randomly assign his subjects to condition and to control the time of day for the conditions. Gibb's manipulation check of the humor variable consisted of listening to an audio recording of the subjects' laughter.

Gruner (1967 & 1970) used intact classes of students as subjects in both of his studies. The work was part of their regular class activities. The use of intact classes of students and the failure to randomly assign subjects to condition, make manipulation checks, or have conditions equal for all groups are questionable methodological practices (Tucker, Weaver, Berryman-Fink, 1981) which permit findings to be challenged.

This study examined the effect of humor upon information retention under more rigid design conditions with randomly selected adults as subjects. They were randomly assigned to condition. Special attention was given to overcoming other weaknesses that have been noted in previous studies.

Video tapes were used as one method to ensure internal validity in the study. Humorous and humorless videos, each containing two instructional messages, were filmed. The content of the messages was the same except for the humor. One person delivered both the control and experimental messages. An evaluation by a panel of graduate students determined that the videos were nearly identical in terms of content, vocal variety, articulation, and rate of delivery. This evaluation panel also established the content validity of the retention test instrument and performed a pre-experiment manipulation check of the two video messages that contained the topic related, non-hostile humor.

A pilot study for the experiment was conducted prior to the actual study. The purpose of the pilot test was to detect and correct any

errors that might have contaminated the experiment. The study was conducted with a 2 X 3 factorial experiment. The study was carried out at the home office of a large, nationwide insurance company in Oklahoma City, Oklahoma. Thirty-six adult subjects were randomly selected to participate in the study. Eighteen subjects were randomly assigned to each condition. The subjects did not have prior knowledge about the purpose of the experiment.

Each group of subjects was assembled in a nearly identical seminar room. The two graduate students who monitored the experiment gave a cover story to hide the purpose of the experiment. Following the cover story, pretests were administered to each group. At the conclusion of the messages, the subjects were post-tested. Each subject also completed three valid and reliable semantic differential scales to measure her perception of the message's seriousness-humorousness, interestingness, and authority and character of the teacher. A one week delayed test (OWD test) was administered to 29 of the 36 subjects subsequent to the experiment. Seven subjects missed the OWD test. One OWD test was subsequently invalidated because it could not be matched with a pretest or post-test. Consequently, data on only 28 subjects were used for the OWD test comparisons.

The pretests suggested that both groups possessed essentially the same beginning knowledge about the content of the messages. Both groups scored significantly higher on their post-tests. The null hypothesis that those subjects who viewed the humorous videos would not score differently on retention tests than would those subjects who viewed the humorless version could not be rejected. Both groups had retained a statistically significant amount of the information after the interval from the post-test to the OWD test. However, there was no difference at

the 0.01 level of significance between the groups on the amount of information loss during the one week subsequent to the experiment. Therefore, the null hypothesis that the humorous group would not score differently on the OWD test than would the humorless group could not be rejected.

It was also hypothesized that the teacher who used humor would not score differently on authority and character would the teacher who did not use humor. The null hypothesis could not be rejected. The humorless group perceived their teacher as having as much authority and character as did the group that heard the humorous versions of the Characteristics of Adult Learners and Effective Listening messages. A manipulation check indicated that the humorous group of subjects perceived their two messages as humorous. Both groups perceived their messages as serious, but the difference between their perceptions was not statistically significant at the 0.01 level of significance.

Conclusions

The humor was placed in the two video messages with the idea that it would arouse the listeners attention and cause them to listen better and remember more than they would if they viewed the same video message without humor. The preponderance of statistical evidence indicates the addition of humor did not produce superior retention of information for the humorous group on the post-tests that immediately followed the experiment or on the one week delayed tests. A delivery style which features good vocal variety, articulation, and hand gestures is just as robust as humor in aiding information retention in both the short run and long run.

The finding that the humorous messages received no higher interest

rating than the two humorless versions was a surprise. A conclusion that can be reached about this finding is that topic related, non-hostile humor will not enhance the interestingness of a message that is already of interest to the listeners. Whether or not the same type of humor would enhance a duller message poses a research question that should be answered in future research.

Whether or not to use humor in oral messages has been discussed by teachers and others since the days of Aristotle. The general thinking has been that the use of humor evokes positive responses and causes the audience to rate the speaker more highly on authority and character, two dimensions of credibility. This assumption was examined in this study. The authority and character of the teacher who gave the two humorous message versions were not enhanced by the use of humor.

The conclusion that humor does not enhance authority and character is at variance with Gruner's (1967 & 1970) studies. Gruner used college age students in his study while this study used professional employees of a large insurance company. The difference in age might account for the variance. College age students are more impressionable than older individuals. Evidence indicates that a speaker can damage his authority and character with college age students if the humor is perceived as "clownish" or disparaging of others.

Some individuals will not use humor in their oral messages because of the anxiety that it might make them appear less credible. Based on the findings of this study, topic related, non-hostile humor used in a message will not diminish an individual's authority and character. This conclusion, however, has to be considered in view of the person who presented the messages in the current study. He is an experienced college teacher, speaks frequently to groups, and is adept at using

humor. Other individuals with less experience as a teacher or speaker might not be evaluated as highly on authority and character if they used the same type of humor contained in this study.

Recommendations for Practice

The following recommendations for practice are suggested:

1) Individuals using humor in their communication should be aware that care must be taken in selection of the humor. The current study dealt only with non-hostile humor. Hostile humor has a different effect. Generally, "sick" humor, ethnic jokes, satire, and any humor that disparages others has a negative effect upon an individual's authority and character.

