THE EFFECTS OF SELECTED FACETS OF STUDENT SELF-CONCEPT ON SATISFACTION IN THE BASIC SPEECH COURSE

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PREFACE

This study is concerned with the relationship of student self-concept to satisfaction in the basic speech course. Specifically the study sought to determine whether selected facets of student self-concept (need for inclusion, affection, and control) are valid predictors of student satisfaction in the basic speech communication course as taught at Oklahoma State University.

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CHAPTER I

INTRODUCTION

Purpose of Study

The concern for the role of speech communication skills in successful personal and career development has grown increasingly intense in recent years. Never before have speech educators been more pressed for quality speech communication programs designed to meet specific student needs. Accurately assessing those needs is a central concern among educators who make efforts to adapt the learning environment in ways that maximize student gain.

The present study grew out of the long accepted educational premise that transfer and application of learning materials is more likely to take place in a favorable learning environment (57, Chapters 4 and 5). The present study made no attempt to test this assumption. Rather, the assumption was accepted as a reason for needing to determine which variables are related to student satisfaction.

Student satisfaction with the learning environment has come to be a major force in shaping that environment. Increased emphasis on accountability in education probably has implications for student satisfaction with curriculum in colleges and universities. Evaluation of course work and instruction by students has become an almost universal method of ascertaining educational productivity. At a time of growing student criticism of course content, course structure, and course instruction,

educators can little afford to ignore the students themselves as primary sources of unmet needs and dissatisfaction.

Of primary focus in this study, then, are students needs as indicators of student satisfaction so that the educational environment can best be tailored to those needs. Specifically, the purposes of this study combine theoretical development and practical application. This study was designed (1) to contribute to the development of the theoretical position which contends that students of different expressed needs with regard to "affection," "inclusion," and "control" should be differentially instructed on the basis of these needs; and (2) to yield data useful in helping students choose among instructional options: primarily lecture, primarily interaction, or primarily independent study.

Long-range objectives of the study are seen as enabling the speech educator to use self-concept data as a means of placing students in particular learning environments and to maximize the match between structure of learning environment and student needs in basic speech communication courses. Such efforts will hopefully contribute to student satisfaction with the basic speech communication course, ultimately increasing potential transfer and application of learning materials. Finally, the implementation of these objectives may make a meaningful contribution to the positive, healthy development of students' self-concepts through maximal self-fulfillment in the basic speech communication course.

Importance of the Study

Numerous studies indicate that it is not actual but <u>perceived</u> credibility that affects audience response to speakers. It is not

actual but perceived difficulty of tasks that prevent some people from beginning or completing those tasks. It is not actual but perceived hostility, anxiety, or anger that adversely affects many human relationships.

College courses are usually structured in such a way that the instructor, originator, or supervisor of a particular course perceives it to be valuable. Possibly a wiser approach would be to create a setting in which the student perceives the educational experience as having real value for him. If he does not, he is obviously less likely to feel he has gained from the learning experience and, therefore, less likely to feel "satisfied." Ultimately, his perception will affect the "real" value of the learning materials to which he has been exposed. Application and transfer are less likely to take place if the student's satisfaction with the learning situation is low. These conclusions make it impossible to ignore the necessity for affecting not only the learning modes or methods but, more importantly, the student's perception of these learning modes and methods.

Much valuable time would be lost if an effort were made to restructure every student's orientation toward and perceptions of learning modes and methods while he is in college. In the interest of serving the student maximally early in his college career, educators should explore those factors that affect his initial perceptions of learning modes and methods. In this study, students were not asked to assess their own needs. They were simply asked to indicate typical behavior pattern descriptions which provided eventual need scores. The objective of the study, then, focuses on using self-concept information as a source of identifying interpersonal needs and using need scores to

predict course satisfaction. Identifying needs related to course satisfaction should allow the matching of teaching modes to student's needs. This matching should result in greater student satisfaction and enhance the application and transfer potential for the student.

Statement of Problem

A search of the literature in psychology, education and speech communication reveals an abundance of research in how learning approaches affect the development of a student's self-concept. Of specific concern to Judd (68) and others has been the effect of the basic speech communication course on a student's self-concept. Apparently much less attention has been paid by researchers to the predictive potential of self-concept scores.

Self-concepts develop as a result of our interaction with other people (24, 92). During this interaction we come to assume dominant or submissive roles and form more or less hostile or affectionate relationships with persons who are the objects of our interaction over periods of time. Accepting this developmental process as valid, one might question: Would a student's self-concept profile enable a speech-communication educator to determine the most valuable educational modes and methods for that student?

Addressing this question in experimental research demands some necessary delimitations for two major reasons: (1) a "self-concept profile" would be an overwhelmingly weighty data bank if it contained every conceivable facet of one's self-perceptions; and (2) a student's "preferences in educational modes and methods" would be an equally unmanageable construct.

The focus of this study is student self-concept as a predictor of student "satisfaction" with the basic speech course. In order to work with manageable concepts, this researcher dealt with selected aspects of self-concept, specifically the interpersonal needs for affection, inclusion, and control.

The problem, then, pursued in this research can be phrased in the following question: Is there a relationship between selected facets of student self-concept and student satisfaction in the basic speech course? The findings should be of concern to both the educator and the student of speech communication theory.

Definitions

Although key terms are operationally defined in Chapter III, certain constitutive definitions may contribute to clarity at this point. Those definitions that particularly contributed to the direction of this study are listed below.

1. B-P-E Paradigm — This paradigm for examining theories in educational psychology was developed from a Kurt Lewin model and signifies that Behavior (B) is a result of both Person (P) and Environment (E). This paradigm suggests that personality characteristics of students have an effect on learning behaviors (57).

2. Course Satisfaction — This term is intended to apply to a student's attitude toward a course as determined by whether the course was both enjoyable and provided conceptual, affective, and behavioral gains for the student, as perceived by the student. Perceived gain and enjoyment are intended to be the primary dimensions of course satisfaction, as the term is used in this study.

3. Group Work -- Certain assignments in the basic speech course that provided the setting for this study were assessed on the basis of group efforts in group projects. Groups of students were assigned or elected to work together on assignments in private and public discussion, termed "group work" in this study.

4. Interpersonal Interaction -- This kind of interaction implies the presence of at least two people who show verbal and/or nonverbal cognizance of each other. As used in this study, the term implies that some amount of satisfaction or fulfillment is gained by all parties involved in the interaction.

5. Interpersonal Needs -- This term is used in this study as William Schutz defines it: ". . . an interpersonal need is one that may be satisfied only through attainment of a satisfactory relation with other people" (122, p. 15). All people, according to Schutz, have these three interpersonal needs.

a) Need for Inclusion: The need to establish and maintain a satisfactory relation with people with respect to interaction and association, the need for feeling of mutual interest, the need to feel that self is significant and worthwhile (122, p. 18).

b) Need for Control: The need to establish and maintain a satisfactory relation with people with respect to control and power, the need for mutual respect for competence and responsibleness, the need to feel that one is competent and responsible (122, pp. 18-19).

c) Need for Affection -- The need to establish and maintain a satisfactory relation to others with respect to love and

affection, the need for mutual affection, the need to feel that self is lovable (122, p. 20).

6. Method of Instruction — The method or mode of instruction refers to the set of learning experiences planned by the instructor and/or student for the purpose of contributing to a student's conceptual, affective, and/or behavioral structure. In this study three modes are of special importance:

a) Independent Study: Those instructional methods utilized by students without assistance from the instructor or from other students (for example, reading the textbook or listening to audio tapes).

b) Lecture: That traditional mode of instruction which involves primarily teacher dispensation of information in a one-to-many situation.

c) Interaction Instruction: That kind of instruction that takes place as a result of interpersonal interaction activities involving students and/or instructors.

7. Performance Work — Certain activities in the basic speech course are characterized by student performance in the presence of student audiences. In this study, such activities are referred to as performance work.

8. Self-Concept — As used in this study, the term "self-concept" refers to "those physical, social, and psychological perceptions of ourselves that we have derived from experiences and our interactions with others" (15, p. 39). The specific aspects of self-concept most relevant to this study are those Schutz terms "need for affection," "need for control," and "need for inclusion."

9. Transfer of Learning -- Learning transfer is said to take place when an individual makes use of a principle in a context outside that in which he learned the principle. Often the term is employed to signify a student's ability to apply in the "real world" what he has learned in a classroom.

Conceptual Base and Rationale

The basic concepts explored in this study include "self-concept" and "course satisfaction." This portion of the report provides the conceptual base and rationale for studying the relationship between constructs associated with self-concept and satisfaction. As treated in this study, these constructs represent a culmination of several communication, psychological, educational, and organizational theories.

The interpretation of "satisfaction" in this study is based largely on a consideration of Herzberg's (54) and Whyte's (145) analysis of "satisfaction" in the human organization and Thayer's (134) view of "communication satisfaction." The treatment of "course satisfaction" grew out of a number of educational theories, primarily those of Hunt and Sullivan (57) in their B-P-E (Behavior results from both the Person and the Environment) paradigm, plus the experience of this writer in thirteen years of teaching varied facets of speech communication in the secondary schools and in two university settings. The analysis of "self-concept" is strongly influenced by the works of social psychologists George Mead (92) and Charles Cooley (24), plus psychologists Sydney Jourard (65, 66), Carl Rogers (111), Harry Stack Sullivan (130), and psychiatrist William C. Schutz (122).

The theoretical base for satisfaction has its origin in studies of

"worker satisfaction" in the human organization. Herzberg (54) theorizes that the presence of "satisfiers" tends to motivate people toward greater effort and improved performance. Satisfiers, he explains, relate to the nature of the work itself and to rewards growing out of work performance. These satisfiers are intrinsic factors such as sense of achievement, recognition, and interest in the work itself.

Herzberg distinguishes "satisfiers" from "dissatisfiers" by describing the latter as relevant to the individual's relationship to the environment in which he does his work. Company policy and ineffective management are cited as examples of "dissatisfiers." Dissatisfiers, then, include those things an employee wishes to avoid (being deprived of a reasonable salary, for example). These factors Herzberg calls "hygiene factors"; people on the job want their lives to be hygienically clean. The effects of improved hygiene, Herzberg cautions, last for only a short time.

His survey of 200 engineers and accountants led him to conclude that the presence of job satisfiers, not the absence of job dissatisfiers, leads to happiness on the job. Removal of job dissatisfiers, he found, does not lead directly to job satisfaction. Herzberg's theory, then, is that motivation factors (achievement, responsibility, the work itself) not hygiene factors (company policy, salary, working conditions) are most directly related to job satisfaction.

Whyte (145) considers both hygiene factors and motivation factors as potential job satisfiers. In fact, he enumerates three aspects of job satisfaction: (1) extrinsic (pay, working conditions, etc.); (2) intrinsic (work itself, advancement); and (3) social-recognition (relationships with superiors and peers). Whyte further contends that

job satisfaction is relevant to sentiments which make up the individual's self-concept, involving three elements: status, personal worth, and level of aspiration. He interprets sentiments in terms of time, IRR (investment - reward - relationship), and social relativity. Symbols, he says, affect sentiments. Symbols may indicate that a job or office has high or low status, that a person or organization is hostile or friendly, that an action is appropriate or inappropriate, etc. These symbols can take several forms. Whyte defines symbols as "words, objects, conditions, acts of characteristics of persons which refer to (or stand for) the relations between men and their environment" (p. 141).

Finally, Whyte (145) contends that job satisfaction is highly dependent upon "interaction." His research leads him to conclude that people with a high need for interaction with others will not be satisfied in a position that provides minimal opportunities for interaction with others.

> Jobs in an organization differ along several important dimensions. We assume that one of the most important of these is interaction. Jobs differ markedly in regard to the amount of interaction they require; in some almost constant interaction is required, whereas in others the individual may work long periods of time without interacting with anyone. Jobs also differ in the possibilities or limitations on non-required interaction. An individual who is naturally inclined to much interaction may adjust reasonably well to a job that requires little interaction, providing the work situation offers opportunities for interaction. If the same job is performed in an isolated situation, we would expect the individual to be much less satisfied with it (p. 98).

A summary of Whyte's position reveals how job satisfaction is affected by sentiments, symbols, and interactions. Other things being equal, contends Whyte, the individual will be more satisfied with a job that fits well with his interaction pattern than one which fits poorly. Interactions, past and present, influence the individual's sentiments

toward his job. One's perception of symbols activates or reinforces these sentiments, thus affecting the ultimate "fit."

An extension of Whyte's "fit" can be seen in Thayer's (134) theory of communication systems. According to this theory an individual maintains himself through the generation, dissemination, acquisition, and ingestion or consumption of data. The selective translation of raw data into sensory data is viewed by Thayer as a vital part of "communication metabolism." A match between communication system (between "appetites" and the "generation of data") results in a phenomenon Thayer calls "communication satisfaction" (p. 33). In terms of intercommunication, one's need or "appetite" for data will determine the degree to which communication satisfaction is possible. This satisfaction can occur even when communication does not result from a conscious need or a nonconscious appetite. And, Thayer further explains, "there is inevitably some feeling of dissatisfaction when our needs or expectations (whether inputting or outputting) are not fulfilled in our communicative encounters" (p. 144).

Several implications for the present research arise out of Herzberg's, Whyte's and Thayer's satisfaction theories: (1) intrinsic motivation affects satisfaction with an experience; (2) extrinsic motivation affects satisfaction with an experience; (3) people who need interaction are more likely to be satisfied with an experience that provides interaction; (4) satisfaction in interaction encounters is somewhat dependent upon particular communicative <u>needs</u> and behaviors of parties involved; (5) a person's self-concept is made up of clusters of sentiments which determine how satisfying he will find an experience; (6) a person's perception of the amount of time involved in completion

of a task affects his satisfaction with the task; (7) a person's perception of the investment-reward relationship involved in a task affects his satisfaction with the task; and (8) a person's perception of social and symbolic rewards involved in task performance affects his satisfaction with the task.

Consideration of these implications led to an examination of Hunt and Sullivan's B-P-E paradigm as relevant to satisfaction in an academic setting. The B-P-E model is based on the classic Kurt Lewis formula: B = P X E (Behavior results from both the Person and the Environment). Hunt and Sullivan (57) accept this formula as Lewin intended and extend it to mean also "Between Psychology and Education." Both interpretations of the model allow for a "system of organizing and thinking about the content of educational psychology" (p. iii). The B-P-E model encourages serious consideration of the needs of the child and their relation to environmental requirements. This model can be used, claim Hunt and Sullivan, to "coordinate student characteristics with educational approaches" (p. iii). Using the B-P-E paradigm, the educator raises the question: Why has a specific approach succeeded or failed with this particular student or group of students? The B-P-E paradigm serves as a constant reminder to the educator that "learning (B) results from both the student (P) and the educational approach (E)" (p. iv).

Concern for matching student and educational approach led Hunt, Harvey, and Schroder (57) "to attempt to identify those environments most appropriate for a child, at given stages" (p. 206). The resulting model (Conceptual Level Matching Model) is derived from a theory of personality development.

The CL model is most useful to educators who attempt to distinguish

between a child's immediate needs (contemporaneous) and his long-term requirements for growth (developmental). To illustrate this distinction, Hunt and Sullivan suggest the example of a student who might be at a "dependent, conforming stage of development (or contemporaneous orientation)" (57, p. 200). In dealing with such a student, a teacher should take into account the contemporaneous orientation in deciding what immediate educational environment will be most effective. However, the teacher must also consider what efforts should be directed toward the eventual development of the student's independence. Since the CL theory evolved explicitly in a B-P-E framework, the theory can be described from three perspectives: (1) Behavior, (2) Person, and (3) Environment. Hunt and Sullivan contend that the wise educator always begins with the Person.

Development of the P (person) is considered on a dimension of conceptual level, which is a dimension of increasing conceptual complexity and interpersonal maturity. Hunt and Sullivan (57) describe persons with high conceptual levels as (1) self-responsible, (2) independent, (3) capable of adapting to a changing environment, (4) more tolerant of stress, and (5) more capable of considering an experience from different viewpoints. Thus, persons at a high conceptual level of development are more capable of processing information effectively (Chapter 9).

Hunt and Sullivan cite several studies as evidence of validity for the contemporaneous aspects of CL. They point to Wolfe's findings, indicating that "high CL persons are better able to look at a problem from a variety of viewpoints" (57, p. 213). Evidence is also given that conceptual level is related to moral maturity and ego development as well as to creativity and self-responsibility (p. 213).

In an examination of the "B" in the B-P-E paradigm, Hunt and Sullivan report the findings of Clainch: "When the required response on examination is simple (objective test), there is no difference in CL groups, but when the behavior requires analysis and synthesis (essay), the high CL group is significantly superior" (p. 213).

The CL model is also examined by Hunt and Sullivan in light of the third element in the B-P-E paradigm: Environment (E). The basic dimension of environmental variation, explain Hunt and Sullivan, is "degree of structure." In high structure the environment is largely determined by the training agent (teacher, for example). In low structure, the person experiencing the environment is at least as important in determining the environment as is the training agent. Low structure is typified by student-centered practices, discovery learning and presentation of principles (inductive teaching). High structure is typified by teacher-centered approaches, learning through lecture and presentation of principles or rules before examples (deductive teaching).

Environments may combine the typical approaches in a variety of ways resulting in a continuum from very low structure through moderate structure to very high structure (57, p. 105). The heart of the CL matching model is expressed as a generally inverse relationship between CL and degree of structure: "Low CL learners profit more from high structure and high CL learners profit more from low structure or, in some cases, are less affected by variation in structure" (46, p. 215). Hunt and Sullivan (57) cite much experimental evidence supporting this matching principle in Between Psychology and Education.

Hunt and Sullivan (57) speculate that students probably view school environments in terms of "degree of acceptance" and "degree of control."

Students are particularly aware of manifestations of "independence," "autonomy," and "student-teacher responsibility" (p. 99). They also tend to view their environments with negative or positive feelings. Cognitive and affective outcomes may be differentially influenced by environment:

> Some approaches may produce satisfaction and poor performance while others may produce dissatisfaction and good performance. It may seem reasonable to think that people learn better when they are happy, but more information is required to establish the validity of the assumption. Differential analysis should facilitate such work and it may be that 'Happy in what way?' is the real question (57, p. 111).