2) A person using humor in a message should examine the amount of humor included in that message in relation to its content and length. Gruner (1970) forwarded the notion that excessive use of humor could produce negative reactions toward the speaker.

3) Most studies have used humor that was appropriate to the topic matter of the messages. The one exception used humor which was inappropriate to the topic as compared with topic related humor. This study indicated that the listeners did not think the message with non-topic humor was worthwhile suggesting that users of humor should include only humor appropriate to the subject matter if they want their message to be considered as worthy of the listeners' attention.

Recommendations for Further Research

There are certain aspects of humor and its effect on information retention and authority and character which need further examination.

1) Various types of humor should be tested with a factorial design

using "source credibility" (high versus low) and "non-hostile versus hostile humor" as factors. Several studies have concluded that humor can negatively affect authority and character. Other studies, however, suggest that humor can positively affect authority and character. A design featuring high and low credibility and hostile and non-hostile humor as factors could clarify the effects of different types of humor on source credibility.

2) Research should incorporate different age groups for comparison of the type of humor used. All prior research has used highschool or college age students as subjects. Various age groups might have different perceptions of the type of humor.

3) More research on the effect of humor should be carried out with a procedure such as the Solomon Four Group Design. This design allows the determination of the effects of pretesting by the inclusion of two untested groups. The Solomon Four Group Design also enhances generalizability of the findings.

4) Additional research about the effects of humor on information retention or authority and character should be examined with a repeated series design. Any experiment conducted in one setting generally has limitations. A repeated series design, particularly those with multiple groups, provides important replication necessary to reach conclusions that are more tenable.

Implications

The study demonstrated that humor does not enhance information retention. However, human beings treasure humor. We tend to like people who have a sense of humor. An individual is more likely to admit to some degree of mental deficiency than admit to lacking a sense of

humor. Humor is a remarkably useful thing in one's own personal life as well as a key to communication and learning. There are several implications to these generalizations.

Humor may be a very inexpensive prescription for good health. In this age of high technology and miracle drugs, laughter might be the best medicine. Practitioners of the healing arts have long observed that patients with a healthy sense of humor often respond to medical treatment more easily and recover more quickly than do individuals without a sense of humor.

A sense of humor is also beneficial in developing and maintaining a healthy personality. Some third force psychologists such as Maslow and Allport contend that humor is indeed a variable important to having a healthy personality. Disappointments and failure can lead to negative emotions. When an individual faces disappointment and failure with a sense of humor, the accompanying stresses seem to pass more quickly, enabling him to return to wellness. Mentally healthy individuals generally accept disappointments more easily as a part of life. A sense of humor is a trait that is consistently found in individuals who are considered to have healthy personalities.

Groups frequently generate myths or themes that are important to the life of the group. Indigenous humor arises from these myths or themes. The humor itself may become part of the group culture and perpetuate cohesiveness. Humor can also provide escape from a situation that threatens a group or some of its members. Humor is important to a group in communicating information, drawing members of the group together and relieving group tension.

In presenting implications of humor, it would border on dereliction of duty if humor in the classroom were not addressed. It is suggested

that non-hostile humor might create a classroom climate in which students achieve a sense of fulfillment and actualization without feeling threatened. A congenial classroom environment permits personal growth and freedom to pursue the satisfaction of the higher order human needs. As McGhee and Goldstein (1983) stated, "whether used in one's own personal life to lighten the load or as a teacher to enlighten, humor can be a powerful tool if used well" (p. 4).

There are many implications to humor. It may have more to contribute to teaching and life in general than can ever be demonstrated in the laboratory. It is important for an individual's well being and to group life. Teachers who use humor in their classroom will probably find that overall results obtained will conform to their objectives.

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APPENDIXES

APPENDIX A

INSTRUCTIONAL MESSAGES

Characteristics of Adult Learners

Instructional Message

Humor Items Denoted by All Capital Letter Sentences

Since the first part of this class is being filmed, let me recite my name. I am _____. I will be your teacher today. DO YOU KNOW WHAT A TEACHER IS. A TEACHER IS A PERSON WHO SWORE THAT HE WOULD STARVE BEFORE TEACHING AND HAS DONE BOTH EVER SINCE. I want to introduce today's topic with a brief story.

VISUALIZE WILL YOU FOUR ELDERLY GENTLEMEN WHO AGREED TO MEET AT THE GOLF COURSE AT THREE O'CLOCK FOR A GAME. THREE OF THEM ARRIVED RIGHT ON TIME. THE FOURTH DID NOT. THEY WAITED AND WAITED FOR THEIR FOURTH MEMBER. FINALLY, THEY WERE ABOUT TO LOSE THEIR TEE-OFF SPOT. THEY BEGAN LOOKING FOR ANOTHER PERSON TO COMPLETE THEIR FOURSOME.

THEY LOOKED AROUND AND SPOTTED PAUL, ANOTHER ELDERLY GENTLEMEN FRIEND OF THEIRS WHO WAS STANDING NEARBY. ONE SAID, "HEY, LET'S ASK PAUL TO PLAY." ANOTHER SAID, "NO, LETS DON'T, HE CAN'T HEAR VERY GOOD. IT WOULD BE HARD TO TALK TO HIM WHILE WE ARE PLAYING. STILL ANOTHER SAID "YES, YOU ARE RIGHT, BUT HE HAS EYES LIKE A HAWK AND CAN SEE WHERE THE BALLS LAND AND NONE OF US CAN SEE VERY FAR."