In defense of the CL Matching Model, Hunt and Sullivan address this question: What is the evidence for specific person-environment combinations? To answer this question, they establish three criteria for person-environment interactions: (1) Is it a theoretically-acceptable match? (2) Is it an empirically-acceptable match? (3) Is it a personally-acceptable match? "Personal" is added to the expected "theoretical" and "empirical" criteria for two reasons. First, Hunt and Sullivan contend that psychological research is necessarily limited in generalizability. Results of psychological research are often applicable only to the particular research environment. Second, they point out that educational practioners use different criteria for evaluating P-E (person-environment) interactions than researchers do. Teachers, for example, often rely on intuition as an indicator of whether there is a satisfactory relationship between student and the instructional environment.

The theoretical criterion Hunt and Sullivan propose calls for combinations consistent with theory. The empirical criterion requires statistical evaluations. The personal criterion involves the questions,

"Does it make sense and fit in with past experience? Is it intuitively reasonable?" These questions are usually answered by the teacher. The teacher may judge the match as Pervin (105) does:

> A 'match' or 'best-fit' of individual to environment is viewed as expressing itself in high performance, satisfaction, and little stress in the system whereas a 'lack of fit' is viewed as resulting in decreased performance, dissatisfaction, and stress in the system (p. 56).

Snow offers another criterion by which the teacher may intuitively ("personally") judge the P-E match. In what Snow (128) calls the preferential model, the match depends entirely on the degree to which the person likes the environment.

Hunt and Sullivan (57) conclude the chapter on "Concepts of Interaction" with this recommendation:

> New ideas for person-environment combinations may come from theories, and experiments, but the most overlooked sources are the statements of teachers and students themselves and direct observation of how different students learn from different approaches (p. 128).

The Hunt and Sullivan Conceptual Level Matching Model is based on several important assumptions:

(1) That B (learning) is a result of the interaction between P (person) and E (environment);

(2) That B varies and can be cognitive as well as affective;

(3) That P varies from a low to a high conceptual level and may experience both immediate need (contemporaneous) and long-range needs (developmental); and

(4) That E varies in structure, primarily dependent on who is exercising decisions affecting that structure.

Implications for the present study can be gleaned from the above examination of the B-P-E paradigm and the CL matching model:

(1) That a mismatch between student and educational environment is likely to result in student dissatisfaction with that environment;

(2) That mature, responsible, independent students will probably be dissatisfied in highly structured educational environments;

(3) That student preference for educational mode is related to his conceptual level (maturity, independence, responsibility);

(4) That student perception of degree of structure in the environment and how much autonomy he is given affects his satisfaction with that environment; and

(5) That statements from students themselves are valid sources of "match" or "mismatch" data.

Perhaps it is evident to the reader why a relationship is proposed between self-concept and course satisfaction. The hypotheses tested in this study assume an interaction between one's perception of himself and his perception of the world around him.

The "identity crisis" so many students are popularly described as suffering may be attributable in part to the insistence that all students conform to a specific set of expectations in a uniform environment. Such an educational policy denies the psychological theories that explain how individuals develop psychologically, emotionally and cognitively and how they come to have a self-concept.

What is there in the theory of self-concept development that would lead one to conclude that a measure of self-concept might be a valid predictor of satisfaction with an experience or set of experiences?

William James (61) is said to have set the stage for contemporary theorizing about the self:

> In its widest possible sense . . . a man's Self is the sum total of all that he can call his, not only his body and his psychic powers, but his clothes and his house, his wife and children, his ancestors and friends, his reputation and works, his lands and horses, and yacht and bank-account (p. 291).

Reflections of James can be seen in Symonds's (132) description of self. It consists of four aspects: (1) how a person sees himself; (2) what he thinks of himself; (3) how he values himself; and (4) how he attempts through various actions to enhance or defend himself (p. 469).

Hall and Lindsay (50) suggest that the term "self" as used in modern psychology has come to have two distinct meanings:

> On the one hand it is defined as the person's attitudes and feelings about himself, and on the other hand it is regarded as a group of psychological processes which govern behavior and adjustment. The first meaning may be called the self-as-object definition since it denotes the person's attitudes, feelings, perceptions, and evaluations of himself as an object. In this sense, the self is what a person thinks of himself. The second meaning may be called the self-as-process definition. The self is a doer, in the sense that it consists of an active group of processes such as thinking, remembering and perceiving (p. 468).

Thus it might be safe to synthesize the views of James, Symonds, Hall and Lindsay, as Rogers (111) does in the following definition of self-concept:

> The self-concept or self-structure may be thought of as an organized configuration of perceptions of self which are admissable to awareness. It is composed of such elements as the perceptions of one's characteristics and abilities; the percepts and concepts of the self in relation to others and to the environment; the value qualities which are perceived as associated with experiences and objects; and goals and ideals which are perceived as having positive or negative valence . . . (p. 136).
>
> This configuration . . . as Raimy says . . . 'serves to regulate behavior and may account for uniformities in personality' (p. 191).

Application of self-concept theories to the present study can be better understood when one examines how these dimensions of self come to

be developed. George Mead (92) and Charles Cooley (24) contend that man's self-concept formation is a developmental process resulting from his interaction with others. Infants cannot at first distinguish themselves from others; they engage in imitative behavior, role-taking, act toward themselves as others act toward them. Eventually children develop expectations about their own behavior, about what is expected of them in various situations. As they develop and mature, they construct the self-concept. They operate on it. They make inferences about it. As they interact with others, they constantly engage in role-taking, inference making, etc., thus redefining self as they grow.

Mead (92) asserts two general stages in the full development of self:

> At the first of these stages, the individual-self is constituted simply by an organization of the particular attitudes of other individuals toward himself and toward one another in the specific social acts in which he participates with them. But, at the second stage in the full development of the individual self, that self is constituted not only by an organization of these particular individual attitudes, but also by an organization of the social attitudes of the generalized other or the social group as a whole to which he belongs (p. 158).

Cooley (24) defines this social self as "simply any idea, or system of ideas, drawn from the communicative life, that the mind cherishes as its own" (p. 152). This social reference from which we develop a sense of self results in a mirror-image of ourselves as reflected through appraisals and reactions from others. These imaginings of how others see us contribute to the development of what Cooley calls our "looking-glass self" (p. 152).

Significant in these concepts is the shaping of self as the person interacts with others. Others either confirm or deny one's view of self. One can make healthy adjustments or maladaptive responses to

those reflections or denials of his self-appraisal. Obviously, evaluations by others are not always constant or consistent. Studies by Sullivan (130) and others provide evidence that we are influenced by particular persons or groups as we shape and reshape our self-concepts. These persons Sullivan calls "significant others."

How strongly are we affected by our interactions with significant others? Robert Rosenthal's (114) classic experiment with elementary teachers and students labeled as having "high potential to bloom intellectually" graphically supports the position that students can "become" what is expected of them by "significant others."

Self-disclosure is also highly significant in self-concept development. Jourard's (65) commitment to the value of self-disclosure is evident:

> Discovery and actualization of new selves in new worlds in a slow and sometimes painful, sometimes joyous and exciting business. Authentic self-disclosure is a way of letting others know of one's self and world, to see if they approve or disapprove and to see if one likes or dislikes this self and world oneself (p. 2).

Jourard's findings (65, 66) indicate a correlation between self-acceptance and self-disclosure. The more that a person accepts himself, the less readily he is threatened by the experience of being known by others. This self-disclosure to others is a method of checking one's self-perception against social-perception, a form of reality testing.

From these theories of self-concept formation can be gleaned four essential factors that contribute to the development of one's self-concept: (1) observations of oneself and of others; (2) social comparison and role-taking; (3) interactions with significant others and with reference groups; and (4) self-disclosure.

Clearly, these theories of self-concept development support the notion that one's perception of himself affects his perception of and interaction with his environment. Roger's (111) definition of self reinforces the interactive nature of self with environment. According to Rogers, the self is

> . . . the organized, consistent conceptual gestalt composed of perceptions of the characteristics of the 'I' or 'me' and the perceptions of the relationships of the 'I' or 'me' to others and to various aspects of life, together with the values attached to these perceptions (p. 200).

Central in Allport's (1) theory of self is his treatment of self-extension. His interpretation of self-extension makes things, people, and events central to one's existence. It is as if a person extends himself to include other aspects of the world. When one is expressing one's sense of self, his behavior shows choice, flexibility, individuality. To Allport, self and interaction with the world outside self are basic components of the same process.

Jourard's (65) warning that "when one treats oneself as a tool or thing, one treats others in the same way" lends further support to the idea that self-perception affects perception of and interaction with others (p. 184). Rogers (111) says that as changes occur in one's perception of self and the perception of reality, changes occur in behavior.

The notion that self-concept affects perception and behavior is best summarized by Pietrofesa (106), who defines self-concept as a composite of numerous self-percepts and encompasses all of the values, attitudes, and beliefs toward one's self in relation to the environment. The self-concept, he says, influences, and to a great degree determines, perception and behavior (p. 40).

These theories of self-concept development have several implications for the educator:

(1) Self-concepts are formed in part through interaction with others;

(2) Teachers and peers in classroom settings are often interpreted as "significant others";

(3) In an educational environment, self-expectations are often determined by other expectations;

(4) Self-fulfilling prophecies are relevant to educational development;

(5) Self-disclosure is more likely to take place in a trusting environment;

(6) Self-concept is strongly interrelated with one's behavior; and

(7) Healthy self-concept development depends to an extent on the nature of interactions with significant others and reference groups in the educational environment.

Clearly, the teacher cannot ignore that the classroom is a vital part of the student's total environment. Every day in this environment self-concept formation is taking place. It is here that the student engages in observation of himself and significant others; it is here that he makes social comparisons; it is here that he interacts or refuses to interact with others; it is here that he willingly or unwittingly engages in self-disclosure; it is here that he gains greater self-acceptance and realizes more of his potential or it is here that he moves further away from healthy self-concept development.

A healthy self-concept is described by Rogers (111) as one involving (1) self understanding acceptance, (2) a positive realistic

self-image, (3) freedom to be oneself, (4) openness to experience, (5) trust in one's organism, and (6) internal consistency (p. 9).

Understanding the basis for a healthy self-concept may be increased through a look at Sullivan's (130) basic goals for human behavior: "satisfactions" and "security." The first involves satisfying physiological needs such as food, drink, sleep, and rest. "Security" involves the feeling of belonging, acceptance, and well-being. To neglect the latter needs can create anxiety (p. 15).

Anxiety is of primary concern in Roger's (57, pp. 240-242) educational philosophy. Learning potential is minimized when threat to self is high. The individual's self-concept resists any experience which is inconsistent with a proper functioning of self, and if a change is to be made in self-concept, that change will be enhanced only through experiences which enhance self and not through experiences that threaten self. Seemingly, minimal threat to self-concept is more likely to occur in an educational environment that provides for maximum self-fulfillment and personal satisfaction. Perhaps, then some measure of self-concept held by a young adult in a university setting can enable educators to best determine the environment most conducive to continued favorable self-concept development.

Finally, it can be argued that use of a self-concept measure to predict satisfaction in a speech course is valid because of the inherent relationship between self-concept and communication. Such a relationship is not difficult to understand if one accepts Mead's (92) belief that "the structure of the complete self is . . . a reflection of the complete social process" (p. 144). This social process, he explains, is "the process of communication" (p. 145). It is difficult to find a

basic communication text published in the last five years that does not devote substantial discussion to self-concept as a variable in communication.* The way one sees himself affects the way he selects, processes, and sends messages. Communicative interaction with others reinforces or restructures one's view of self and ultimately causes a continuation or alteration of the communicative process. Communication behavior tends to be consistent with one's self-image or is adjusted as the self-image develops in a variety of environments.

Thus, one can see the rationale for including self-concept as an indicator of course satisfaction in the basic speech course. A person's perception of and behavior toward his environment is largely determined by his self-image.

Those particular aspects of one's self-image of concern in this study are discussed by Schutz in his explanation of what he calls "Fundamental Interpersonal Orientation." Because "people need people" Schutz contends they develop fundamental kinds of interpersonal orientations. In The Interpersonal Underworld Schutz (122) presents a well-supported case for the position that "people need people." His theory evolves into the following postulate, which he calls "the postulate of interpersonal needs." Specifically, this postulate designates that

> (a) Every individual has three interpersonal needs, inclusion, control, and affection.
> (b) Inclusion, control, and affection constitute a sufficient set of areas of interpersonal behavior for the prediction and explanation of interpersonal phenomena (p. 13).

Schutz defines "interpersonal relations" generally as those

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*See basic speech texts by Brooks, Pace and Boren, Patton and Giffen, Burgoon, Scheidel, and Hughey and Johnson.

"relations that occur between people as opposed to relations in which at least one participant is inanimate" (p. 14). Interpersonal situations have important properties that are in general different from those of noninterpersonal situations. The "interpersonal situation" is "one involving two or more persons, in which these individuals take account of each other for some purpose, or decision . . ." (p. 14). Two additional characteristics of an interpersonal situation are described by Schutz. One, it involves a particular point of reference (usually provided by one of the participants, sometimes by an outside observer). Two, it exists during a stated time interval.

For further clarity, Schutz offers an explanation of what he terms "interpersonal need." An interpersonal need is one that "may be satisfied only through the attainment of a satisfactory relation with other people" (p. 15). Specifically, there are three interpersonal needs: (1) the need for <u>control</u>, (2) the need for <u>affection</u>, and (3) the need for <u>inclusion</u>.

Schutz defines the interpersonal need for <u>control</u> behaviorally as "the need to establish and maintain a satisfactory relation with people with respect to control and power" (p. 18). Defined at the level of self-concept, this need for control is explained as the "need to feel that one is a competent, responsible person" (p. 20).

The interpersonal need for <u>affection</u> Schutz defines behaviorally as "the need to establish and maintain a satisfactory relation with others with respect to love and affection." Defined at the level of self-concept, the need for affection is interpreted as "the need to feel that the self is lovable" (p. 20).

The interpersonal need for <u>inclusion</u> is defined behaviorally as

"the need to establish and maintain a satisfactory relation with people with respect to interaction and association." At the self-concept level, this is a need "to feel that the self is significant and worthwhile" (p. 18).

Interpersonal behavior, Schutz claims, involves two dimensions of each of these three needs. Interaction among people involves both expressed behavior (how one behaves toward others) and wanted behavior (how one wants others to behave toward him). Thus there are six resulting dimensions of behavior associated with Schutz's interpersonal need theory: expressed inclusion, wanted inclusion, expressed affection, wanted affection, expressed control, and wanted control.

On the basis of much research and study, Schutz (122) concludes that interpersonal behavior will always involve the three need areas he has identified. This conclusion is phrased in the following theorem:

> Theorem 1-1. If a representative battery of measures of interpersonal behavior is factor analyzed, the resulting factors will reasonably fall into three need areas, inclusion, control, and affection (p. 54).

These three need areas, as Schutz defines them, relate directly to the make-up of one's self-concept. One can also see the relationships between these three interpersonal needs and the needs associated with "conceptual level" in the B-P-E paradigm. Clearly, the way the three needs are met contributes to the development of one's self-concept and ultimately to one's satisfaction in relationships with others.

Satisfactory human interaction is implicit in all four theoretical constructs covered in the development of the rationale for this study: satisfaction, the B-P-E Paradigm, self-concept development, and interpersonal needs. The theories associated with these concepts provide the

basis for studying the nature of the interaction between selected facets of a student's self-concept and satisfaction in the basic speech course.

Hypotheses

The literature explored in the development of the rationale for this study does indicate a probable relationship between self-concept and course satisfaction. To guide the exploration of this relationship, the following null hypotheses were tested:

Hypothesis 1. There is no relationship between expressed inclusion and satisfaction in the basic speech course.

Hypothesis 2. There is no relationship between wanted inclusion and satisfaction in the basic speech course.

Hypothesis 3. There is no relationship between expressed affection and satisfaction in the basic speech course.

Hypothesis 4. There is no relationship between wanted affection and satisfaction in the basic speech course.

Hypothesis 5. There is no relationship between expressed control and satisfaction in the basic speech course.

Hypothesis 6. There is no relationship between wanted control and satisfaction in the basic speech course.

Organization of the Report

The plan followed in this report grew out of a desire for ease of understanding and possible replication of research. Thus, following the review of literature in Chapter I intended to establish a rationale for the research, Chapter II provides specific reinforcement of that rationale. Chapter II looks at selected research of literature specifically

relevant to the relationships between self-concept and satisfaction, plus a review of course evaluation as a valid method for collecting data on course satisfaction. Chapter III outlines methodology including a general description of the research design, the nature of the sample, a fairly detailed description of the basic speech course, an explanation of both the FIRO-B and course satisfaction scales, plus discussion of data collection and statistical procedures and an indication of basic assumptions and limitations of the study. In Chapter IV results are discussed. Conclusions and recommendations, along with a summary of research findings appear in the final portion of the report, Chapter V.

Summary

The purpose of this study is to determine the relationship between selected aspects of student's self-concepts and course satisfaction in the basic speech course. Such a study has potential for improving students' perceptions of the basic speech course by matching the learning environment with students' needs as they perceive them. Since much of the literature examined suggests a significant relationship between self-concept and satisfaction plus the need to match students and learning environment, the hypotheses offered here seem justified. Student self-concept ratings in need for affection, inclusion, and control may well serve as valid indicators of student satisfaction in the basic speech course.

CHAPTER II

REVIEW OF SELECTED RELEVANT RESEARCH

In the development of a rationale for this study much attention was paid to a review of research in the separate areas of "satisfaction," "self-concept," and "match between student and learning environment." Thus the present chapter will be devoted to a highly select area of relevant research. The scope of this review was determined by a search through literature relevant to the relationships between self-concept and satisfaction.

The first part of this chapter represents an extension of the theoretical rationale which provided the basis for an analogy between "job satisfaction" and "course satisfaction." The second part deals specifically with the relationship between self-concept and course satisfaction. Third, literature relevant to adapting coursework to student needs is reviewed. The final section of this chapter provides implications and a summary of this review of literature.