FINALLY, IN DESPERATION THEY AGREED. THE FIRST GOLFER GOT UP, AND HIT THE BALL A TREMENDOUS SHOT. HE SAID, "HEY PAUL, WHERE DID IT GO?" PAUL SAID, "WELL, IT WENT RIGHT DOWN THE MIDDLE OF THE FAIRWAY. THE PERSON THAT HIT SAID "OK, BUT WHERE DID IT LAND. PAUL SAID, "I CAN'T REMEMBER." THIS BRINGS ME TO THE POINT THAT I WANT TO MAKE. Each of us hold some beliefs about older learners. I want to visit with you today about some of these observations, but I want to more specifically address the Characteristics of Adult Learners because most of us in some

way have to interact with the older person regardless of whether it is in teaching, making a sale, or communicating with them in some way.

AS I TALK WITH YOU TODAY ABOUT THIS TOPIC I WILL BE MINDFUL OF THE LITTLE GIRL WHO TOLD HER GRANDMOTHER SHE WAS INTERESTED IN LEARNING ABOUT PENGUINS. THE KIND GRANDMOTHER WAS IMPRESSED WITH THIS DESIRE AND BOUGHT THE BEST BOOK ON THE SUBJECT THAT SHE COULD FIND AND SENT IT TO HER GRANDCHILD. LATER, THE CHILD WROTE HER GRANDMOTHER AND SAID, "THANK YOU VERY MUCH FOR THE BOOK ABOUT PENGUINS. IT TOLD ME MORE ABOUT THEM THAN I WANTED TO KNOW." I CERTAINLY HOPE THAT I DON'T TELL YOU MORE THAN YOU WANT TO KNOW ABOUT ADULT LEARNERS, BUT I DO HOPE THAT THE INFORMATION WILL BE VERY HELPFUL TO YOU.

By this stage of your life, I'm sure that each of you have found that learning did not end when you graduated from high school or college. Those termination points signaled the beginning of another learning period; life-long learning. You went to your first job and you had to learn new skills and new information. Sometimes, almost daily. You bought a new car and had to read the owner's manual to find out certain operating and service requirements. As a parent you had to learn parenting skills. The lists goes on and on; there is no end to learning; hence, learning is life long into our adult years.

THERE IS AN OLD STORY ABOUT THE CURIOUS LITTLE BOY WHO WENT WADING WITH THE LITTLE GIRL NEXT DOOR. PRETTY SOON THEY DECIDED THAT THE ONLY WAY THEY COULD KEEP THEIR CLOTHING DRY WAS TO TAKE THEM OFF. THE SMALL BOY STOPPED WADING AND LOOKED THE LITTLE GIRL OVER. "GOSH," HE SAID, " I DIDN'T KNOW THERE WAS THAT MUCH DIFFERENCE BETWEEN BAPTISTS AND METHODISTS."

Some things just take us longer to learn and what we think we know just is not so. This is the way it is with some of our observations

about the older learner. These are just not so, particularly with respect to ability to learn and motivation to learn. What I will be sharing with you today has been largely determined through research rather than casual observation.

Age Impact on Learning

The first thing that I want you to consider is that there is no truth to the old adage that "you can't teach an old dog new tricks". There is a vast amount of evidence that suggests this is simply not so with adult learners. In fact, learning ability increases rapidly until the individual reaches early maturity or about the age of eighteen. Then, there is usually a gradual improvement in learning ability until a person reaches thirty-five when it starts to decline slightly. We are just as capable of learning at forty-five as we were at twenty-five, and perhaps even more capable than we were at eighteen because of our accumulated experience. It does, however, take longer. Cross (1981) stated that aging is not a major handicap to learning until quite late in life. She states that a serious limitation on learning does not start until around the age of seventy-five. This does vary, of course, person by person.

Motivation

Motivation for learning or get up and go is more of a factor than age. IT'S NICE TO SEE PEOPLE WITH PLENTY OF GET-UP-AND-GO, ESPECIALLY IF SOME OF THEM ARE VISITING YOU. Motivation for learning is important. Adults cannot be forced or coerced into the classroom and made to learn. Neither can children. Research has shown that adults will seek out learning experiences to cope with specific life-change events. Evidence suggests that adults who engage in learning do so mainly because they have a use for the knowledge or skill being sought. Increasing or

maintaining one's self-esteem is also a very strong motivator. Many adults have the motivation to learn and it is a serious mistake to assume that they cannot learn or are not motivated to learn.

There are some physiological factors, however, that can impinge on an adult learner's capability to learn. These factors are speed of learning, hearing, and memory. I will cover these factors and describe how they can be dealt with regardless of whether it is in the classroom or the office. LET ME RELATE TO YOU A STORY BEFORE I PROCEED TO THESE FACTORS.

I WAS RECENTLY OVER AT OUR UNIVERSITY INDOOR SWIMMING POOL FOR A WORKOUT. A YOUNG LADY WAS AT THE POOL TAKING PICTURES FOR A CLASS PROJECT. SHE ACCIDENTALLY DROPPED HER CAMERA INTO THE POOL. SHE CALLED ON ME FOR HELP. NATURALLY, I DIVED IN, WENT DOWN TO THE BOTTOM OF THE SIXTEEN FOOT DIVING AREA AND RETRIEVED THE CAMERA. THINKING THAT IT MIGHT HAVE BEEN MY MANLY PHYSIQUE THAT ATTRACTED HER ATTENTION TO ME, I ASKED HER WHY SHE CALLED ON ME TO RETRIEVE THE CAMERA. SHE SAID, "PROFESSOR, YOU APPARENTLY HAVE FORGOTTEN ME, BUT I AM IN ONE OF YOUR CLASSES. I HAVE FOUND THAT YOU CAN GO DOWN DEEPER, STAY DOWN LONGER, AND COME UP DRIER THAN ANYONE THAT I HAVE EVER KNOWN. SO, KEEP IN MIND AS WE PROGRESS I WILL CERTAINLY WORK TO KEEP FROM DROWNING YOU WITH DETAILS.

SPEED OF LEARNING

All of us learn at different rates. Some of us are quick learners. Some of us learn more slowly than others. The rate of learning speed can even vary with what we are learning. We even have different learning styles. I believe that this is quite evident when you look at how people learn. Some people prefer their information through reading, others prefer listening, while some get most of their information

through hands-on. These styles can even combine for a preferred learning style. Take into consideration a person's learning style when working with them. This certainly applies to adults as well as younger learners.

I RECALL AN INSTANCE WHEN I WAS IN THE NAVY. THERE WAS A SAILOR ABOARD OUR SHIP WHO COULDN'T READ VERY WELL. HE GOT AN IMPORTANT LETTER FROM AN ATTORNEY. HE ASKED ME TO READ THE LETTER ALOUD TO HIM. AS I STARTED TO READ, THIS SAILOR REACHED OVER AND STUCK A FINGER IN EACH OF MY EARS SO THAT I COULDN'T HEAR WHAT I READ TO HIM. THIS WAS DEFINITELY NOT A PERSON WHO PREFERRED TO GET HIS INFORMATION FROM READING. Take into consideration a persons learning style when working with them. This equally applies to younger learners.

Hodskins (1964) found that slowing of learning behavior is a general characteristic of older adults. The degree of change in reaction time is approximately 25 percent between the twenties and the sixties and 43 percent between the twenties and seventies. The change in reaction time appears to reflect a basic change in how the central nervous system processes information. This change is uncontrollable. It is a bodily function. We can't fight it, therefore, we must learn to compensate for it.

We do not fail to learn as we grow older. Our speed of learning just slows down a little. Canestrari' (1963) found that older learners benefited more from the slowing of the pace of the task than did the younger learners. Adults learn just as much as young learners do but it takes them a bit more time. Adults show more improvement when they are able to set the pace for the learning task themselves.

As adults we need not be overly concerned with how fast we complete a learning task, but that we complete the task with full potential. As

stated earlier, each of us has different learning styles and learn at varying speeds. That is what makes each of us unique. Speed of learning is a personality characteristic just like our smile. There is a growing body of evidence that suggests speed of learning is over-emphasized. Knox suggests that when adults control the pace, they have the same ability to learn as they did in their twenties and thirties and can indeed learn when they are motivated.

HEARING

TWO OLD FRIENDS MET AT THEIR 40TH HIGH SCHOOL REUNION. EACH WAS WANTING TO IMPRESS THE OTHER WITH HIS PHYSICAL PROWESS. THEY GOT A BOTTLE OF SPIRITS AND DROVE UP ON THE HILL OVERLOOKING TOWN WHERE THEY HAD SPENT SOME OF THEIR YOUTHFUL DAYS. THEY IMMEDIATELY STARTED LYING TO ONE ANOTHER.

ONE POINTED TO THE TRAIN DEPOT ON MAIN STREET ABOUT A MILE AWAY AND ASKED THE OTHER ONE "CAN YOU SEE THAT FLY ON THE SIDE OF THE DEPOT BUILDING." THE OTHER ONE SQUINTED AND SQUINTED TRYING TO SEE THE FLY. FINALLY, HE SAID, "NO, RECKON I CAN'T, BUT I SURE CAN HEAR HIM WALKING AROUND."

Like our eyesight, hearing also deteriorates with age. Women, for example, lose acuity for lower pitch. Men lose acuity for high pitch. This is why women communicate better with other women and men communicate better with other men.

Loss of hearing is usually a gradual process, almost going unnoticed. Usually, the deterioration begins at about age thirty. As chronological age increases, the problem worsens. The loss between ages sixty and seventy seems to be more of a drastic change. When we get in this age range, we may have trouble understanding every day speech without a hearing aid.

Loss of hearing has grave implications. People with hearing problems tend to lose confidence and withdraw from general activities. This withdrawal can cause great reluctance to enter into new activities and associations. Because learning involves auditory signals and self-confidence, reluctance by adults to enter into new experiences may inhibit learning. Just like vision problems, hearing problems can be dealt with.

To make it easier for others to understand us, we need to speak distinctly and at a slower pace. This will enable those of us who rely on lip movement and facial expressions to receive the whole meaning. If you are delivering information such as directions or a presentation, it would be helpful if you would stand still while delivering that message. This lets the adult learner adjust to the source of sound as well as observe nonverbal gestures.

MEMORY

I'M SURE THAT YOU HAVE HEARD THE OLD STORY THAT THERE ARE TWO SIGNS OF AGING. ONE IS LOSS OF MEMORY AND I CAN'T REMEMBER THE OTHER ONE JUST RIGHT NOW.