Self-Concept and Job Satisfaction

The relationship between self-concept and satisfaction is not a new notion in human behavior studies. Many of the theories of job satisfaction are based on the idea that whatever psychological mechanisms operate to make people "satisfied" or "dissatisfied" in general also affect satisfaction and dissatisfaction in work (54, 119, 131). It is the

general premise implicit here that makes research in job satisfaction relevant to the present study.

In 1957, Super (131) wrote: ". . . jobs serve to implement self-concepts and when the self-concept and the job do not match, dissatisfaction results." Such a statement grows out of Super's theory of vocational adjustment, as affected by self-concept:

> This is the theory that satisfaction in one's work depends on the extent to which the work, the job, and the way of life that goes with them enable one to play the kind of role that one wants to play. It is, again, the theory that vocational development is the development of a self-concept that the process of implementing a self-concept and that the degree of satisfaction attained is proportionate to the degree to which the self-concept has been implement (p. 189).

Support for Super's theory can be found in Schaffer's (119) explanation of how one's needs are related to job satisfaction. Schaffer claims that the strengths of a person's needs or drives and the extent to which these are satisfied determine one's satisfaction in any situation. To understand why a person is dissatisfied with his job is a matter of knowing the extent to which his needs are not being satisfied and the relative strength of those needs:

> Overall job satisfaction will vary directly with the extent to which those needs of an individual can be satisfied in a job are actually satisfied; the stronger the need, the more closely will job satisfaction depend on its fulfillment (p. 29).

In validating his theory, Schaffer chose twelve needs which met six stringent criteria: universality of need, definability of need, importance of need, measurability of need, permanence of need, relevance of the need to a work environment. This list of needs appears below:

> A. <u>Recognition and Approbation</u>. The need to have one's self, one's works, and other things associated with one's self known and approved by others.

B. Affection and Interpersonal Relationships. The need to have a feeling of acceptance by and belongingness with other people. The need to have people with whom to form these affective relationships.

C. Mastery and Achievement. The need to perform satisfactorily according to one's own standards. The need to perform well in accordance with the self-perception of one's abilities.

D. Dominance. The need to have power over and control of others.

E. Social Welfare. The need to help others, and to have one's efforts result in benefits to others.

F. Self-Expression. The need to have one's behavior consistent with one's self-concept.

G. Socioeconomic Status. The need to maintain one's self and one's family in accordance with certain group standards with respect to material matters.

H. Moral Value Scheme. The need to have one's behavior consistent with some moral code or structure.

I. Dependence. The need to be controlled by others. Dislike of responsibility for one's own behavior.

J. Creativity and Challenge. The need for meeting new problems requiring initiative and inventiveness, and for producing new and original works.

K. Economic Security. The need to feel assured of a continuing income. Unwillingness to "take a chance" in any financial matters.

L. Independence. The need to direct one's own behavior rather than to be subject to the direction of others (p. 5).

To tap these twelve need areas, Schaffer designed a questionnaire to measure three variables: (1) the strength of each of the needs selected; (2) the degree to which each was being satisfied in the individual's job; and (3) the individual's overall job satisfaction. Schaffer found that two clusters of needs could be extracted. One group contained needs which were passive or hostility-restraining in nature; the other contained assertive, aggressive needs. A coefficient of

correlation equal to .58 was obtained between the mean satisfaction scores of each person's two strongest needs and overall satisfaction.

Doré's and Meacham's (33) study of self-concept and job satisfaction among managers also found a significant relationship between these two constructs. Specifically, the self-concept variable found to be most strongly related to job satisfaction was the Self-Required Self, (SR-S) difference score. This score represents the consistency between "self"--how one presently sees himself, and "required self"--the way one thinks he should see and feel about himself.

Ross and Zander (115) postulate that the strongest indicator of work dissatisfaction is job turnover. In a 1957 study they found that

> the degree of satisfaction of certain personal needs supplied by a person's place of employment has a significant direct relationship to his continuing to work for that company. These personal needs include need for recognition, need for autonomy, need for a feeling of doing work that is important, and need for evaluation by fair standards (p. 327).

In a 1973 study on job turnover, Karp and Nickson (70) examined Herzberg's motivation-hygiene deprivation as an indicator of job turnover. Their findings confirmed Herzberg's theory that job satisfaction is more strongly related to having basic motivation needs (for achievement, recognition, satisfying work, responsibility) met than it is to hygiene factors (salary, supervision, and working conditions). Both motivation and hygiene were found to be significantly relevant to job-turnover, however. Karp and Nickson stress that "perception" of motivators and hygiene factors was a crucial construct in this study.

The relevancy of the "motivation-hygiene theory" for determining job satisfaction was tested among a population of principals in 271 elementary and secondary schools in Central New York in 1973 (59). Results

indicated that job-related factors (motivators) such as achievement and recognition were significantly mentioned as indicators of job satisfaction. Also significant in satisfaction—as well as dissatisfaction—were interpersonal relations with subordinates, interpersonal relations with peers, and interpersonal relations with supervisors.

Since the basic speech course that served as the setting in this study was a required course for most of the subjects involved, some parallel might be seen in the efforts made among military manpower toward job satisfaction. A study by Huskey (58) examined the relationship between levels of expressed personal needs and job satisfaction among a United States military population stationed in West Berlin. The questionnaire designed for the study measured the following needs: (a) recognition and approbation, (b) affection and interpersonal relations, (c) mastery and achievement, (d) dominance, (e) social welfare, (f) self-expression, (g) socioeconomic status, (h) moral value scheme, (i) dependence, (j) creativity and challenge, (k) economic security, and (l) independence. The study tended to confirm the hypothesis that the level of job satisfaction is highly related to the degree to which the individual feels that self-growth needs are being met.

Theorizing that self-image affects organizational identification, and that organizational identification is an indicator of job satisfaction, Schneider, Hall, and Nygen (121) postulate that prediction of job behavior before one takes a given job is possible. Self-image, they found, is a valid early predictor of amount of organizational identification and a valid long-term predictor of importance of organizational identification.

These studies in self-concept and job satisfaction support the

notion that one's self-image is related to his satisfaction in work. Though not all the literature reviewed expresses a predictive potential of self-concept measures, there is a strong indication of a significant relationship between self-concept and job satisfaction.

Self-Concept and Course Satisfaction

Obviously, the exploration of the literature thus far reveals a general relationship between self-concept and satisfaction. Of more specific interest in this study, however, is the relationship between self-concepts of students and course satisfaction.

Since course satisfaction is almost always measured in the university setting by some form of course evaluation, most of the research in the area deals directly with course evaluation. This part of Chapter II will first look at general findings in validity of and trends in course evaluation, then explore specific relationships between self-concept and course satisfaction, plus look at general trends in evaluation of the basic speech course, and finally examine the correlation of student self-concept and satisfaction in speech courses.

Possibly the most relevant initial question one can raise about course evaluations is whether they generate valid, useful, and universal data. This was the question addressed by Costin, Greenough, and Menges (25). Pointing out that the strongest impetus for rating courses in recent years comes from the students themselves, this 1971 review of empirical studies in course evaluation indicates that "students' ratings can provide reliable and valid information on the quality of courses and instruction" (p. 530). These findings suggest a number of common denominators in course evaluation:

> Research findings suggest that criteria used by students in their ratings of instructors had much more to do with the quality of the presentation of material than with the entertainment value of the course per se. Such attributes as preparedness, clarity, and stimulation of students' intellectual curiosity were typically mentioned by students describing their best instructors. Correlation between course ratings and grade received . . . tended to be small, and several studies suggested that such correlations resulted from greater interest in the course by students receiving better grades, rather than a "reward effect" . . . majors tended to rate courses more highly than nonmajors in some cases; students required to take a course sometimes rated it lower than those for whom it was an elective, upper class students usually gave higher ratings than underclassmen; and experienced or higher ranking instructors usually received higher ratings than did their less experienced colleagues (p. 530).

The validity findings of McKeachie and Yi-Guang Lin (91) regarding student ratings of teacher effectiveness are less encouraging. McKeachie and Yi-Guang Lin report the following four conclusions from their validity studies:

1. In four out of five studies teachers rated high on "Skill" tended to be effective with women students.
2. In all five studies teachers rated high in "Structure" tended to be more effective with women than with men. In fact, on the whole, the more structured instructors tend to be ineffective with male students.
3. Teachers who were high on "Rapport" ("Warmth") tended to be effective on measures of student thinking.
4. Teachers whom students rated as having an impact on beliefs were effective in changing attitudes (p. 444).

The validity study by Sullivan and Skanes (129) involved students in ten first-year courses, who were asked to rate their instructors. The mean ratings for each class were correlated with the mean class mark on final common examinations. It was found that correlations were higher for experienced, full-time faculty members than for inexperienced faculty members and lowest for inexperienced part-time instructors. Academically successful and highly evaluated instructors were both "task-oriented" and interest arousing. Unsuccessful but highly

evaluated instructors attempted to arouse interest without being task oriented. However, the most significant correlations were between electing to take subsequent courses in the subject (math) and level of achievement.

In his analysis of student responses in 1,200 undergraduate classes to a 40-item course evaluation, Rosenshine (113) found that four variables correlated 0.4 or higher with five "preference criteria." The four variables were (1) clarity of instructor's presentation, (2) value of class, (3) interest of subject matter, and (4) instructor's emphasis on student enjoyment of course. These variables correlated highly with the following preference criteria: compare this instructor to other college instructors, would you recommend this instructor to a friend, compare this course with other college courses, was this course worthwhile, and would you recommend this course to a friend.

French-Lazovik (41) reports University of Pittsburg and University of Washington studies which conclude that "the kind of teaching evaluated most highly by students is teaching which they judge to be clear in exposition, which arouses and broadens their interests, and which motivates or stimulates them to intellectual activity" (p. 384).

There is some indication that student evaluations are affected by how involved students feel in the courses taken and how much value is placed on student input by instructors. Flanders (38) points to a relationship between satisfaction and the percentage of student ideas used by instructors in structuring and conducting coursework.

A variety of explanations have been given for the variation in results of course evaluations. McKeachie and Yi-Guang Lin (91) suggest that differing goals of students and teachers affect results on course

evaluations. They advise that the reply to the question, "Which teachers are most effective?" must be "For which objective?" and, "For which students?"

Granzin and Painter (49) offer as a "new explanation for students' course evaluation tendencies" unnecessary redundancy on the evaluation forms and failure to look at student and/or teacher commitment in a course. They recommend reducing course evaluation forms to include these items: class, grade expected, required course, effort and interest/entertainment nature of course. These items, they warn, merely represent starting points for further research. Additional sets of items should reflect the researcher's particular interests.

Even the least encouraging reports of course evaluation tendencies and validity seem in general agreement that student evaluations are a reasonable method of measuring student reaction. Methods for reliably predicting that reaction would certainly be useful in any educational setting.

Several studies explore the predictive correlation between self-concept and scholastic achievement. In their survey of empirical investigation exploring this correlation West and Fish (144) found that the literature clearly indicates a "significant associational relationship between some aspects (factors) of self-concept and scholastic achievement." However, since not all studies show a correlation between achievement and course satisfaction, an examination of studies specifying a variety of satisfaction predictors seems warranted.

Predicting satisfaction in college was the general concern in a study by Berdie, Pilapil, and In Jae Im (6). Specifically, this study sought to determine the relationship between university satisfaction as

expressed by graduating seniors and personality characteristics assessed by psychological inventories completed prior to the freshman year. The results suggest that to a large extent satisfaction with the university is associated with certain characteristics of students at the time they enter school.

Another general study of satisfaction, conducted among seniors in a small liberal arts college, found several needs correlated with satisfaction. These needs (the need to be personally close, friendliness, and emotional spontaniety, as examples) were not shown to be significantly different among more or less satisfied seniors. However, the more satisfied seniors "perceive the college environment as providing significantly greater opportunity and encouragement for the satisfaction of intellectual, cultural, academic, and achievement-related needs" (103).

Treffinger's findings (137) produced similar results but his study was aimed at predicting students' ratings of instruction rather than overall satisfaction with college. Treffinger found generalized pre-course ratings as stronger indicators of specific course ratings than were student personality characteristics.

Other studies, however, do report a strong relationship between self-concept and course satisfaction. The results obtained by Kubiniec (75) support the predictive value of self-concept variables. Kubiniec maintains that an individual's behavior is affected by his perceptions of himself and his environment. Her research results support this contention; she found a significant relationship between women students' self-concept and "enjoyableness of academic activities."

The nature of instruction seems to have a bearing on the

relationship between self-concept and course satisfaction. Bigelow and Egbert (8) report that independent study students who received high grades and who have high social needs tended to be less satisfied with completely independent study. Smith (126) found that students who measured high in anxiety and low in initial achievement gained more on achievement tests and were more highly satisfied in "teamwork" learning situations than in traditional lecture classes.

More specifically relevant to the present research are the findings in a 1973 study of student satisfaction by Mitchelmore (96). This study explored several interpersonal needs as indicators of course satisfaction. Her survey of the literature led Mitchelmore to conclude that students differ in their need for warmth, for participation, for independence, and for power. All these needs she found to be related to a student's need to be involved in instructional planning and classroom participation. These needs were also found to relate to student perception of teacher behavior.

Mitchelmore's study focused on ideal and real instructor behavior as correlates of student satisfaction. Her survey of over 300 psychological and educational articles led to an identification of four basic dimensions of teacher behavior: consideration, interaction facilitation, motivation, and work facilitation. Satisfaction scores on the interaction facilitation and consideration dimensions were significantly correlated with student involvement practices. Overall satisfaction was significantly associated with student involvement in choice of topics, preparation of material, and overall student-centered classroom practices. "Need for dependence" was found to be strongly correlated with description of ideal instructor behavior.

Thus it can be seen that a combination of earlier conclusions are represented in Mitchelmore's findings. It might be safe to summarize the reviewed literature on student self-concept and course satisfaction by pointing to several associated factors. Self-concept is related to satisfaction, but it is not the sole determinant of course satisfaction. Instructor characteristics, the nature of the coursework and the instruction, the amount of student involvement in decision-making affecting course structure, students' expectations about the course and their grade, and prior achievement scores all are shown to be relevant as interacting agents in the relationship between self-concept and course satisfaction.

Since the research setting in this case is the basic speech classroom, an examination of the literature in that area should prove useful. The question such a search might answer is, "What differences, if any, exist between general course evaluation procedures and those that are used in the basic speech course?" The results of this search reveal no essential differences. The research of Freshley and Richardson (42) indicates what appears to be typical evaluation procedures in speech communication courses. Their study shows that

> . . . sex, expected grade, class in school, and instructor each separately tend to influence responses to some items in a course-evaluation inventory and that, generally, students tend to like the instructor better than the content of the course (p. 85).

There is no strong indication that speech course evaluation differs in any significant way from course evaluation in general. Specific studies in the relationship between self-concept and satisfaction in speech courses, however, appear limited. Only one recent study seems particularly relevant to the present research.

In this study Ober and Jandt (100) investigated the relationship between aspects of student's self-concepts and their evaluation of college-level discussion instruction. The course studied included one weekly mass lecture on small group theories and two weekly smaller group laboratory sessions in which lecture content was reinforced through small group activities.

Three aspects of self-concept were employed in this study: (1) expressed acceptance of self and others, (2) self descriptions on the interpersonal dimensions of dominance-submission and love-hate, and (3) social desirability. These constructs were measured through the use of the Berger scales, the Leary Interpersonal Check List, and the Marlowe-Crowne Social Desirability Scale.

The course evaluation form used in the study included twenty items relevant to the instructors of the course, course materials and activities, examinations, grading practices, as well as overall perceptions of the course. The general conclusions of this study point to the acceptance of self-concept as a contributing factor in variance of course evaluation responses. Sex differences were shown to be significant:

> Males expressing high acceptance of self and/or high dominance tended to rate the course more favorably than males expressing low acceptance of self and/or low dominance . . . . Females expressing high acceptance of others on the Berger scale tended to rate the course more favorably (100, p. 66).

This specific study in self-concept and course satisfaction in a speech course is supportive of other studies finding that such a relationship does indeed exist.

Adapting Coursework to Student Needs

An underlying premise in this study is found in Schutz's

interpersonal need theory: all individuals have some degree of need for inclusion, affection, and control. These needs, taken together, form an important part of one's self-concept structure. Any significant contribution of the present study cannot stop with the demonstration that these interpersonal needs are reliable and valid predictors of satisfaction in the basic speech course. The demonstration of such a relationship would be of little value if there were no evidence that procedures for adapting to varying students' needs exist and are functional. Best serving these individual needs is still the ultimate goal in any instructional setting.

Believers in Cronbach's "aptitude-treatment interaction" have consistently rejected the notion that there is one best teaching method for all individuals. Educators have long sought methods of ascertaining whether student achievement, performance, and satisfaction can be traced to the interaction between teaching methods and student characteristics. The value of the present study would be greatly diminished if there were no evidence of such an interaction. This section of literature review explores two areas: (1) the interaction of student, needs, instructor, and instructional methods; and (2) attempts to adapt instructional programs in speech communication to the needs and abilities of individual students.

The search for meeting individual needs with differential teaching methods does not deny that there are demonstrable similarities among individuals; it simply indicates the recognition that individuals may vary in many potentially significant ways (109, p. 339). In determining how best to provide for these significant individual differences, researchers in educational psychology have sought an answer to the

question, "What is the best method of instruction?" Answers even in recent years reecho earlier findings. Not surprising then are the conclusions of Dubin and Taveggia (36) in their reanalysis of the data from ninety-one studies in varied effectiveness of instructional methods:

> The results of our intensive reanalysis of data on comparative college teaching methods make it very clear that our intended goal has been achieved. We are able to state decisively that no particular method of college instruction is measurably to be preferred over another, when evaluated by student examination performances. We may also conclude that replication of the 91 studies examined in detail in this survey would not produce conclusions different from our own . . . . We are convinced that approximately 40 years of research speaks the truth. It is now time to turn to a reconceptualization of the analytical problem (p. 96).