Memory is another characteristic of the adult learner that is frequently thought to seriously deteriorate as one ages. Cross (1981) suggests the "greatest problems with memory for older people occur with meaningless learning, complex learning, and the learning of new things that require reassessment of old learning." Adults indeed do not deal too well with learning meaningless information. But, this is predominately connected with trying to make association with previously learned material.

Adults have a tendency to associate new information with previously learned material. If the association cannot be made, then there is a

tendency to reject the new material. Adults, as they grow older, might need help in making these associations. Generally, adults tend to have lower ability to learn information that is quick-paced, complex, or unusual. The thinking is that the adult tries to link back new information with previously learned material. This sometimes takes a while because of the vast amounts of knowledge that we have accumulated in our memory bank and have to scan through. But it is important to remember that the learning capability of a sixty-year old is just as good and, at times, superior to some people at age thirty.

One way to help older learners is to make new material meaningful to them in some way. Organize the material and relate it to something they can understand. Present the material at a slower pace so that it can be related back to past experiences. New material should be presented in terms of one idea at a time to aid in comprehension. Frequent summation has also been found to be very helpful to comprehension and retention. Whenever appropriate, place more emphasis on the skills of locating and utilizing information rather than on mechanical memorization.

While performance is being altered by the aging process, the adult is also being affected by the emotional response to physiological changes. Adults may take longer to perform unfamiliar tasks which can cause them to become less confident in their abilities. Some adults become depressed and often times discouraged to the point where their performance level is below their physical state potential. It is not unusual for adults with low confidence to withdraw from learning and side with the old myth "I'm too old to learn." Others are determined, due to physical change, to overcome this loss of ability and are motivated to perform effectively. They tend to think the old man's

boast, "I'm just as good as I ever was," is true after all.

We tend to hold some axioms about the characteristics of the adult learner that are simply not correct. The things that we generally perceive to be problems of adults' learning are really detriments. These detriments which I labeled as speed of learning, vision, hearing, and memory can be overcome with empathy and effort.

Effective Listening

Instructional Message

Humor Items Denoted by All Capital Letter Sentences

Today I'm going to help you become better at listening--listening, for instance, to lectures. I SHOULD POINT OUT, OF COURSE, THAT THE STUDENT SOMETIMES IS NOT THE ONLY ONE TO BLAME FOR COMMUNICATION PROBLEMS IN THIS SITUATION. I SUPPOSE YOU'VE ALL HEARD ABOUT THE PROFESSOR WHO DREAMED HE WAS LECTURING TO HIS CLASSES--AND WHEN HE WOKE UP, HE WAS?

We're going to spend about ten minutes together today trying to understand the listening process. As you might suspect, listening is the communication skill that is most frequently used today. Chances are, you listen three times as much as you read. Yes, even you who are over-talkative do this. Yet in school, listening receives less than one-sixth as much emphasis.

We will consider three questions. (1) Why study listening? (2) What is listening? (3) What are some principles of listening which, when practiced, will aid you in becoming a more capable listener?

Most of us are pretty poor listeners. For example, you will probably not remember more than 25 percent of the information in this speech. Listen carefully, and maybe you can make me eat my words. AND I'M KEEPING THIS SHORT. I'M LIKE THE POLITICIAN WHO DISCONTINUED LONG SPEECHES BECAUSE OF HIS THROAT. TOO MANY PEOPLE THREATENED TO CUT IT. BESIDES, I'VE ALWAYS HAD A GREAT DEAL OF RESPECT FOR MEN WHO DIDN'T NEED AN OVERABUNDANCE OF WORDS TO GET THEIR MESSAGE ACROSS. YOU MAY HAVE HEARD THE STORY ABOUT CALVIN COOLIDGE WHO, UPON HIS RETURN FROM CHURCH ONE SUNDAY, WAS ASKED BY HIS WIFE WHAT THE MINISTER SPOKE ABOUT.

"SIN," SAID COOLIDGE.

"WHAT DID HE SAY ABOUT IT?" ASKED MRS. COOLIDGE.

"HE WAS AGAINST IT," SAID COOLIDGE.

But, back to listening--start right now! We've uncovered three points thus far. First, listening is the most frequently used communication skill. Second, it is emphasized less than one-sixth as much as reading in schools and is used three times as frequently. Third, you will only remember about 25 percent of the information I give you.

But you still want to know, "Why study listening?" Your grades are based on tests over lectures. Studies reveal training in listening increases comprehension and understanding of lectures. And I'm sure we've all sat through some lectures that needed all the comprehension and understanding they could get. I'M REMINDED OF A PHILOSOPHY CLASS I WAS IN ONCE. THE PROFESSOR LOOKED UP FROM HIS YELLOWED NOTES, PEERED TOWARD THE BACK OF THE ROOM, AND ASKED: "WHO'S SMOKING BACK THERE?" ONE STUDENT YELLED BACK: "NO ONE. THAT'S JUST THE FOG WE'RE IN."

But to return to the subject of listening, Dr. Charles Irvin tested 1,400 Michigan State college freshman before and after listener training. Poor to above-average listeners before training improved the most. Listening-trained students improved 9-12 percent--9-12 percent--over non-listening-trained students. Listening does improve through training.

In another study, Dr. Arthur Heilman gave students a listening test. Next, they were taught six lessons in listening. Then, they took a second listening test. Students receiving listening training improved greatly over students without training. Students with low listening scores and high I. Q.'s improved more than other groups.

How about outside the classroom? In outside listening situations, listening trained-students were superior. Johnson and Haugh also note listening improvement through training.