McKeachie's (88) 1970 summary of research turned up no marked evidence of recent reconceptualization. The primary contribution of the McKeachie summary concerned reconceptualizing criteria for determining student success in a course. Factual knowledge, retention and thinking, student attitude and motivation were all found to be relevant in comparisons of methods of instruction. McKeachie's findings uncovered no significant deviations from those of Dubin and Taveggia. Perhaps the most important discovery to come out of McKeachie's research concerned the interaction between student characteristics and method of instruction. Studies cited by McKeachie indicate an interaction between method of instruction and several student characteristics: intelligence, cognitive style, authoritarianism, sociability, affinity, and anxiety.

McKeachie was not alone in these findings. Doty (32) found that successful students in conventional lecture courses were characterized by moderate achievement and social needs and low creativity whereas students who were successful in courses taught by small discussion groups were characterized by high creativity and/or high social needs.

Achievement motivation was also found to be a contributing student characteristic in effect of teaching style on academic achievement. Domino's (31) study reports that

> . . . students taught in a manner consonant with their achievement motivation orientation obtained significantly higher means on the multiple choice items, on factual knowledge ratings of their essay answers, and on their ratings of teacher effectiveness and course evaluation than their peers taught in a dissonant manner (p. 427).

The need for social interaction has been shown to be another student characteristic relevant to teaching mode. Beach (5) and Seigel and Seigel (123) report that personal contact with the instructor is important to some students, but not to all. Beach (5) found that nonsociable students achieved significantly greater than sociable students in a lecture mode. With use of the small-group teaching mode the results were reversed. The Seigel and Seigel (123) study revealed that fact-oriented and low ability students profited markedly from teacher contacts. In a later study they found that the "nature" of the contact had an impact of educational outcomes.

Studies by Bigelow and Egbert (8) and McCollough and Van Atta (87) disclose a relationship between social needs, independence, and achievement.

Davis's (28) study brings us full circle to the earlier declaration that no real difference in teaching methods exists apart from a consideration of student characteristics. Davis finds a difference in gain scores by different "kinds" of students taught by the mastery learning mode of instruction and the conventional mode. He re-extends the earlier warning that "the entire problem of researching the instructional process must be reconceptualized." Davis claims that

> . . . while it is patently evident that at least four variables (i.e., the goal of instruction, the teacher, the student, and the subject matter) are operating in the instructional milieu, these variables have not been viewed and treated as interactive and multi-dimensional (p. 115).

Certainly support for Davis's claim can be found in Rhetts's revival of Cronbach's interaction model. Rhetts (109) advocates utilizing an Attribute Treatment Interaction design in instructional development. His own research demonstrates that "learner, task, and treatment characteristics can combine in interaction with one another to produce complex performance differences" (p. 347).

While not all researchers agree that specific student characteristics interact directly with teaching modes and educational outcomes, most concur that educators should not give up in their effort to tailor coursework to student needs.

Of special interest in this study is the potential for tailoring the basic speech communication course to student needs. In his review of literature relating student characteristics to success in speech communication courses, Johnson (62) concluded that "we have still not found a good predictor of success in basic speech communication courses using a single method of instruction" (p. 10). Johnson agrees with earlier findings in his conclusion that no single method of instruction in the basic speech course will serve all students equally well.

Until the ultimate optimal match between student and learning environment is discovered, perhaps the most productive instructional approach is one characterized by diversity. Such diversity provides greater assurance of the high levels of student involvement and thinking that Olmo (101) claims as resulting in more positive attitudes among students toward the teacher and the coursework.

Such diversity will be more likely to contribute to the balance between independence and involvement, aggregates that Kowitz (74) describes as "defining satisfying social interaction" in the interpersonal speech classroom. Such diversity is more likely to allow the teacher to enhance instructor roles in consideration, interaction facilitation, motivation, and work facilitation, roles viewed as significant in student satisfaction.

Such diversity will increase probability of student involvement in establishing instructional objectives and course direction. Barbour (4) advises that the student in the speech communication classroom is most likely to profit from the learning environment if he enters into learning activities voluntarily and if he has options. An optimum interpersonal laboratory learning session includes all three levels of learning. Barbour contends that

> . . . the learner understands the material intellectually, he experiences that material through the application of a method, and he integrates it into his own being on a skills level so it can become a part of his ever-increasing interpersonal communication competencies (p. 57).

Book (10) also sees student involvement in instructional planning in speech courses as crucial to educational outcomes. She recommends that students be encouraged to help write objectives on units such as self-disclosure, levels of communication, defensive-supportive climates, etc. Reimanis's study (107) in teaching effectiveness and the interaction between teaching methods and student and teacher characteristics confirmed his hypothesis that student-directed and structured classes are superior to instructor-directed and unstructured ones. Additional support for increasing student responsibility in course curriculum development can be seen in a study by Morgan (98). He found that

increased satisfaction, improved attitudes, and increased achievement result from a student-centered approach at Hiram College in 1969.

The most important role played by student involvement in instructional development is the resulting increase in transfer, according to Makay (82). In the basic speech course, and in others, Makay claims that transfer results from relating classwork to the real world.

Student and teacher inputs must include initial expectations of both, cautions Calista (17), if any accurate appraisal of the dynamics of the teaching-learning situation is to be accomplished. Support for Calista's advice can be found in Thrash's (136) admonition that "attempts to individualize instruction should retain at least some of the elements of traditional coursework . . . which most students appear to expect" (p. 6).

Summary and Implications of Review of Literature

The enormity of the research into the subconstructs associated with "self-concept" and with "satisfaction" indicates the complexity of these constructs of human behavior. Even the bulk of research correlating the two constructs suggests the intricate nature of this relationship. The most firm of all the conclusions to come out of this research review relevant to these two constructs is that a relationship does exist between them. Research in organizational work behavior demonstrates a correlation between self-concept and job satisfaction, strong in some studies, not so strong in others. A similar description of that relationship can be said to apply to research in the academic setting. Student self-concept does appear relevant to how satisfied he is with his learning and learning environment, more relevant in some cases than in

others.

Research in adapting coursework to individual needs affirms the long-held notion that no one method of teaching is superior over another universally. Though students may have common basic needs, they do not possess these needs in uniform degrees; therefore they cannot be instructed successfully and, in their opinion, satisfactorily through uniform methods.

From this review of literature can be drawn several conclusions regarding the impact of students' needs on instructional design and ultimately on course satisfaction. It can be inferred that students with a high need for control, affection, and inclusion will be more satisfied in academic settings which allow them to be involved in instructional design. Particularly are students who have a high need to control others more likely to be satisfied if they are active participants in course design.

On the basis of combined research in the fields of education, psychology, and speech communication, structuring a student's learning environment to produce desired learning behaviors demands consideration of the "person," his self-concept.

Evidence continues to indicate that course evaluations are reasonable indicators of student reaction to how well his perceived needs are being met. Though considerable revisions are recommended by some educators, no one seems eager to abandon course evaluations as instruments for ascertaining useful data about courses and course instruction.

On the basis of this review of the literature, further research into the relationship between student self-concept and course satisfaction seems warranted.

CHAPTER III

METHODOLOGY

The major objective of the present study was to determine the relationships between facets of student self-concept and satisfaction in the basic speech course.

The methodology used for exploring these relationships is described in this chapter, organized in the following sequence: Research Design, Selection and Description of the Sample, Description of the Basic Speech Course, Selection and Description of the FIRO-B, Description of the Course Satisfaction Scale, Data Collection Procedures, Statistical Procedures, and Assumptions and Limitations of the Study.

Research Design

Since the present study was designed to discover interactions among variables (self-concept and course satisfaction) in an existing educational setting, it is properly called a field study (72). Variables in such a study are not manipulated. The investigator is interested in relationships among observed attitudes, perceptions, and behavior (p. 387).

Specifically, this research represents a correlational study which sought to test selected hypotheses. In determining research design, consideration was given to strengths and weaknesses commonly associated with correlational field studies (72, pp. 389-391).

One weakness of the field study is that it does not provide for tight control over variables. Therefore, causal relationships are difficult to determine. The complexity of social institutions contributes to the confusion possible in a field study and creates research risks. Identifying authentic correlations cannot be accomplished with complete certainty. Kerlinger (72) cautions that alternative variables may account for greater variance than those being studied (p. 389).

However, a correlational field study was decided upon because of certain advantages. One, generalizability of results is increased when research is conducted in an authentic, ongoing situation such as is provided in a university setting. This is particularly true when results are to be generalized to this and other university settings. Second is the discovery potential of this kind of research. Many unanticipated relationships can come of such a study.

Finally, the nature of the relationships explored highly influenced the selection of this research design. Personality constructs such as those studied here--need for affection, inclusion, and control--are not manipulable variables. Studying these constructs as indicators of course satisfaction, it was decided, could best be accomplished in a natural setting. Any attempt to manipulate one's self-concept would result in a violation of the premise on which the study is based: that authentic student perceptions of their needs are valid indicators of course satisfaction.

Selection and Description of the Sample

In the interest of enhancing validity, particularly the generalizability of research results, it was decided that all persons enrolled in

Speech 2713 in the spring, 1975, would be used as subjects in this field study. The total enrollment was approximately 800 students comprised of freshmen, sophomores, juniors, seniors, and one graduate student from seven colleges: (1) Agriculture, (2) Arts and Sciences, (3) Business, (4) Education, (5) Engineering, (6) Home Economics, and (7) Technical Institute.

Several factors account for the large discrepancy between the number of students initially enrolled in Speech 2713 and the 435 students for whom research results are reported. One, some students did not take the FIRO-B scale given during the second week of classes. Two, some students had withdrawn from the course when the course satisfaction scale was administered in the final week of classwork. Third, an additional 21 students were eliminated because they did not sign their names to the course satisfaction scale. Four more were eliminated because of blanks left on the course satisfaction scale. Fourth, the bulk of the difference can be accounted for because many students did not take the course satisfaction scale. Attendance was not required in all twenty-eight sections of Speech 2713. Classwork during the final week of school consisted of public discussion presentations, and many students did not attend and fulfill their role as audience members.

The number of students by sex, by year in school, and by college who comprised the 435 subjects of the study are shown in Table I.

TABLE I

SUBJECTS IN THE STUDY

Males	Females	Fresh.	Soph.	Jun.	Sen.	College: Agric. (1)	College: Busn. (2)	College: A&S Educ. Home Ec. Engineer. Tech.Inst. (3)
264	171	169	182	54	29	62	185	187
Total = 435		Total = 434*				Total = 434*		

*One graduate student participated in the study.

Description of the Basic Speech Course

Speech 2713 is the basic speech communication course at Oklahoma State University. Offered each semester, it is a required course in the Business and Agriculture colleges. Home Economics, Education, and Arts and Sciences make Speech 2713 an option to fulfill a general studies requirement.

Speech 2713 also serves as the core course for Speech Communication Consultancy and Speech Education majors. In all, this basic speech course serves approximately 800 students per fall and spring semesters and usually serves approximately 90 students in the summer. Designed as a three-hour course, Speech 2713 incorporates both exposure to theoretical concepts and practical application through student performance. Based on the theory that the communication encounters students commonly

face are more often "interpersonal" than "public," the course provides proficiency development in both interpersonal and public communication with a slightly heavier emphasis on the former.

Jim D. Hughey and Arlee W. Johnson, co-designers of the course and co-authors of the required text in Speech 2713, based their development of the course on experience with "thousands of college students during the last ten years." (See page 1 of the syllabus, Appendix B.) According to the Spring, 1975, syllabus, Speech 2713 is designed to give the student opportunities to explore communication encounters that are difficult for him personally and to develop proficiency in coping with those encounters. As specified in this syllabus, the five communication encounters deemed most needed by students include these: (1) describing and analyzing communication breakdowns, (2) conducting interviews, (3) presenting public speeches, (4) participating in private discussion groups, and (5) presenting public discussions to an audience.

Speech 2713 was developed primarily out of response to student needs. The designers, however, were also obligated to consider the time restrictions inherent in a three-hour course divided into twenty-seven sections with approximately thirty students in each section.

In the spring semester, 1975, Speech 2713 was structured around a Monday mass-lecture once a week and individual discussion sections which met twice a week. The Monday lectures consisted primarily of theoretical and instructional presentations; the discussion sections afforded opportunities for reinforcement of theory and instruction together with provisions for student performances.

In addition to the usual overview of Speech 2713 in the initial "mass-lecture," students were given copies of the course syllabus which

reads, in part:

> More than likely this course will be different from most courses you have taken before. A number of the newest and most efficient learning concepts have been incorporated into this course to help you learn as much as possible without working harder than you would in any other course.

The syllabus goes on to explain these "learning concepts": (1) that the student will always know what is expected of him; (2) that instruction is carried out through an individualized approach; (3) that the student will have opportunities for reassessment; (4) that the student will always know how he is doing in the course.

The syllabus provides a one-page description of course objectives, a three-page description of individualized instruction, course mechanics and the grading system used in the course, plus a day-by-day account of activities, assignments, and relevant reading materials.

The fundamental principles of learning, on which the course is based, are also explained in the required text: Speech Communication: Foundations and Challenges (56). These four learning principles are enumerated in the introduction of the text:

> (1) learning is most efficient when students are fully informed about what is expected of them; (2) learning can occur only when students have the skills and information that are prerequisite to dealing with a new learning task; (3) learning is accomplished in different ways by different students; and (4) learning is facilitated when students work on tasks related to their needs and interests (p. x).

The remaining pages in the introduction are devoted to an explanation of the instructional techniques used to implement the four learning principles. They include these four techniques: (1) behavioral objectives, (2) mastery learning, (3) individual prescription, and (4) modular flexibility.

Hughey and Johnson justify the use of behavioral objectives through

the claim that students do better when "the expected observable performance required of the student is stated in concrete terms, and the criteria that should be used to evaluate the student's behavior are stated publicly" (p. xi). An example of the behavioral objective can be seen in the phrasing of the expected student behavior in the first graded terminal assessment in Speech 2713 (Assessment 4.4):

> Describe a speech communication problem you personally observed; identify, name, and describe the barriers to effective information inputting and processing; and describe strategies for overcoming these barriers (p. 80).

Following this statement of the objective are several pages describing the factors to be included in the report of the communication problem incident, what the analysis of the incident involves, and what to include in the description of strategies for overcoming the barriers involved in the incident. Also specified are the criteria by which a student's response on Assessment 4.4 will be considered passing.

The second technique employed in Speech 2713 is <u>mastery learning</u>. Such a learning approach is used, Hughey and Johnson (56) explain, "to ensure that students have the skills and information that are prerequisites to dealing with a new learning task."

> To ensure that students have the necessary prerequisites for every objective, we have (1) arranged the units of this book into a learning sequence in which certain units are prerequisite to other units, (2) arranged objectives within units into learning sequences, and (3) established minimal levels of performance that we believe are necessary to indicate mastery of an objective (p. xi).

Hughey and Johnson build a learning sequence into each unit. Satisfactory performance on each prerequisite objective in a unit is an integral part of mastery learning as interpreted by Hughey and Johnson (p. xiii). Both self-assessments and instructor assessments are provided in each

unit as a part of the mastery learning approach. Should a student fail to perform satisfactorily on a given instructor assessment, he is "recycled" through the unit until he masters that objective.

The third instructional technique used by Hughey and Johnson to insure implementation of the four principles of learning cited earlier is individual prescription. In each unit the student is given freedom of choice from several activities designed to help him meet the unit objectives. The concept of "self-assessment" also individualizes instruction for the student. Another way instruction is individualized is through the use of an Advanced Standing Examination, which allows students to get credit for competencies they already possessed at the beginning of the course. A fourth provision used in Speech 2713 to individualize instruction is the Wednesday Night Fest, a one- to two-hour session once each week. It serves several purposes: (1) to enable students to finish the course in approximately nine weeks, (2) to provide special individualized instruction for students needing extra help, and (3) to give students an opportunity to "recycle" when necessary. The sessions were conducted by the same instructors who taught the 16-week semester version of the course.

In addition to the use of behavioral objectives, mastery learning, and individual prescription, Hughey and Johnson also claim modular flexibility as a method of tailoring Speech 2713 to "the needs and interests of the students" (p. xv). Parts of units can be combined with parts of other units in ways that maximize the potential usefulness of the text. Some segments of units can be omitted; some can be used in more than one objective.

The reader is reminded that the persons who were primarily

responsible for the development of the format used in Speech 2713 also authored the required text for the course, Speech Communication: Foundations and Challenges. This text developed out of the authors' fundamental philosophy for Speech 2713, as can be seen in the opening paragraph in the introduction:

> Speech Communication: Foundations and Challenges is the result of a five-year effort to develop and refine a method of instructing undergraduates in intrapersonal, interpersonal, and public communication. The first experimental version of the text appeared in 1971. Since that time, the text has undergone complete revision twice and has profited from its being classroom tested with more than 6,000 students at both two-year and four-year colleges and universities. Through these classroom experiences with Speech Communication: Foundations and Challenges, we have found that both its content and format offer students an exciting, efficient, and effective way of becoming competent participants in a variety of human transactions (p. ix).

We are reminded of Hughey and Johnson's concern for efficient, enjoyable learning in the final paragraph of that introduction:

> We hope the techniques in Speech Communication: Foundations and Challenges will help make student learning more efficient. If students are able to apply sound principles, concepts, and techniques of speech communication and develop favorable attitudes toward communication encounters, the goals of Speech Communication: Foundations and Challenges will have been met (p. xvi).

Characteristics of students who develop either favorable or unfavorable attitudes in the basic course is the focus of the present research. The results of that research can be better understood if the reader is more fully aware of which particular "communication encounters" were encountered in Speech 2713, Spring, 1975. Possibly the clearest view of those encounters can be seen through the reproduction of the five graded terminal objectives included in Speech 2713:

1. Encounter #1 - Objective 4.4: "Describe a speech communication problem you personally observed; identify, name, and describe the

barriers to effective information inputting and processing; and describe strategies for overcoming these barriers" (56, p. 80).