How about practical training? Forrest Whan reported pilots with listening training reduced the number of messages repeated. Pilots trained to adapt to the listener in various flying conditions acted more quickly and more accurately in tests. Remember, listener training reduced repetition of messages by pilots, and helped them act more quickly and more accurately in flight. ONE PILOT WHO WOULDN'T HAVE BEEN MUCH AIDED BY THIS TRAINING, HOWEVER, WAS ONCE APPROACHED BY AN OLD NEW ENGLANDER AND HIS WIFE WHO WANTED TO TAKE A PLANE RIDE. \$10? TOO MUCH!" THEY SAID.

THE PILOT MADE A PROPOSITION. HE WOULD TAKE THEM FREE IF THEY DID NOT SAY A SINGLE WORD DURING THE TRIP. IF THEY SPOKE, THEY WOULD PAY THE \$10.

TRIP OVER AND NOT A WORD SPOKEN. ONCE LANDED, THE PILOT SAID HE DIDN'T THINK THEY'D DO IT.

"WELL," SAID THE OLD MAN, "YOU ALMOST WON--SURE FELT LIKE HOLLERING WHEN MAMA FELL OUT."

Another reason for studying listening is the wide differences in listening ability. Dr. Jones' Columbia study showed high scores were about six times--get that--six times--higher than the lowest scores. Dr. Paul Rankin's work supports these findings.

What's the point? Simple! Most students benefit from listening training. Reducing wide differences in listening ability produces more effective communication.

AND WE ALL KNOW THAT THE CLASSROOM IS ONE PLACE WHERE COMMUNICATION SKILLS NEED TO BE AS SHARP AS POSSIBLE. I RECENTLY HEARD ABOUT ONE

CLASS IN WHICH THE PROFESSOR WANTED TO MAKE A POINT IN LOGIC, SO HE SAID, "THE UNITED STATES IS BOUND ON THE EAST BY THE ATLANTIC OCEAN, AND ON THE WEST BY THE PACIFIC OCEAN. NOW, HOW OLD AM I?"

"YOU ARE FORTY-EIGHT," CALLED OUT ONE OF THE STUDENTS.

"HOW DID YOU ARRIVE AT THAT?" ASKED THE SURPRISED PROFESSOR.

"IT WAS EASY," SAID THE STUDENT. "MY TWENTY FOUR YEAR OLD BROTHER IS ONLY HALF CRAZY.

But to return to the subject of listening ability, you might wish to ask--doesn't listening ability develop without special training? No! Dr. Rankin concluded listening ability doesn't develop adequately for life needs without special training. Dr. Ralph Nichols states daily practice doesn't eliminate need for training, Practicing the same fault is falsely assuming that practice makes perfect. Why study listening? Listening abilities are taught, not caught. But they're not taught enough in formal education. Nichols believes it is considered by all, but really taught by none. An English teachers' survey showed listening was one of the most important skills that needs to be taught. Why study listening? Teachers think it needs to be taught--formally.

Have we answered, "Why study listening?" Yes! We showed that listening ability is learned and improved through training; that comprehension and understanding improve through listening training; that wide differences in listening ability exist and training shortens the gap; that listening doesn't usually develop adequately without training; that teachers believe it should be studied formally.

Now, what is listening? Listening is comprehending. Listening occurs when meaning is attached to aural symbols or words that we hear--we understand. Listening is a process--an ongoing, dynamic activity.

To define listening meaningfully, silence is accepted as an aural symbol. I mean aural--a-u-r-a-l--aural. Silence has meaning. Ever ask for a date and get silence? It had meaning. Listeners digest or prepare for new ideas during silence. Much listening occurs during silence.

Remember, listening isn't limited to immediate speaking situations. Word meaning may start before and continue after talk. Let's say you quarreled with a friend one night. Next day you walk silently toward class together. The silence has meaning.

ANOTHER TYPE OF SILENCE WITH WHICH WE'VE ALL PROBABLY HAD SOME EXPERIENCE IS THAT CAUSED BY EMBARRASSMENT. I KNOW A YOUNG WOMAN SCHOOL TEACHER WHO BOARDED A CITY BUS, NOTICED A FAMILIAR FACE ACROSS THE AISLE, AND NODDED AT HIM. HE STARED AT HER BLANKLY, GIVING NO SIGN OF RECOGNITION.

FLUSTERED, THE GIRL CALLED OUT, "I'M SORRY. I THOUGHT YOU WERE THE FATHER OF ONE OF MY CHILDREN."

But, to return to our subject--are hearing and listening the same? No! Hearing is focusing on or becoming aware of sound through the senses. Hearing defects reduce classroom learning for only 3-6 percent of the nation's children. Listening is adding meaning to sound symbols, or words.

Are reading and listening the same? No? They are related; but not the same. Heilman found a .66 or moderate relationship between listening and reading. Reading is a visual activity. Nichols states, listening is an aural--or ear--plus a visual activity.

Ear and eye activity differ. Ear activity is multidirectional. Eyes require focusing. You can listen to me from all sides; you must focus eyes on me to see me. Ears are more sensitive than eyes. Ears

require less energy to activate them, are more durable than eyes, and have greater capacity for continued use. Long movies may make your eyes hurt; but do your ears?

Reading and listening differ, because listening is a social activity. Reading is individualized. The reader sets his own pace. Listening requires other people interacting--it's social. In listening, the speaker sets the pace. Read as fast as you wish, but you can listen only as fast as the speaker speaks--it's social.

Good readers aren't necessarily good listeners. Training in one skill doesn't carry-over to another skill. Reading and listening then, are related, but not the same.

In summary, listening is comprehending through the ear by attaching meaning to words or symbols. Silence has meaning and is an aural symbol. Listening is related, but not the same as hearing or reading. Listening is a social process that is not limited to speaking situations.

OUR LAST AND MOST IMPORTANT QUESTION IS, "WHAT CAN WE DO TO LISTEN BETTER?" YOU MIGHT PREFER AN ANSWER OFFERED BY W. C. FIELD--"IF AT FIRST YOU DON'T SUCCEED, TRY, TRY AGAIN. THEN QUIT. THERE'S NO USE MAKING A FOOL OF YOURSELF."

But let me also give you some alternatives. First, get interested in topics--be attentive. Good listeners find interest in most topics; poor listeners find topics dry. Create interest by selfishly realizing listening is an easy way to (1) get information; (2) grow culturally; (3) mature socially. There are no uninteresting topics, only uninterested listeners. You listen to what you want to hear. Watkins and Frost state over half of deafness is really inattentiveness.

Second, don't over-criticize the speaker, speech, or situations;

stimulate him. Build confidence. Listener and speaker share responsibility for successful speech--it's a two-way street. Listening is inside-action, no one else does it for you. Help the speaker, don't over criticize.

Third, keep cool toward emotion-rousing points or over-stimulation. Fully understand points before judging. Exercise emotional control and maturity before responding to terms like "strip-tease" or "mercy-killing." DONT'T BE LIKE THE CO-ED ON HER WAY TO A POLITICAL RALLY WHO SAID, "I'M GOING WITH AN OPEN MIND, A COMPLETE LACK OF PREJUDICE, AND A COOL, RATIONAL APPROACH TO LISTEN TO WHAT I'M CONVINCED IS PURE RUBBISH."

Fourth, develop a philosophy that is objective and open-minded. Listen to and identify words. Analyze reasons for word meanings. Rationalize word impact through discussions with others.

Fifth, don't over or under expend energy--don't fake it. Seniors fake attention well. Effective listeners increase heart action, blood circulation, and body temperature when listening. Do you? Nichols states attention is a collection of inner tensions satisfied when related messages are received from the speaker. Try to: (1) come rested to listen; (2) concentrate on what's said; (3) give prior thought to topic; (4) behave as listeners should behave.

Sixth, recognize main points. Lee found only 25 percent of the listeners recognized main ideas.

Seventh, take notes only when there is a reason for taking them. McClendon's study revealed comprehension was not increased when students took notes. Then why take notes? YOU MAY BE MISTAKEN FOR A "GRIND," YOU KNOW. YOU ALL KNOW WHAT HAPPENS WHEN AN INSTRUCTOR WALKS IN AND SAYS, "GOOD MORNING, CLASS." THE C STUDENTS SAY "GOOD MORNING"

BACK--THE A STUDENTS WRITE IT DOWN IN THEIR NOTES.

Remember, get interested in topics. Don't over-criticize. Keep cool toward emotion-rousing points. Be open-minded. Don't fake attention. Recognize main points. Take notes only when necessary.

In closing, let's review main points. First, why study listening? Listening is learned and improved through training. Wide differences in listening ability exist. Listening doesn't develop adequately without training.

Second, what is listening? Listening is comprehending through the ear and attaching meaning to words and symbols. Silence has meaning. Listening is a social process not limited to speaking situations.

Third, how can we listen better? We can get interested; avoid over-criticizing; keep cool toward emotion-rousing points; be open-minded; avoid faking attention; recognize main points; and take only necessary notes.

APPENDIX B
RETENTION TEST

Age _____
_____ Male or
_____ Female

1. Adults have the same ability to learn as most high school and college students.
_____ True or _____ False
2. Circle the two answers that best explain the reasons why adults seek learning activities.
 - (a) to enhance self-esteem
 - (b) for the fun of learning
 - (c) specific life change events
 - (d) generally, to gain a job promotion
3. Generally, age starts becoming a serious hardship on learning in one of the following age categories. (Circle the correct answer)
 - (a) mid-forties
 - (b) early fifties
 - (c) early sixties
 - (d) around age 75
4. Human beings learning ability generally increases rapidly until about what age? (Circle the correct answer)
 - (a) until about 18
 - (b) about 27
 - (c) about 45
 - (d) about 53
5. Most people generally have a preferred method of learning and recent research suggests that the preferred method is: (Select only one)
 - (a) reading
 - (b) listening
 - (c) hands on
 - (d) a combination of all three
 - (e) it depends on the individual
6. Men hear men better and women hear women better. Is this statement _____ true or _____ false?
7. Which one of the following categories represents the age that most people's hearing deteriorates the greatest? (Circle the category most correct)
 - (a) 35-40
 - (b) 41-55
 - (c) 56-60
 - (d) 61-70