2. Encounter #2 - Objective 7.3: "Demonstrate how to plan, conduct, and evaluate an interview with a specified purpose" (p. 176).

3. Encounter #3 - Objective 13.4: "Demonstrate how to plan, present, and evaluate a public speech with a specified purpose" (p. 367).

4. Encounter #4 - Objective 9.3: "Demonstrate how to plan for, participate in, and evaluate a private discussion with a specified purpose" (p. 239).

5. Encounter #5 - Objective 12.4: "Demonstrate how to plan for, participate in, and evaluate a public discussion with a specified purpose (p. 337).

This survey of the five "communication encounters," related criteria, and evaluation forms (for a sample of the criteria and evaluation forms associated with each of these five objectives, see Appendix A) should serve as evidence of the application of the "learning principles" Hughey and Johnson set out to accomplish through the four selected "instructional techniques." For a more detailed look at the format of Speech 2713, the reader is invited to examine the course syllabus for the Spring, 1975, Appendix B.

Selection and Description of the FIRO-B

The purpose of this part of the methodology description is to justify selection of the FIRO-B for measuring interpersonal interaction variables of self-concept. This researcher is cognizant that much previous similar research reports inconclusive or insignificant findings regarding relationships between student self-concepts and variables

associated with learning experiences. Judd (68) finds fault with popular self-concept measures (Tennessee Self-Concept Scale, as an example). Most, he contends, provide such general self-image data that specific correlations between that data and any variable are usually shown to be nonsignificant. What is needed, Judd recommends, is a more refined, discriminating instrument, one that identifies specific self-concept variables. Although Judd's research concern was with the effect of the basic speech course upon a student's self-concept, his criticism of the popular self-concept measures seems relevant to this study.

One purpose of the present research is to discover ways of maximizing student satisfaction with the basic speech course. The basic course in this study has a strong interpersonal orientation. Thus the use of an instrument designed to measure interpersonal orientation seemed justifiable.

The name FIRO, as explained by its originator, William Schutz (122, p. ix), signifies "Fundamental Interpersonal Relations Orientation." The underlying theory, as explained in Chapter I is that persons orient themselves in characteristic ways toward other people in an effort to fulfill the basic interpersonal needs for affection, inclusion, and control.

Schutz presents much empirical support to validate the FIRO-B as "the key measuring instrument" for the development of his interpersonal need theory (Chapter 4). The focus of the FIRO-B is on behavior. The primary purposes for developing the FIRO-B are, as Schutz explains them,

> (1) to construct a measure of how an individual acts in interpersonal situations, and (2) to construct a measure that will lead to the prediction of interaction between people, based on data from the measuring instrument alone (p. 58).

Since prediction of interaction is the proposed aim for FIRO-B, then concern must be exhibited for both behavior one expresses toward others and how he wants others to behave toward him. Therefore, Schutz designed the FIRO-B to measure "the individual's behavior toward others and the behavior he wants from others in the three areas of interpersonal interaction" (p. 58).

> This measure leads to six scores: expressed inclusion behavior (e^I), wanted inclusion behavior (w^I), expressed control behavior (e^C), wanted control behavior (w^C), expressed affection behavior (e^A), and wanted affection behavior (w^A) (p. 58).

Schutz offers the following table for interpreting high and low score combinations in each of the six areas (p. 60):

DESCRIPTIVE SCHEMA AND APPROPRIATE TERMINOLOGY FOR EACH INTERPERSONAL NEED AREA

			I initiate interaction with others	
			Low	High
INCLUSION	I want to be included	High	Undersocial Social-compliant	Oversocial Social-compliant
		Low	Undersocial Countersocial	Oversocial Countersocial
			I try to control others	
			Low	High
CONTROL	I want to be controlled	High	Abdicrat Submissive	Autocrat Submissive
		Low	Abdicrat Rebellious	Autocrat Rebellious

(Continued on following page.)

			I try to be close and personal	
			Low	High
AFFECTION	I want others to be close & personal with me	High	Underpersonal Personal-compliant	Overpersonal Personal-compliant
		Low	Underpersonal Counterpersonal	Overpersonal Counterpersonal

Validity

Schutz provides much evidence that the FIRO-B is valid in all four dimensions: (1) content validity, (2) concurrent validity, (3) predictive validity, and (4) construct validity.

The FIRO-B is a Guttman scale; i.e., it is an undimensional scale, one in which all items measure the same dimension. In the case of the FIRO-B "90 percent of all responses to all items can be correctly predicted from a knowledge of how many items each person 'accepted'" (122, p. 60). For example, item "1" in the set of items designed to measure "expressed inclusion" reads as follows: "I try to be with people." The possible responses include the following: "(1) usually, (2) often, (3) sometimes, (4) occasionally, (5) rarely, (6) never." An "accepting" response is any one of the first three according to Schutz's theory and research.

As indicated, there are six dimensions in the FIRO-B: (1) expressed inclusion, (2) wanted inclusion, (3) expressed control, (4) wanted control, (5) expressed affection, and (6) wanted affection. Content validity, as established by Schutz, implies that any sample of items on a given dimension would rank respondents in essentially the

same way. The sampling of the universe, therefore, yields a satisfactory content validity (p. 66).

Concurrent validity (how well FIRO-B scores correspond to measures of concurrent criterion performance or status) Schutz established through studies of political attitudes, occupational choice, and conformity behavior. In each case a significant correlation was found between interpersonal orientations measured by the FIRO-B and corresponding interpersonal behavior based on a variety of studies.

Political studies focused on the issues of segregation, military strength, obligations to our allies, office and duties of the President, the Middle East. The results of these studies encouraged Schutz to conclude concurrent validation for the hypothesis that interpersonal relations orientations are significantly related to specific political attitudes (p. 72).

These studies involved the use of the FIRO-4, a form of the FIRO-B scale measuring affection, expressed control and wanted control among the four occupational groups. These studies and a similar study involving Harvard and Radcliffe business studies produced results Schutz claims as supportive of concurrent validity (p. 74). Schutz cites further support for concurrent validity of the FIRO-B by pointing to evidence that "those who profess little need to be liked, who don't like to be governed by rules, and who express themselves freely tend not to change their opinions when under social pressure" (p. 77).

Finally, Schutz discusses predictive and construct validity. Predictive validity, he reminds, is evaluated by showing "how well predictions made from the test are confirmed by evidence gathered at some subsequent time" (p. 77). Since the FIRO-B scale is designed to test a

theory, Schutz contends that virtually every study in this book (The Interpersonal Underworld) is relevant to predictive validity. He devotes entire chapters to studies (focusing on childhood interpersonal atmospheres) as evidence of construct validity, validity "evaluated by investigating what psychological qualities a test measure" (p. 77). Schutz points to additional studies which replicate his findings, providing reinforcement for his conclusions regarding the validity of FIRO-B.

Reliability

In establishing the reliability of FIRO-B Schutz refers to internal consistency. "The reproducibility for all scales is very high and consistent over all samples," Schutz concludes after describing the evolution of the FIRO-B scales and the revisions that came about as a result of continued testing (p. 77).

In a series of test-results, the data compiled by Schutz established a .70 coefficient of stability for the FIRO-B. Thus, the FIRO-B has passed acceptable standards for determining its reliability, according to Schutz's findings.

Schutz's summary of his interpersonal theory provides insight into the implications of the FIRO-B for the present research:

> There are three interpersonal need areas, inclusion, control, and affection, sufficient for the prediction of interpersonal behavior. Orientations which an individual acquires toward behavior in these areas are relatively invariant over time . . . .
>
> Every interpersonal relation follows the same general developmental sequence. It starts with inclusion behavior, is followed by control behavior and, finally, affection behavior. This cycle may recur. When the relation approaches termination it reverses direction, and investment from the

> relation is withdrawn in the order affection, control, and inclusion.
>
> From these postulates it is theoretically possible to predict the course of the relation, if we know the interpersonal orientations of the individual members of the relation and the interpersonal description of the circumstances under which they will interact (p. 200).

Of particular importance at this point is the intended application of the FIRO-B in the present research. While Schutz indicates psychological interpretations of each need area, such fine discriminations were not the focus of this research. Nowhere in the present research did the researcher attempt to use the FIRO-B scale to ascertain specific psychological patterns of student behavior. It was not the intent of this research to determine normality or abnormality of student behavior in the basic speech course. The FIRO-B scores were used expressly as indicators of need for interaction, inclusion, and control. They were not intended to be interpreted in terms of a student's tendency toward "undersocial" or "oversocial" behavior, etc. The ultimate goal of this study is to match student with educational environment, not to prescribe treatment to make marked changes in the student's psychological makeup. No application or interpretation of the FIRO-B is intended beyond its usefulness in predicting student satisfaction with the basic speech course. The FIRO-B was simply selected as the most valid, reliable instrument available, in this researcher's opinion, for correlating student need for affection, inclusion, and control with student satisfaction in the basic speech course.

Description of the Course Satisfaction Scale

In developing the course satisfaction scale used in this study,

consideration was given to the perceptions of instructors who taught Speech 2713 in the spring, 1975. In late March, 1975, instructors were given pilot forms of the satisfaction scale* in an effort to determine whether they felt "affection," "inclusion," and "control" were relevant to student satisfaction. None of the items included on the original 60-item scale were rejected by any of the instructors on the basis of irrelevance or inappropriateness. This original survey, however, was judged to be too cumbersome; thus, an abbreviated 22-item form was developed.

The 22-item satisfaction scale grew out of the satisfaction theories presented earlier. These theories implied a need for measures of both intrinsic as well as extrinsic factors associated with satisfaction. Dissatisfaction can be said to occur if students do not enjoy the activities, experiences, and assignments in the course. The same theoretical base suggests dissatisfaction if the students feel they did not gain from the learning experiences provided in Speech 2713. Thus <u>enjoyment</u> and <u>gain</u>, as perceived by the student, comprised the dichotomous nature of items included on the course satisfaction scale.

Not only was the satisfaction scale designed to tap student attitudes toward the assignments (the five terminal objectives in the course), but also their attitudes toward the teaching methods employed in the course, including the textbook. The first ten items on the scale were designed to determine attitudes toward learning from the lecture approach, learning through interaction with classmates and instructor, and learning individually from the textbook.

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*See Appendix E.

In the interest of avoiding the halo effect (resulting in unnaturally favorable responses) or other response distortions, the satisfaction scale was prepared to seem a natural part of course procedures. The scale was administered as a departmental evaluation form and was labeled as such. It provides a range of five responses to each item in a Likert-type format, as can be seen in the reproduction in Appendix D.

Data Collection Procedures

Since this study took place in a large university setting, it was decided that the following criteria for data collection should be met:

(1) Normal classroom procedures should not be interrupted.

(2) Data collection should use as little time as possible.

(3) Proper approval should be obtained.

(4) The procedures should call as little attention to themselves as possible.

(5) Potential for contribution to the particular learning environment should be considered.

These criteria dictated the procedure for this study. With the approval of the department head and the supervisor of Speech 2713 (the basic speech course), the FIRO-B measure was included as a part of the usual Diagnostic and Advanced Standing Measure used in this course. This measure was administered during the second Monday that classes were in session during the spring semester, 1975. It was administered during the 11:30 A.M. Monday lecture session to approximately 375 students and during the 12:30 P.M. Monday lecture session to approximately 375 students.

For this measure each student was given a "test" booklet comprised

of 164 items and a standardized answer form. Instructions for the measure were read by the same person to both lecture groups. The FIRO-B was comprised of 54 items which were numbered 21 through 75 on the 164-item measure. A communication sensitivity scale consisting of 20 multiple-choice items preceded the FIRO-B, constituting the first section of the measure. The remaining items dealt with course content. Students were instructed as though the FIRO-B items constituted a traditional portion of the diagnostic measure used in Speech 2713.

Time alloted for the entire 164-item measure was fifty minutes. Although many students did not complete the entire measure, all students who turned in answer forms had completed all 54 FIRO-B items. The one-page answer form called for a single-digit numerical response on all 164 items.

The revised 22-item, three-page satisfaction scale (the course evaluation) was administered during the last two weeks of regular classwork at the discretion of each instructor. Instructors were encouraged to treat the satisfaction scale as they would any course evaluation. The five response choices (strongly agree, agree, neutral or does not apply, disagree, strongly disagree) were repeated below each one of the 22 items to insure uniformity and accuracy in responses.

Statistical Procedures

The statistical procedures utilized to analyze the data consisted of all those tasks performed after the data had been collected. The data analysis procedures were divided into two general categories: (1) the preliminary preparation and coding procedures and (2) the hypothesis testing procedures.

Preliminary preparation of the survey data consisted first of identifying usable data. Data analysis demanded matching student responses on both the FIRO-B scale and the course evaluation scale. Completed forms for both scales were selected for a total of 435 usable forms. Each subject was then assigned a number from 1 through 435.

Next, each set of FIRO-B responses for each subject was handscored for a total of six sets of responses: wanted inclusion, expressed inclusion, wanted affection, expressed affection, wanted control, and expressed control. Possible responses for each of the 54 FIRO-B items consisted of six choices, numbered from 1 through 6. With exceptions to be explained below, all numerically low choices indicate a strong need for affection (wanted and expressed), for inclusion (wanted and expressed), and for control (wanted and expressed). As an example the first item on the FIRO-B reads as follows: "I try to be with people." The choice for this and other items on the scale were numbered as follows:

1. usually
2. often
3. sometimes
4. occasionally
5. rarely
6. never*

Thus, a low score (1 or 2) can be seen to indicate a stronger need for inclusion than a high score (5 or 6). Low scores on the scale did not signify a uniform measure of needs in all six dimensions, however. To avoid a "response set," some items were irregularly phrased. For example, in the dimension of "expressed affection" low scores signified need

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*Choices were not identical for all 54 items. See the FIRO-B scale reproduced in Appendix C.

for closeness and personal warmth with the exceptions of items 39 and 45. In the dimension of "wanted affection" low scores also signified a need for closeness and personal warmth with the exceptions of items 55, 60, 66, and 72. In the case of each exception, scoring procedures demanded transposition of numbers so that sets of scores could be computed.

For example, item 39 on the FIRO-B scale reads as follows: "My personal relations with people are cool and distant." Possible responses to that item are as follows:

1. most people
2. many people
3. some people
4. a few people
5. one or two people
6. nobody

Obviously, a low score (1 or 2) would not signify a need for closeness or personal warmth. Therefore, the numbers in this case (and in the other exceptions cited) were transposed so that a 6 became a 1, a 5 became a 2, etc.

After this transposition was completed, the six scores on the first dimension ("wanted inclusion") were summed for a total "wanted inclusion" score. A similar summing process resulted in a separate total score for each of the six dimensions on the FIRO-B.*

Preliminary to actual hypothesis testing, a factor analysis was run on the course satisfaction items to determine which of the items formed a cluster measuring the same course satisfaction dimension. The factor analysis provides a mathematical model representing usefully and

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*This method of scoring provides for finer distinctions than does the method used by Schutz. See pages 58-65 in The Interpersonal Underworld (121).

reliably a measure of dimensionality, identifying "the important parameters of the phenomena under investigation" (117, p. 503). The factor loadings on the rotated factor matrix, in this case, revealed five dimensions in the course satisfaction scale, as shown in Table II. A factor loading of at least .46 was set as the parameter for including a particular item in a particular factor or dimension. The resulting five factors are presented along with their factor loadings in Table II*. Each of the five dimensions was given a "construct title" as a result of assessing the commonality among items that contributed to the makeup of a particular factor. These construct titles are shown beside each numbered dimension in parentheses.

A sixth dimension was created by summing all 22 items on the scale for a composite course satisfaction score. These six factors represent the criterion (or dependent) variables in this study. Testing the six hypotheses in the study called for a close analysis of the degree to which the criterion variables are associated with the six predictor or independent variables (the FIRO-B scores). Since the prediction of one or more variables from known values of another variable or variables was sought, a regression analysis was deemed necessary. The ultimate aim of the use of a regression analysis in this case is to make the best estimate possible of a student's satisfaction score from a knowledge of his FIRO-B score, along one or more of six dimensions.

Assumptions and Limitations of the Study

The results of any study are affected by the assumptions and

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*See Appendix H for the complete rotated factor matrix.

TABLE II

FACTORS OF COURSE SATISFACTION AS DETERMINED THROUGH FACTOR ANALYSIS

Factor Items From Satisfaction Scale	Rotated Factor Loadings*
Factor 1 (Group Work)	
17. Enjoyment of private discussion	.79
18. Gain from private discussion	.79
19. Enjoyment of public discussion	.74
20. Gain from public discussion	.77
Factor 2 (Teaching Methods & Instructor)	
1. Enjoyment of interpersonal interaction opportunities	.48
2. Gain from interpersonal interaction opportunities	.51
3. Enjoyment of lecture approach	.75
4. Gain from lecture approach	.76
7. Satisfaction with interaction with instructor	.74
8. Gain from instructor	.74
Factor 3 (Interpersonal Interaction)	
9. Satisfaction with opportunity to become acquainted	.69
10. Gain from interaction with other students	.73
13. Enjoyment of interview assignment	.74
14. Gain from interview assignment	.70
Factor 4 (Text)	
5. Enjoyment of textbook	.83
6. Gain from textbook	.80
Factor 5 (Performance Work)	
11. Enjoyment of communication problem assignment	.54
12. Gain from communication problem assignment	.60
15. Enjoyment of informative speech assignment	.73
16. Gain from informative speech assignment	.74
21. Enjoyment of course	.46
22. Gain from course	.52

*Based on a rigid orthogonal rotation determined by Kaiser's varimax criterion.

limitations inherent to that study. In this case, results should be viewed in light of certain assumptions upon which the study was based. These include the following:

1. It was assumed that students enrolled in Speech 2713, Spring, 1975, were not atypical.
2. It was assumed that the course evaluation scale gave a dependable measure of student satisfaction with Speech 2713.
3. It was assumed that students' responses were not biased by the fact that they were required to put their names on the evaluation forms.
4. It was assumed that the time of day students attended Speech 2713 classes did not severely contaminate research results.
5. It was assumed that students responded to the satisfaction and FIRO-B scales with integrity, not distorting responses or responding in a random manner.

Also inherent to this study were the following limitations:

1. Course evaluations of necessity must be given near the end of a course and may not reflect the peaks or falls in satisfaction throughout the course.
2. Speech 2713 is a required course for most students who took it in the spring, 1975; research shows a general tendency for students to rate required courses lower than electives, thus affecting overall satisfaction scores in basic courses (46).
3. Most students who take Speech 2713 are freshmen and sophomores. Underclassmen often rate courses lower than do upperclassmen (25, p. 530).
4. Self-report inventories (such as the FIRO-B scale), as

instruments for studying personality, are limited by the individual's ability to read the items with understanding and self-insight and by his willingness to reveal himself frankly (135, p. 415).

5. Differences between course satisfaction ratings by males and females was not determined to be of practical use in providing for individual needs.
6. The generalizability of results in this study is limited by the nature of the course studied, the nature of the sample, the nature of the subject matter, the size of the classes, the application of instruction methods, etc.

Although these assumptions and limitations are probably not unusual in this kind of research, they must be taken into consideration in the interpretation of the results reported in Chapter IV.

Summary

This study of student self-concept and course satisfaction is a correlational field study involving 435 students enrolled in the basic speech course at Oklahoma State University in the spring, 1975. This basic course involves five objectives, with an emphasis on interpersonal speech communication, taught through a variety of methods. As a part of a diagnostic measure administered the second week of classwork, students took the FIRO-B scale, which measured three dimensions of self-concept: need for affection, need for inclusion, and need for control. During the final two weeks of classwork, students were given the course satisfaction scale. Factor analysis and multiple regression analysis were used as primary methods for statistical treatment of results, which were

interpreted in light of the basic assumptions and limitations mentioned in this chapter.

CHAPTER IV

RESULTS

Overview

This chapter presents the results of the statistical analysis. Following a brief review of statistical procedures used in this study will be a presentation of general findings regarding the six factors associated with course satisfaction plus general findings related to each of the six dimensions of the FIRO-B. Results from the regression equation as relevant to each satisfaction factor are presented separately. Then, findings associated with each hypothesis are given along with unhypothesized additional findings.

Review of Statistical Procedures

Since a number of predictor variables were studied in this research, multiple regression analysis was used. Regression analysis allows the prediction of unknown values of one variable from known values of another. In this case, the known values (FIRO-B scores) were used as predictors of course satisfaction scores. A multiple regression equation was needed in this study because there was more than one predictor variable.

From the standpoint of sampling stability, regression lines are more stable than any other correlation between variables, since regression equations use <u>all</u> the scores obtained from the measures used in

prediction (53). Predictions based on the regression line will not be influenced by minor sampling fluctuations as much as would be the case if individual values were used to make predictions. If the correlations obtained through multiple regression analysis were perfect (+1), absolute prediction without error would be possible. Such correlations being highly unlikely, the value of the test required to reject the null hypotheses in this study was set at the .05 level of significance.

General Findings Relevant to the Satisfaction and FIRO-B Scales

The course satisfaction scale consisted of 22 items, which were subjected to a rigid orthogonal rotation determined by Kaiser's varimax criterion, rendering five factors. Commonalities among items grouped in the five factors led to the following connotative designations:

Factor 1 -- Group Work;

Factor 2 -- Teaching Methods and Instructor;

Factor 3 -- Interpersonal Interaction;

Factor 4 -- Text;

Factor 5 -- Performance Work.

A sixth factor was added before statistical analysis was completed:

Factor 6 -- Overall Course Satisfaction.

Likert-type responses on the satisfaction scale ranged from 1 (strongly agree) to 5 (strongly disagree) for each of the 22 items. A "strongly agree" response is equivalent to a high degree of satisfaction with whatever a particular item on the satisfaction scale represents. A "strongly disagree" response can be interpreted as a high degree of dissatisfaction. Table III shows the sums, means, variance, and

standard deviation for each of the six factors relevant to course satisfaction. Since there were four items on the satisfaction scale constituting Factor 1, the mean score shown on Table III can be divided by four to determine where the mean on that factor falls with regard to the range of possible responses on the satisfaction scale. The results of such computation reveal that overall student satisfaction with Factor 1 (Group Work) was 2.5; i.e., students were slightly more satisfied than dissatisfied with "group work" in Speech 2713.

TABLE III

SATISFACTION SCALE -- RESPONSES OF ALL 435 STUDENTS IN EACH FACTOR

Satisfaction Factor	Number of Items in Each Factor	Sum	Mean	Variance	Standard Deviation	Adjusted Mean
Factor 1 (Group Work)	4	4749	10.9	16.2	4.0	2.7
Factor 2 (Teaching Methods and Instructor)	6	6205	14.2	18.6	4.3	2.4
Factor 3 (Interpersonal Interaction)	4	3659	8.4	8.9	2.9	2.1
Factor 4 (Text)	2	2614	6.0	4.8	2.2	3.0
Factor 5 (Performance Work)	6	7133	16.3	25.3	5.0	2.7
Factor 6 (Overall Course Satisfaction)	22	24360	56.0	205.1	14.3	2.5

Similar computations were executed for each factor. The results of these computations are designated as "Adjusted Mean" in Table III. Visual inspection of these adjusted mean scores reveals that students in this study showed most satisfaction with Factor 3, Interpersonal Interaction (2.1), and least satisfaction with Factor 4, Text (3.0). The Overall Course Satisfaction mean (2.5) reveals that students in this study were more satisfied than dissatisfied with Speech 2713.

Responses on the FIRO-B measure ranged from a possible low total score of 9 to a possible high total score of 54 on each of the six dimensions. Low scores signify a strong need to include others (FIRO-B1), to be included by others (FIRO-B2), to show affection (FIRO-B3), to receive affection (FIRO-B4), to control others (FIRO-B5), and to be controlled by others (FIRO-B6). The means for each of these six dimensions is shown in Table IV, along with sums, variance, and standard deviation for all 435 subjects in the study. The median score would be 27.

TABLE IV

FIRO-B SCALE -- RESPONSES OF ALL 435 STUDENTS

FIRO-B Dimension	Sum	Mean	Variance	Standard Deviation
FIRO-B 1	10319	23.7	48.9	6.9
FIRO-B 2	8416	19.3	54.4	7.3
FIRO-B 3	10373	23.8	50.1	7.0
FIRO-B 4	8348	19.1	43.4	6.5
FIRO-B 5	14773	33.9	65.0	8.0
FIRO-B 6	15858	36.4	41.2	6.4

Visual inspection of Table IV reveals that students in this study showed strongest needs in these dimensions: Need to be included by others (FIRO-B2) and need to receive affection (FIRO-B4). Results reveal the needs registering least strength are these: need to control others (FIRO-B5) and need to be controlled by others (FIRO-B6). An interpretation of these findings is not relevant to this study.

FIRO-B as a Predictor of Satisfaction

Since regression equations utilize scores from all predictor variables, the presentation of data that follows shows correlations obtained between all predictor variables and each satisfaction factor separately. The regression equation was written to include eleven predictor variables, the six dimensions of FIRO-B plus these five additional predictor variables:

1. Course grade reported in points earned out of a possible 1000;
2. Degree held by instructor (master's or doctorate as opposed to a bachelor's);
3. College 1 (Agriculture);
4. College 2 (Business);
5. College 3 (Arts and Sciences, Education, Home Economics, Engineering, and the Technical Institute).

These variables were explored as a method of checking the hypothesized relationships between self-concept and course satisfaction. Based on the review of literature, course grade, instructor, and college were selected as having probable influence on course satisfaction.

Since the first predictor variable shown in a regression equation is fitted first, consideration was given to the expected predictive

power of each predictor variable. Because of the theory which relates student-versus-teacher influence to course structure, it was decided that FIRO-B6 (wanted control) would most likely be the strongest predictor of satisfaction with the speech course as structured in this study. Thus, FIRO-B6 was listed first in the equation. Since there was no compelling reason for special sequencing of the remaining five FIRO-B dimensions, they were simply listed in reverse numerical order in the equation. In the six sections that follow are reported the influence of these six predictor variables, along with the influence of the five non-hypothesized variables, on each of the six course satisfaction factors.

FIRO-B as a Predictor of Factor 1

Table V shows the F value for the regression equation to be nonsignificant (.874) with regard to Factor 1. Thus, the eleven predictor variables taken collectively do not significantly predict student satisfaction with Group Work. F values are also reported for predictor variables sequentially (Column 4) and for the predictive power of each variable after removing the influence of other predictor variables (Column 7). Visual inspection reveals that none of the FIRO-B dimensions shows statistical significance as individual predictors of student satisfaction with Group Work after the influence of all other variables has been removed (Column 8). The sequential analysis results (Column 5) reveals that none of the FIRO-B dimensions shows statistical significance as individual predictors of student satisfaction with Group Work after the influence of all other variables sequenced in the table above the variable has been removed.

TABLE V

ANALYSIS OF VARIANCE AND REGRESSION COEFFICIENTS FOR FACTOR 1
(GROUP WORK)

Source	DF	Sum of Squares	Mean Square	F Value	Prob > F
Regression	11	156.498	14.227	0.874	0.565
Error	423	6878.522			
Corrected Total	434	7035.020			

R-Square	C.V.	Std Dev	Factor Mean
0.022	36.937%	4.032	10.917

Source (1)	DF (2)	Sequential SS (3)	F Value (4)	Prob > F (5)	Partial SS (6)	F Value (7)	Prob > F (8)
FIROB6	1	10.64	0.654	0.418	12.84	0.789	0.374
FIROB5	1	39.72	2.442	0.118	56.16	3.454	0.063
FIROB4	1	3.10	0.190	0.662	0.44	0.027	0.868
FIROB3	1	1.33	0.082	0.774	0.19	0.012	0.912
FIROB2	1	6.15	0.378	0.538	2.67	0.164	0.685
FIROB1	1	13.15	0.809	0.368	7.92	0.487	0.485
COLL3	1	0.70	0.043	0.835	3.49	0.214	0.643
COLL2	1	4.09	0.252	0.615	2.88	0.177	0.674
COLL1	1	3.23	0.199	0.655	1.95	0.120	0.728
INSTR	1	72.71	4.471*	0.035	72.50	4.459*	0.035
GRADE	1	1.61	0.099	0.752	1.61	0.099	0.752

*Significant at the .05 level.

FIRO-B as a Predictor of Factor 2

Table VI shows the F value for the regression equation to be non-significant (1.700) with regard to Factor 2. Thus the eleven predictor variables taken collectively do not significantly predict student satisfaction with Teaching Methods and Instructor. F values are also given for each predictor variable sequentially (Column 4) and for the predictive power of each variable after removing the influence of the other

predictor variables (Column 7). Visual inspection shows that sequential analysis results (Column 5) are nonsignificant for all variables, with the exception of FIRO-B1 (.027). After removal of the influence of all other variables, however, FIRO-B1 has a nonsignificant F value of 3.48. Though FIRO-B1 (need to include others) is shown as a significant predictor of student satisfaction with Teaching Methods and Instructor, some of its predictive power is lost after other variables are fitted into the equation. Possibly the addition of the instructor variable (significant at .004) accounts for this loss.

TABLE VI

ANALYSIS OF VARIANCE AND REGRESSION COEFFICIENTS FOR FACTOR 2 (TEACHING METHODS AND INSTRUCTOR)

Source	DF	Sum of Squares	Mean Square	F Value	Prob > F
Regression	11	343.219	31.201	1.700	0.070
Error	423	7763.378	18.353		
Corrected Total	434	8106.597			

R-Square	C.V.	Std Dev	Factor Mean
0.042	30.033%	4.284	14.264

Source (1)	DF (2)	Sequential SS (3)	F Value (4)	Prob > F (5)	Partial SS (6)	F Value (7)	Prob > F (8)
FIROB6	1	0.78	0.042	0.836	0.08	0.004	0.944
FIROB5	1	0.05	0.003	0.955	1.67	0.091	0.762
FIROB4	1	44.65	2.432	0.119	39.75	2.166	0.141
FIROB3	1	5.17	0.281	0.595	23.12	1.260	0.262
FIROB2	1	1.79	0.097	0.754	12.81	0.698	0.403
FIROB1	1	89.43	4.872*	0.027	63.88	3.480	0.062
COLL3	1	4.13	0.225	0.635	14.93	0.813	0.367
COLL2	1	2.11	0.114	0.734	14.12	0.769	0.380
COLL1	1	12.70	0.692	0.405	15.71	0.856	0.355
INSTR	1	155.18	8.455*	0.003	153.95	8.388*	0.004
GRADE	1	27.18	1.481	0.224	27.18	1.481	0.224

*Significant at the .05 level.

FIRO-B as a Predictor of Factor 3

Table VII shows the F value for the regression equation to be non-significant (1.675) with regard to Factor 3. Thus the eleven predictor variables taken collectively do not significantly predict student satisfaction with Interpersonal Interaction. F values are also reported for each predictor variable sequentially (Column 4) and for the predictive power of each variable after removing the influence of the other predictor variables (Column 7). Visual inspection shows that sequential analysis results (Column 5) are nonsignificant for all variables, with the exception of FIRO-B4 (.001). After removal of the influence of all other variables, however, FIRO-B4 has a nonsignificant F value of 1.202. Though FIRO-B4 (need to receive affection) is shown as a significant predictor of student satisfaction with Interpersonal Interaction, some of its predictive power is lost after other variables are fitted into the equation.

TABLE VII

ANALYSIS OF VARIANCE AND REGRESSION COEFFICIENTS FOR FACTOR 3 (INTERPERSONAL INTERACTION)

Source	DF	Sum of Squares	Mean Square	F Value	Prob > F
Regression	11	162.278	14.752	1.675	0.076
Error	423	3725.063	8.806		
Corrected Total	434	3887.342			

R-Square	C.V.	Std Dev	Factor Mean
0.0417	35.279%	2.967	8.411

TABLE VII (Continued)

Source (1)	DF (2)	Sequential SS (3)	F Value (4)	Prob > F (5)	Partial SS (6)	F Value (7)	Prob > F (8)
FIROB6	1	0.00	0.000	0.987	0.83	0.094	0.758
FIROB5	1	13.45	1.528	0.217	15.78	1.792	0.181
FIROB4	1	87.39	9.924*	0.001	10.58	1.202	0.273
FIROB3	1	2.82	0.321	0.571	0.69	0.078	0.778
FIROB2	1	17.12	1.944	0.163	18.46	2.096	0.148
FIROB1	1	0.11	0.012	0.909	0.22	0.025	0.873
COLL3	1	0.43	0.049	0.824	1.33	0.151	0.697
COLL2	1	0.52	0.059	0.807	0.88	0.100	0.751
COLL1	1	1.35	0.154	0.694	1.52	0.173	0.677
INSTR	1	12.17	1.382	0.240	11.83	1.344	0.246
GRADE	1	26.86	3.050	0.081	26.86	3.050	0.081

*Significant at the .05 level.

FIRO-B as a Predictor of Factor 4

Table VIII shows the **F** value for the regression equation to be significant (2.673) with regard to Factor 4. However, none of the FIRO-B dimensions directly contribute to this significance. The eleven predictor variables taken collectively account for this significance. F values reported for the FIRO-B dimensions taken sequentially are all nonsignificant (Column 4). The predictive powers of the FIRO-B dimensions, when the influence of all other variables is removed, also show nonsignificant F values (Column 7). Thus, the FIRO-B dimensions are not shown to be significant predictors of student satisfaction with Text.

FIRO-B as a Predictor of Factor 5

Table IX shows the F value for the regression equation to be significant (2.003) with regard to Factor 5. However, none of the FIRO-B

dimensions directly contribute to this significance. The eleven predictor variables taken collectively account for this significance. F values reported for the FIRO-B dimensions taken sequentially are all nonsignificant, with the exception of FIRO-B1 (4.733, Column 4). The predictive power of FIRO-B1, when the influence of all other variables is removed, however, shows a nonsignificant F value of 2.94 (Column 7). Though FIRO-B1 (need to include others) is shown to be a significant predictor of student satisfaction with Performance Work, some of its predictive power was lost after other variables were fitted into the equation. Possibly, the addition of the instructor variable (significant at .016) and the course grade variable (significant at .045) account for this loss.

TABLE VIII

ANALYSIS OF VARIANCE AND REGRESSION COEFFICIENTS FOR FACTOR 4 (TEXT)

Source	DF	Sum of Squares	Mean Square	F Value	Prob > F
Regression	11	137.165	12.469	2.673	0.002
Error	423	1972.797	4.663		
Corrected Total	434	2109.963			

R-Square	C.V.	Std Dev	Factor Mean
0.065	35.938%	2.159	6.009

Source (1)	DF (2)	Sequential SS (3)	F Value (4)	Prob > F (5)	Partial SS (6)	F Value (7)	Prob > F (8)
FIROB6	1	0.04	0.009	0.920	0.66	0.142	0.705
FIROB5	1	1.21	0.261	0.609	1.94	0.417	0.518
FIROB4	1	1.23	0.265	0.606	0.69	0.149	0.699
FIROB3	1	4.32	0.927	0.336	11.70	2.509	0.113
FIROB2	1	2.09	0.448	0.503	1.78	0.382	0.536
FIROB1	1	11.27	2.417	0.120	3.71	0.796	0.372

TABLE VIII (Continued)

Source (1)	DF (2)	Sequential SS (3)	F Value (4)	Prob > F (5)	Partial SS (6)	F Value (7)	Prob > F (8)
COLL3	1	11.64	2.497	0.114	0.29	0.062	0.802
COLL2	1	0.08	0.017	0.895	1.40	0.301	0.583
COLL1	1	0.85	0.182	0.669	0.94	0.203	0.652
INSTR	1	55.95	11.997*	0.000	54.97	11.786*	0.000
GRADE	1	48.44	10.386*	0.001	48.44	10.386*	0.001

*Significant at the .05 level.