8. Adults in their 60's have the same ability to learn as they did in their 20's and 30's provided they are motivated.
_____ True or _____ False
9. Adults have a tendency to reject new information. This is primarily because of: (Circle the one correct answer)
- (a) they are unmotivated.
 - (b) memory deterioration because of age.
 - (c) failure to associate new information with old information.
10. Adults can learn new material if it is (a) meaningful to them, (b) quick paced and unusual, or (c) related to something they can understand. (Circle only the one answer you think is correct)
- (a) a, b, and c are correct
 - (b) only items a and b are correct
 - (c) only items a and c are correct
 - (d) all are incorrect
11. Circle the three items listed below that are physiological barriers to an adult learning. (Note: There could be more than one answer)
- (a) eyesight
 - (b) memory
 - (c) hearing
 - (d) motivation
12. Most people listen three times as much as they read. Is this statement _____ true or _____ false?
13. Most people remember about 25 percent of the information that they hear. Is this statement _____ true or _____ false?
14. Listening ability can develop without special training. Is this statement _____ true or _____ false?
15. Silence has meaning. This statement is _____ true or _____ false.
16. Listening and hearing are the same. This statement is _____ false or _____ true.
17. Listening is a social activity. _____ true or _____ false
18. Good readers are generally good listeners. _____ true or _____ false

19. Listening is a good way to: (Circle the answers that apply)
- (a) get information
 - (b) grow culturally
 - (c) mature socially
 - (d) only (a) is correct
 - (e) only (b) is correct
 - (d) none of the above
20. Over one-half of deafness can be attributed to inattentiveness.
_____ true or _____ false
21. Taking notes generally aids comprehension. _____ true or _____ false

APPENDIX C

TIME AND SEQUENCE SCHEDULE

Sequence Schedule
Effect of Humor Experiment
August 14, 1988

Control Time	Event	Control Group	Experimental Group	Experimental Time
10.45	Give Cover Story	4 Minutes	4 Minutes	10.45
10.49	Give Pretests	4 Minutes	4 Minutes	10.49
10.53	Gather Pretests	1 Minute	1 Minute	10.50
10.54	Start Video	18 Minutes	23 Minutes	10.50
11.12	Stop Video & Give Post-test	5 Minutes	5 Minutes	
11.17	Stop Post-test & Gather	1 Minutes	1 Minutes	11.22
11.18	Filler	5 Minutes	Unneeded	
11.23	Dismiss Groups			11.23

APPENDIX D

COVER STORY

Cover Story

Extension or outreach to the public is one of Oklahoma State University's major functions. This is a very difficult function to carry out because we simply have more requests for courses than we have people to deliver them. In extension efforts, we generally go where the people are at a convenient time to them and our faculty. However, a convenient time and place for one person is not necessarily a convenient time and place for another person. This represents a challenge to the University.

We are responding to this challenge by looking at alternative means of delivery. Rather than carrying out extension courses on-site and making people meet our available schedule, we are starting to look at video instructional courses. These could be made available to organizations and individuals for less than \$8.00 a video.

To furnish our video extension courses, we intend to tape classes in specific need areas while classes are in session at OSU. Any course can be taped while a class is in progress at an extremely low cost. We do not know, however, how video tape buyers might react to them. This is where you come into the picture.

The videos that you are about to see are "The Characteristics of Adult Learners" and "Effective Listening." Both are actual videos of lectures. We want to know what you think about the videos. But, before we start, we want you to respond to a set of questions. What you write on the response sheet is important because it will give us information about developing instructional video courses. The personal information that you give us is confidential. Please take five minutes and complete the questionnaire and then we will show the videos.

APPENDIX E

SEMANTIC DIFFERENT SCALES TO MEASURE MESSAGE CONTENTS
AND AUTHORITY AND CHARACTER

(cover sheet for scales given to subjects)

Directions: Please read carefully. You are to rate the teacher and his performance. It is important to Oklahoma State University that you respond honestly and to the best of your ability because this information will be used not only for present evaluation of the teacher, but also for planning for other teachers in the use of instructional videos. There are no right or wrong answers on the scales. Your first impression will probably be the most accurate response, so work quickly. When you have finished, hand your paper to the room monitor, but do not leave the room until you are released.

SMITH'S SCALE *

1. Rate the general, overall seriousness-humorousness of the content of the video instructional messages just presented on the following continuum. (Place an X in the appropriate space.)

Serious: _____ : _____ : _____ : _____ : _____ : _____ : Humorous
 Extremely Quite Slightly Undecided Slightly Quite Extremely
 or
 Neutral

2. Rate the general, overall interestingness of the content of the video instructional messages just presented on the following continuum. (Place an X in the appropriate space.)

Light: _____ : _____ : _____ : _____ : _____ : _____ : Heavy
 Extremely Quite Slightly Undecided Slightly Quite Extremely
 or
 Neutral

McCroskey's Scale *

3. Now you are to rate the speaker on the following pairs of words. Note: Place only one X on each line.

	VERY	QUITE	SLIGHTLY	SLIGHTLY	QUITE	VERY	
Unreliable	___:	___:	___:	___:	___:	___:	Reliable
Inexpert	___:	___:	___:	___:	___:	___:	Expert
Uninformed	___:	___:	___:	___:	___:	___:	Informed
Worthless	___:	___:	___:	___:	___:	___:	Valuable
Unintelligent	___:	___:	___:	___:	___:	___:	Intelligent
Unqualified	___:	___:	___:	___:	___:	___:	Qualified
Unfriendly	___:	___:	___:	___:	___:	___:	Friendly
Selfish	___:	___:	___:	___:	___:	___:	Unselfish
Dishonest	___:	___:	___:	___:	___:	___:	Honest
Sinful	___:	___:	___:	___:	___:	___:	Virtuous
Unpleasant	___:	___:	___:	___:	___:	___:	Pleasant
Awful	___:	___:	___:	___:	___:	___:	Nice

*Title of scales was not shown on the scales given to subjects to complete.

VITA ²

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