TABLE IX

ANALYSIS OF VARIANCE AND REGRESSION COEFFICIENTS FOR FACTOR 5 (PERFORMANCE WORK)

Source	DF	Sum of Squares	Mean Square	F Value	Prob > F
Regression	11	545.639	49.603	2.003	0.026
Error	423	10472.558	24.757		
Corrected Total	434				

R-Square	C.V.	Std Dev	Factor Mean
0.0495	30.344%	4.975	16.397

Source (1)	DF (2)	Sequential SS (3)	F Value (4)	Prob > F (5)	Partial SS (6)	F Value (7)	Prob > F (8)
FIROB6	1	0.14	0.006	0.938	2.32	0.093	0.759
FIROB5	1	41.82	1.689	0.194	79.45	3.209	0.073
FIROB4	1	36.88	1.489	0.222	0.20	0.008	0.926
FIROB3	1	1.25	0.050	0.821	14.62	0.590	0.442
FIROB2	1	36.59	1.477	0.224	9.24	0.373	0.541
FIROB1	1	117.18	4.733*	0.030	72.79	2.940	0.087
COLL3	1	56.97	2.301	0.130	14.74	0.595	0.440
COLL2	1	0.01	0.000	0.981	6.51	0.263	0.608
COLL1	1	9.08	0.366	0.545	8.16	0.329	0.566
INSTR	1	145.76	5.887*	0.015	143.48	5.795*	0.016
GRADE	1	99.89	4.035*	0.045	99.89	4.035*	0.045

*Significant at the .05 level.

FIRO-B as a Predictor of Factor 6

Table X shows the F value for the regression equation to be significant (2.167) with regard to Factor 6. However, none of the FIRO-B dimensions directly contribute to this significance. F values reported for the FIRO-B dimensions taken sequentially are all nonsignificant (Column 4). The predictive power of the FIRO-B dimensions, when the influence of all other variables is removed, is also shown to be nonsignificant (Columns 7 and 8). Thus the FIRO-B dimensions are not shown to be significant predictors of Overall Course Satisfaction.

TABLE X

ANALYSIS OF VARIANCE AND REGRESSION COEFFICIENTS FOR FACTOR 6
(OVERALL COURSE SATISFACTION)

Source	DF	Sum of Squares	Mean Square	F Value	Prob > F
Regression	11	4750.047	431.822	2.167	0.015
Error	423	84265.952	199.210		
Corrected Total	434	89016.000			

R-Square	C.V.	Std Dev	Factor Mean
0.053	25.203%	14.114	56.000

Source (1)	DF (2)	Sequential SS (3)	F Value (4)	Prob > F (5)	Partial SS (6)	F Value (7)	Prob > F (8)
FIROB6	1	9.16	0.046	0.830	50.90	0.255	0.613
FIROB5	1	316.27	1.587	0.208	532.31	2.672	0.102
FIROB4	1	623.91	3.131	0.077	103.60	0.520	0.471
FIROB3	1	0.15	0.000	0.977	136.12	0.683	0.408
FIROB2	1	163.21	0.819	0.365	45.26	0.227	0.633
FIROB1	1	762.03	3.825	0.051	432.44	2.170	0.141
COLL3	1	108.63	0.545	0.460	6.05	0.030	0.861
COLL2	1	6.67	0.033	0.854	0.06	0.000	0.986
COLL1	1	2.22	0.011	0.915	0.30	0.001	0.968
INSTR	1	1938.49	9.730*	0.001	1914.64	9.611*	0.002
GRADE	1	819.27	4.112*	0.043	819.27	4.112*	0.043

*Significant at the .05 level.

Summary of Hypotheses

The presentation of data thus far in this chapter has shown the general results of the regression analysis employed in this study. These results included the correlations of all predictor variables with each criterion variable. In order to present results relevant to each hypothesis separately, it is necessary to extract the statistical results produced by each FIRO-B dimension from Tables V-X. Doing so allows separate examination of each of the six hypotheses. The following presentation of data shows the regression analysis results for each dimension of FIRO-B as correlated with each of the six factors associated with course satisfaction. All relevant results are reported, though a .05 level of significance is required to reject the null hypothesis.

Hypothesis 1

There is no Relationship Between Expressed Inclusion and Satisfaction in the Basic Speech Course. Expressed inclusion (need to include others) is designated FIRO-B1 in Table XI. The observed significance level (Prob > F) of expressed inclusion is shown in this table for each of the six satisfaction factors. As this presentation of data indicates, there is no significant relationship between expressed inclusion and satisfaction in the basic speech course. Therefore, Hypothesis 1 cannot be rejected at the .05 level of significance.

Hypothesis 2

There is no Relationship Between Wanted Inclusion and Satisfaction in the Basic Speech Course. Wanted inclusion (need to be included by

others) is designated FIRO-B2 in Table XII. The observed significance level (Prob > F) of wanted inclusion is shown in this table for each of the six satisfaction factors. As this presentation of data indicates, there is no significant relationship between wanted inclusion and satisfaction in the basic speech course. Therefore, Hypothesis 2 cannot be rejected at the .05 level of significance.

Hypothesis 3

There is no Relationship Between Expressed Affection and Satisfaction in the Basic Speech Course. Expressed affection (need to show affection) is designated FIRO-B3 in Table XIII. The observed significance level (Prob > F) of expressed affection is shown in this table for each of the six satisfaction factors. As this presentation of data indicates, there is no significant relationship between expressed affection and satisfaction in the basic speech course. Therefore, Hypothesis 3 cannot be rejected at the .05 level of significance.

Hypothesis 4

There is no Relationship Between Wanted Affection and Satisfaction in the Basic Speech Course. Wanted affection (need to receive affection) is designated FIRO-B4 in Table XIV. The observed significance level (Prob > F) of wanted affection is shown in this table for each of the six satisfaction factors. As this presentation of data indicates, there is no significant relationship between wanted affection and satisfaction in the basic speech course. Therefore, Hypothesis 4 cannot be rejected at the .05 level of significance.

TABLE XI

FIRO-B1 (EXPRESSED INCLUSION) AS A PREDICTOR OF COURSE SATISFACTION

	Prob > F*
FIRO-B1 and Factor 1 (Group Work)	.485
FIRO-B1 and Factor 2 (Teaching Methods and Instructor)	.062
FIRO-B1 and Factor 3 (Interpersonal Interaction)	.873
FIRO-B1 and Factor 4 (Text)	.372
FIRO-B1 and Factor 5 (Performance Work)	.087
FIRO-B1 and Factor 6 (Overall Course)	.141

*A Prob > F of .05 or below is required for significance. The observed significance levels shown here are based on FIRO-B1 scores after the influence of all other variables has been removed (Column 8 in Tables V-X).

TABLE XII

FIRO-B2 (WANTED INCLUSION) AS A PREDICTOR OF COURSE SATISFACTION

	Prob > F*
FIRO-B2 and Factor 1 (Group Work)	.685
FIRO-B2 and Factor 2 (Teaching Methods and Instructor)	.403
FIRO-B2 and Factor 3 (Interpersonal Interaction)	.148
FIRO-B2 and Factor 4 (Text)	.536
FIRO-B2 and Factor 5 (Performance Work)	.541
FIRO-B2 and Factor 6 (Overall Course)	.633

*A Prob > F of .05 or below is required for significance. The observed significance levels shown here are based on FIRO-B2 scores after the influence of all other variables has been removed (Column 8 in Tables V-X).

TABLE XIII

FIRO-B3 (EXPRESSED AFFECTION) AS A PREDICTOR OF COURSE SATISFACTION

	Prob > F*
FIRO-B3 and Factor 1 (Group Work)	.912
FIRO-B3 and Factor 2 (Teaching Methods and Instructor)	.262
FIRO-B3 and Factor 3 (Interpersonal Interaction)	.778
FIRO-B3 and Factor 4 (Text)	.113
FIRO-B3 and Factor 5 (Performance Work)	.442
FIRO-B3 and Factor 6 (Overall Course)	.408

*A Prob > F of .05 or below is required for significance. The observed significance levels shown here are based on FIRO-B3 scores after the influence of all other variables has been removed (Column 8 in Tables V-X).

TABLE XIV

FIRO-B4 (WANTED AFFECTION) AS A PREDICTOR OF COURSE SATISFACTION

	Prob > F*
FIRO-B4 and Factor 1 (Group Work)	.868
FIRO-B4 and Factor 2 (Teaching Methods and Instructor)	.141
FIRO-B4 and Factor 3 (Interpersonal Interaction)	.273
FIRO-B4 and Factor 4 (Text)	.699
FIRO-B4 and Factor 5 (Performance Work)	.926
FIRO-B4 and Factor 6 (Overall Course)	.471

*A Prob > F of .05 or below is required for significance. The observed significance levels shown here are based on FIRO-B4 scores after the influence of all other variables has been removed (Column 8 in Tables V-X).

Hypothesis 5

There is no Relationship Between Expressed Control and Satisfaction in the Basic Speech Course. Expressed control (need to control others) is designated FIRO-B5 in Table XV. The observed significance level (Prob > F) of expressed control is shown in this table for each of the six satisfaction factors. As this presentation of data indicates, there is no significant relationship between expressed control and satisfaction in the basic speech course. Therefore, Hypothesis 5 cannot be rejected at the .05 level of significance.

Hypothesis 6

There is no Relationship Between Wanted Control and Satisfaction in the Basic Speech Course. Wanted control (need to be controlled by others) is designated FIRO-B6 in Table XVI. The observed significance level (Prob > F) of wanted control is shown in this table for each of the six satisfaction factors. As this presentation of data indicates, there is no significant relationship between wanted control and satisfaction in the basic speech course. Therefore, Hypothesis 6 cannot be rejected at the .05 level of significance.

Additional Findings

As indicated earlier, five of the eleven predictor variables included in the regression analysis were not dimensions of FIRO-B. Selected as "check hypotheses" were these predictor variables: course grade, the holding of an advanced degree by an instructor (master's or doctorate as opposed to bachelor's), and student's college (Agriculture,

TABLE XV

FIRO-B5 (EXPRESSED CONTROL) AS A PREDICTOR OF COURSE SATISFACTION

	Prob > F*
FIRO-B5 and Factor 1 (Group Work)	.063
FIRO-B5 and Factor 2 (Teaching Methods and Instructor)	.762
FIRO-B5 and Factor 3 (Interpersonal Interaction)	.181
FIRO-B5 and Factor 4 (Text)	.518
FIRO-B5 and Factor 5 (Performance Work)	.073
FIRO-B5 and Factor 6 (Overall Course)	.102

*A Prob > F of .05 or below is required for significance. The observed significance levels shown here are based on FIRO-B5 scores after the influence of all other variables has been removed (Column 8 in Tables V-X).

TABLE XVI

FIRO-B6 (WANTED CONTROL) AS A PREDICTOR OF COURSE SATISFACTION

	Prob > F*
FIRO-B6 and Factor 1 (Group Work)	.374
FIRO-B6 and Factor 2 (Teaching Methods and Instructor)	.944
FIRO-B6 and Factor 3 (Interpersonal Interaction)	.758
FIRO-B6 and Factor 4 (Text)	.705
FIRO-B6 and Factor 5 (Performance Work)	.759
FIRO-B6 and Factor 6 (Overall Course)	.613

*A Prob> F of .05 or below is required for significance. The observed significance levels shown here are based on FIRO-B6 scores after the influence of all other variables has been removed (Column 8 in Tables V-X).

Business, etc.) Though these variables were not hypothesized to predict course satisfaction, results of the data analysis revealed that two of these variables were significantly correlated with several of the satisfaction factors. Significant correlations were found between the holding of an advanced degree and the following satisfaction factors: Group Work, Teaching Methods and Instructor, Text, Performance Work, and Overall Course. Results showed the course grade to be significantly correlated with the following satisfaction factors: Text, Performance Work, and Overall Course. The observed significance levels (Prob > F) for these two variables, after the influence of all other variables has been removed, are reproduced for easy reference in Table XVII and Table XVIII.

TABLE XVII

INSTRUCTOR VARIABLE AS A PREDICTOR OF COURSE SATISFACTION

	Prob > F*
Instructor (holding of advanced degree) and	
Factor 1 (Group Work)	.035*
Factor 2 (Teaching Methods and Instructor)	.004*
Factor 3 (Interpersonal Interaction)	.246
Factor 4 (Text)	.0007*
Factor 5 (Performance Work)	.016*
Factor 6 (Overall Course)	.002*

*A Prob > F of .05 or below is required for significance. The observed significance levels shown here are based on "instructor" scores after the influence of all other variables has been removed (Column 8, Tables V-X).

TABLE XVIII

COURSE GRADE VARIABLE AS A PREDICTOR OF COURSE SATISFACTION

	Prob > F*
Course Grade (points out of possible 1000) and	
Factor 1 (Group Work)	.752
Factor 2 (Teaching Methods and Instructor)	.224
Factor 3 (Interpersonal Interaction)	.081
Factor 4 (Text)	.0014*
Factor 5 (Performance Work)	.045*
Factor 6 (Overall Course)	.043*

*A Prob > F of .05 or below is required for significance. The observed significance levels shown here are based on "course grade" scores after the influence of all other variables has been removed (Column 8, Tables V-X).

Summary

This chapter presented the results of the statistical analysis. The statistical procedures were briefly reviewed. Reasons for the use of regression analysis were given. General findings were reported with regard to the satisfaction scale and the FIRO-B. Satisfaction means reported indicated that students were more satisfied than dissatisfied with the basic speech course. FIRO-B means indicated that students had strong needs to include others, be included by others, to give affection and to receive affection. Needs to control others and be controlled by others were not shown to be so strong.

FIRO-B scores were not found to be significant predictors of course satisfaction; thus, the six null hypotheses were not rejected at the .05

level of significance. Additional predictors explored, though not hypothesized, were found to be significantly correlated with course satisfaction. The holding of an advanced degree by an instructor was found to significantly predict five of the six factors associated with course satisfaction. Course grade was found to be a significant predictor of three of the six factors associated with course satisfaction.

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

Discussion

This study sought an answer to the following question: Are there facets of student self-concept that validly predict student satisfaction in the basic speech course? Six dimensions of self-concept as identified in Schutz's interpersonal need theory were selected as predictive facets of self-concept: expressed inclusion, wanted inclusion, expressed affection, wanted affection, expressed control, and wanted control. A factor analysis produced five factors associated with course satisfaction from among the 22 items on the course satisfaction scale used in this study. Regression analysis was used to determine the usefulness of the FIRO-B dimensions in predicting dimensions of course satisfaction. A discussion of results, recommendations, and a summary of the entire study are given in this chapter.

In interpreting the results of this study one must take into account the basic assumptions and limitations discussed in Chapter III. Certain questions still remain unanswered: Did the satisfaction scale actually provide a valid measure of student satisfaction in the basic speech course? Are there possible indicators other than the FIRO-B need areas that may be better predictors of course satisfaction? Are there discrepancies in the way Speech 2713 was structured to be taught and the way it was actually taught in those 28 sections studied? The discussion

that follows will address these questions in three areas: (1) the satisfaction scale as a valid measure of course satisfaction, (2) possible explanations of satisfaction or dissatisfaction in the basic course other than the FIRO-B need areas, and (3) factors that may have accounted for satisfaction or dissatisfaction in Speech 2713.

The validity of the satisfaction scale as an instrument for collecting authentic satisfaction data is subject to question. The general structure of the scale does not allow certain necessary distinctions to be made. In the dimension designated "Interpersonal Interaction," for example, high scores and low scores are not clear indicators of satisfaction or dissatisfaction. Low scores could indicate satisfaction with the quantity of interaction opportunities, or they could mean satisfaction with the quality of interaction. In the latter case, the student might approve the quality of interaction he experienced, yet still be dissatisfied with the number of interaction opportunities available to him in Speech 2713. Conversely, a high score might mean that the quantity of interaction was satisfactory but the quality was poor.

Such ambiguity has implications for results found in this study. Theory suggests that there should be a high correlation between need for inclusion and satisfaction with activities that allow for interpersonal interaction. Research results did not support this conclusion, possibly because of the ambiguities discussed above. Items relating to interpersonal interaction on the satisfaction scale can be variously interpreted; thus, the predictive potential of need for inclusion is necessarily lessened.

Other ambiguities in the satisfaction scale may have tended to distort results. A low score response to the item concerning the lecture

approach used in a particular section of Speech 2713 does not necessarily indicate student dissatisfaction with lecture. The score may simply indicate dissatisfaction with the lecture approach as implemented by that student's instructor. On the other hand, the student might dislike lectures in general. The scale score itself does not allow the interpreter to make that distinction with certainty. Though the Hunt and Sullivan model (57) would lead one to conclude that a person with a high need to be controlled would prefer the lecture method, the results in this case might not reveal that preference. The satisfaction scale, as designed, does not allow for making distinctions between students who dislike lectures in general and students who dislike the lectures they were exposed to in Speech 2713.

This particular difficulty is especially evident when one attempts to interpret results of this study. According to the theory presented earlier, students with a high need to be controlled (and thus a high desire for structure) should be satisfied in a highly structured course. That the study failed to show such a correlation does not mean it does not exist. Assuming that "highly structured" is acceptable as a valid description of Speech 2713, one cannot be sure that this is the <u>student's perception</u>. The satisfaction scale does not allow the students to rate Speech 2713 in terms of structure. Although the course fits Hunt and Sullivan's (57) criteria for high structure, student perception of its structure is not measured by the satisfaction scale. Thus, the researcher cannot be completely certain as to whether or not a need for control is significantly related to course satisfaction.

Similar ambiguities can be seen in several other items on the scale. Does Item 1 signify quantity or quality of interaction with

other students? Does Item 7 indicate quantity or quality of interaction with the instructor? Obviously, such ambiguities cannot be ignored in interpreting results obtained in this study.

Interpretation of results must also consider alternative explanations of course satisfaction. A theory advanced by McClelland (85) and Atkinson (3, pp. 3-30) holds that the capacity for satisfaction is affected by the drive to attain certain goals, by what McClelland has termed "achievement motivation." This achievement motive is considered a disposition to approach success. Attainment of a certain class of incentives or motives--achievement, affiliation, power--produce certain kinds of satisfaction: pride in accomplishment, or the sense of belonging and being warmly received by others, or the feeling of being in control and influential. Thus a motive is considered by McClelland and Atkinson as a capacity for satisfaction. The strength of such motivation as a possible predictor of course satisfaction certainly merits further consideration.

A second factor that may influence satisfaction scores also warrants additional exploration. There is some evidence that satisfaction in a learning situation is affected by changes that take place in the individual during a particular set of experiences. Downs (34) reports that in a laboratory training study involving students in human relations speech courses, the "subject's satisfaction with the experience is related to the type of changes that take place within him" (p. 204).

In that same study Downs concluded that the "nature of the laboratory experience creates peaks and valleys of satisfaction . . ." (p. 204). In his findings students experienced the greatest amount of satisfaction within the first eight weeks of school. The similarity in the

laboratory training techniques described by Downs and the interaction instruction used in Speech 2713 gives one cause to wonder about the possible affects of such "peaks and valleys of satisfaction" on the results of the present study, particularly since course evaluations were given during the fifteenth or sixteenth week of the course.

In addition to these general factors that may have affected outcomes in this research, specific factors associated with the nature of this particular course must also be considered. In particular it is conceivable that violated expectations and general instructional procedures may have affected research outcomes.

Wernimont (143) reports that "expectations with respect to what the 'work contract' consists of are very important to the satisfaction or dissatisfaction of persons on their jobs" (p. 49). In this study, a student's "actual work contract" in Speech 2713 may have had little direct relationship to his "expected work contract." Students in this study were given the FIRO-B without being instructed to indicate their "classroom" needs for affection, inclusion, and control. There is a possible discrepancy between student expectation with regard to fulfillment of these three needs in social settings and in classroom settings. "Violated expectations" may have influenced satisfaction scores because of stereotyped images some students hold of what <u>should</u> take place in a university classroom setting, despite what their interpersonal needs might indicate.

Smithers (127) concludes from his study of student expectations that students of different personality types tend to hold rather similar standards for lecture behavior. Bruce Tuckman (139) points out that while all educational programs cannot yield identical outcomes, some

students persist in using "conventional criteria" for judging even the most unconventional classes. The conventional model held by more than a few students in this study may well be that basic speech courses should be public-speaking oriented. Since that is not true in this case, distorted satisfaction scores may have resulted from this violated expectation.

Another violated expectation with regard to the "work contract" in Speech 2713 may result from the amount of paper work required in this course. In the three years this researcher has taught the course, one of the most common complaints registered by students in the course has been directed toward paperwork, or what students have termed "busywork." Apparently, students come into the course expecting many spoken communication activities and few or no written communication activities. Since four of the five objectives in Speech 2713 require a substantial amount of written work, violated student expectation may be speculated to occur with high frequency.

Three examples illustrate this point. None of the student's grade in the private discussion assignment is determined by his instructor's observation of how well the student implements discussion techniques. All 200 points for the assignment are determined solely by how well he and members of his group describe their group functioning on paper. In the case of the interview, 120 points out of 200 are awarded on the basis of written reports. The remaining 60 points are not awarded according to application of interview techniques, but on the basis of a brief oral report by the student on interview findings. Probably few students are convinced, in the case of the public speech assignment, that public speakers in the "real world" engage in as much written work

as they are required to do. Most who complain about this assignment declare that few public speakers have access to the magnitude of personal data (self-concepts, attitudes, knowledge level, etc.) about audience members that students in Speech 2713 are required to report. Some students seem to suspect that "real" speakers do not record in writing so many of the thoughts they have when analyzing an audience.

Student expectations in Speech 2713 apparently involve anticipation of much credit for performance work. Quite likely, these expectations are violated, particularly when students who write good justifications of why they conducted a bad interview earn more points than students who conducted good interviews but write bad justifications.

Other violated expectations may also have influenced satisfaction scores. These involve failure to apply fundamental communication principles in Speech 2713. Students in this basic course probably expect a substantial amount of interaction with instructors, direct feedback on performance achievement levels, and frequent opportunities for application of communication principles in classroom performance. Each of these expectations is probably violated for some students in Speech 2713.

First, interaction opportunities between instructor and student are severely limited. Several factors contribute to this limitation: class size, number of laboratory meetings, concern with forms associated with assignments, comprehensive coverage of subject matter built into the course, as examples. This limitation has an impact on the amount of feedback provided students in the course. Time usually does not permit any immediate feedback to students during the public speaking and public discussion presentations or during communication breakdown and interview reports. Two of the five objectives in the course are not usually

observed at all by an instructor. Obviously, no feedback is given to students on these two assignments as performance work.

By the same token, time restrictions inhibit the amount of discussion between instructors and students regarding transfer and application of the principles covered in Speech 2713. Transfer has never been shown to be automatic; it is certain to be decreased when students apparently place most value on public speaking activities, the kind that occur least frequently in the course. Thus, answers to typical student questions (Why am I doing this? How will I benefit? What application does it have in my life?) are not often provided except through occasional one-to-one interaction during the instructors' office hours.

Violated expectations probably also resulted in positive affects on student ratings in course satisfaction. For example, some students may have been pleasantly surprised by the number of interpersonal communication encounters in a course they had expected to be public-speaking oriented. Also unexpected for some students may have been the practical and immediate application potential of the material covered in Speech 2713. Others may have been favorably impressed with the opportunities for redoing assignments for additional points and being reassessed without loss of points, something they may not have been accustomed to in more conventional courses. Likewise, the specificity of instructions and criteria for each objective may have violated the expectation of students who had been accustomed to vague or undisclosed course objectives and assignment requirements.

Possibly another factor related to course satisfaction in Speech 2713 lies in "real"--though maybe not "intended"--instructional focus. Learning to follow written instructions in filling out preprinted forms

seems to become a primary focus in the course for many students. Some would argue that this preoccupation with forms is a residual outgrowth of implementing behavioral objectives in a speech course, as is done in Speech 2713. Aronoff (2) assumes the position that behavioral objectives in a speech course result in a return to the linear, static theory of communication implicit in the Shannon-Weaver model. He argues that controlled observation of specific objectives calls for a kind of linear classroom control. "The formulation and implementation of behavioral objectives requires the implicit adoption of behavioral perspectives in opposition to the process perspective on which communication theory is based" (2, p. 11). While Aronoff has many opponents in this matter (52, 138), one cannot afford to ignore his warning when considering the factors that may influence satisfaction in a speech course taught by behavioral objectives.

Results of this study, though negative in terms of the relationships hypothesized, cannot be taken as conclusive. They must be considered in light of the ambiguities in the course satisfaction scale, possible violated expectations experienced by students in Speech 2713, and explanations of course satisfaction other than the ones hypothesized.

Recommendations

Future research investigating the relationship between self-concept and course satisfaction should avoid as many of the problems encountered in the present study as possible. Obviously, efforts should be made to eliminate the limitations attached to this study.

Those who explore the problem presented in this study may wish to use some form of discriminatory analysis to determine what personality

characteristics separate students into two groups: generally satisfied and generally dissatisfied.

Further research should be directed toward exploring factors other than self-concept variables that are valid predictors of course satisfaction. Since "the instructor" was shown to be a significant variable in this study, further study of the interaction between instructor variables and course satisfaction may be of particular interest. Investigation in this regard should explore the relationships among instructor self-perceptions, instructor attitude toward the course, student self-concepts and student attitudes toward both the instructor and the course.

Obtaining an accurate and representative measure of student course satisfaction may have been a problem in the present research. Special efforts should be made to develop a scale or series of scales that give an authentic accurate measure of student satisfaction. Reliable and valid measures of student satisfaction in basic speech courses may differ from those measures applicable in other types of courses. Such differences need to be determined.

Because some students are known to have unfavorable preconceptions about speech courses, tapping students' attitudes upon entering these courses may be advisable. Since there is evidence that satisfaction peaks and falls during learning experiences, perhaps more than one measure of satisfaction should be taken during a given semester in a particular course. A residual effect of such efforts would provide instructors with information that would allow them to have an impact on course satisfaction during a given semester.

In addition, the factors that contribute to achievement motivation

and motivation in general should be studied as possible predictors of course satisfaction.

Possibly the strongest recommendation to grow out of this research is the further study of student expectations as they relate to course satisfaction. Methods of measuring students' initial attitudes toward the basic speech course need to be developed. Of particular value might be a measure of a student's "expected work contract" in the course. Student ratings in this study indicated an almost neutral evaluation of "performance work." These ratings might be accounted for by violated student expectations. Students seem to expect a substantial amount of performance work in the work contract for the basic speech course. One or more measures could be taken during a semester regarding the work contract to determine if violated expectations have the same negative impact on course satisfaction that they have on job satisfaction.

Finally, future research utilizing improved data collection procedures should replicate the present research. Under improved research conditions, self-concept measures may be shown to be valid predictors of course satisfaction.

Summary of Study

The problem explored in this study concerned the relationship between self-concepts of students and their satisfaction in the basic speech course. Two primary objectives served as goals of this research: (1) to contribute to the development of the theoretical position that students with different needs should be instructed by different methods; (2) to yield data useful in helping students in basic speech courses such as the one described in this study to choose among these

instructional options: primarily lecture, primarily interaction, or primarily independent study. Ultimate goals of the study are to enable speech educators to maximize match between learning environment and student needs and thusly contribute to the positive development of students' self-concepts as a result of the maximal self-fulfillment they experience in the basic speech course.

To guide this research, six null hypotheses were formulated and tested:

Hypothesis 1. There is no relationship between expressed inclusion and satisfaction in the basic speech course.

Hypothesis 2. There is no relationship between wanted inclusion and satisfaction in the basic speech course.

Hypothesis 3. There is no relationship between expressed affection and satisfaction in the basic speech course.

Hypothesis 4. There is no relationship between wanted affection and satisfaction in the basic speech course.

Hypothesis 5. There is no relationship between expressed control and satisfaction in the basic speech course.

Hypothesis 6. There is no relationship between wanted control and satisfaction in the basic speech course.

To test these hypotheses, subjects were selected from the total enrollment in the basic speech course at Oklahoma State University, Spring, 1975. The 435 subjects were selected on the basis of accurately completed FIRO-B forms and accurately completed course satisfaction forms. The former were administered as a part of a routine diagnostic measure given in two large lecture sessions to all students present during the second week of classwork. The satisfaction scale was

administered as a "departmental course evaluation" during the last two weeks of classwork to all students present.

The satisfaction scale was designed to be accepted by students as a course evaluation measure. The FIRO-B was selected as the most valid, reliable measure available to measure interpersonal needs as specific facets of self-concept.

Statistical analysis involved, first, a factor analysis of the items on the satisfaction scale. This analysis yielded five factors which seemed to be fairly independent dimensions of student satisfaction in Speech 2713: (1) Group Work; (2) Teaching Methods and Instructor; (3) Interpersonal Interaction; (4) Text; and (5) Performance Work. Before running the multiple regression analysis on this data, a sixth dimension was added: Overall Course Satisfaction. None of the relationships hypothesized were found to be statistically significant. Self-concept measures were not found to be valid predictors of course satisfaction. However, of the three predictors explored but not hypothesized, two were found significant as predictors of course satisfaction. "The holding of an advanced degree by the instructor" was found significantly related to student satisfaction with the following: Group Work, Teaching Methods and Instructor, Text, Performance Work, and Overall Course Satisfaction. "Course grade" was found significantly related to satisfaction with Performance Work and the Text plus Overall Course Satisfaction.

Results of this research were interpreted in light of three primary considerations: (1) the assumptions and limitations of the study (particularly the structure of the satisfaction scale), (2) factors other than self-concept that may account for course satisfaction, and

(3) special characteristics of the particular basic speech course studied which may have contributed strongly to satisfaction scores.

The following assumptions may have had particular implications for results obtained in this research:

1. Students in this study were not atypical;
2. The time of day students were enrolled in Speech 2713 did not influence responses on the satisfaction scales;
3. The fact that students were required to put their names on the satisfaction scales did not influence their responses;
4. The satisfaction scale gave a dependable measure of student satisfaction.

Several limitations may have affected the results reported in this study:

1. Self-report inventories (such as the FIRO-B) do not always produce honest, objective responses.
2. Differences in instructor attitude and instructor self-concepts were not measured. These differences may interact with student self-concepts in affecting course satisfaction.
3. Students in required courses (as reported earlier) tend to rate them lower than they rate elective courses.
4. Results may have been affected by limitations inherent in the nature of this study, the nature of the sample, the nature of Speech 2713, the nature of the subject matter, and class size in this basic speech course.

A second consideration in interpreting the results of this study is that factors other than self-concept may have contributed significantly to course satisfaction scores. Results of this study indicate that is

true of degree held by instructor and the grade earned in the course. Additional factors need attention. Several studies in course evaluation have shown that success in previous similar courses, changes that take place in a student during a learning experience, achievement motivation and student versus instructor expectations play significant roles in course satisfaction.

Finally, findings about the factors that most influence course satisfaction scores cannot be taken as conclusive without considering peaks and falls in satisfaction that have been shown to occur during learning experiences.

The findings of this study were also interpreted in view of special characteristics of the particular basic speech course studied in this research. This course (Speech 2713) may violate student expectations, particularly with regard to amount of performance work, as compared with written work plus the opportunities for one-to-one interaction for feedback, and for discussion related to transfer of principles covered. Focus in the course, possibly because of the behavioral approach, may seem inappropriate to students in a speech course, a number of whom have complained of busywork and emphasis on learning to follow instructions.

Because of these factors, which may have affected research results, the following recommendations were made:

1. Discriminatory analyses may need to be performed in future studies to determine what student characteristics predict these two categories: generally satisfied and generally dissatisfied.
2. Additional research should be undertaken to determine what factors other than self-concept are closely associated with course

satisfaction.

3. The interactions among instructor self-perception, instructor attitude toward the course, student self-concepts, and student attitudes toward the instructor and the course should be studied.
4. Reliable, valid instruments for measuring satisfaction in the basic speech course should be developed.
5. Measures should be taken in future studies to account for peaks and falls in satisfaction during a given course.
6. Initial attitudes of students toward speech training should be considered in measuring end-of-course satisfaction in the basic speech course.
7. Factors that contribute to achievement motivation and motivation in general should be studied as possible predictors of course satisfaction.
8. Violation of expectations should be explored intensely as a primary factor in course satisfaction, particularly in the basic speech course.
9. The present research should be replicated under improved conditions.

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APPENDIX A

SAMPLE OBJECTIVE FROM SPEECH 2713

1. Encounter #1 - Objective 4.4: "Describe a speech communication problem you personally observed; identify, name, and describe the barriers to effective information inputting and processing; and describe strategies for overcoming these barriers."

The satisfactory completion of Encounter #1 was based on the following criteria:

1. You must adequately report the speech communication problem you personally observed.
2. Your statements of observation and inference must be clearly distinguished throughout your conversation with your classmate.
3. Your analysis of the case study must accurately and appropriately identify at least one inputting or one processing barrier.
4. Your analysis of the case study must accurately and appropriately name the barriers identified.
5. Your analysis of the case study must accurately and appropriately describe each named barrier.
6. You must accurately describe a strategy for overcoming the named barrier.
7. The above description must appropriately describe a strategy for overcoming the named barrier.

The evaluation form for Encounter #1 filled out by the instructor is reproduced below:

INSTRUCTOR ASSESSMENT
Form 4.4
Terminal-Enabling

Student's Name_____
ID Number_____
Course Section_____ Date_____
Instructor_____

Rating Scale				Criteria
	adequate	weak	inadequate	
(25)	____	____	____	1. Report of the Incident
(25)	____	____	____	2. Statements of Observation vs. Statements of Inference
(10)	____	____	____	3. Identify Barrier
(10)	____	____	____	4. Name Barrier
(10)	____	____	____	5. Describe Barrier
(10)	____	____	____	6. Accurate Strategy
(10)	____	____	____	7. Appropriate Strategy

EVALUATION:

DECISION:

APPENDIX B

SPEECH 2713 COURSE SYLLABUS

SPRING SEMESTER, 1975

As you come into this speech communication course, we recognize the fact that you have been speaking and listening all of your life. We also recognize that, probably, you already are quite proficient in communicating with most people in most situations. But what this course is designed to do is to give you the opportunity to explore those communication encounters that are difficult for you personally and to develop your proficiency in coping with those encounters. Our experience with thousands of college students during the last ten years indicates that most students need and want to improve their skills in describing and analyzing communication breakdowns, conducting interviews, presenting public speeches, participating in private discussion groups, and presenting public discussions to an audience.

More than likely this course will be different from most of the courses you have taken before. A number of the newest and most efficient learning concepts have been incorporated into this course to help you learn as much as possible without working harder than you would in any other course. These learning concepts have also been incorporated into your textbook. Your text for this course is:

> Jim D. Hughey and Arlee W. Johnson. Speech Communication: Foundations and Challenges. New York: Macmillan Publishing Company, Inc., 1975.

OBJECTIVES

One of the learning concepts used in Speech 2713 is that the student will always know what is expected of him. Not only will you know what you are to do but also you will know the exact criteria that will be used to evaluate your work. The first major objective of this course requires you to describe and analyze communication barriers and breakdowns you have observed. A formal statement of this objective can be found on page 46 of your text. (A complete discussion of the assessments for this objective is found on pages 86 and 455 in your text.)

The second major course objective requires you to plan, conduct, and evaluate an information-getting interview. The objective is formally stated on page 156. (For a complete discussion of the assessment

for this objective see pages 186 and 465.)

For the third course objective we ask you to plan, present, and evaluate an information-giving public speech. This objective is stated on page 346 of your text. (For a complete discussion of the assessment for this objective see pages 374 and 505-506.)

In meeting the fourth course objective you will plan for, participate in, and evaluate a problem-solving private discussion. This objective is stated on page 214. Your instructor will provide you with a hand-out that describes the assessment for this objective.

Finally, we ask you to demonstrate how to plan for, participate in, and evaluate a persuasive public discussion. You can find the objective on page 320 of your text. (For a complete discussion of the assessment for this objective see page 495.)

We hope that the information we have provided thus far in this syllabus will go a long way toward fulfilling the first learning concept utilized in this course--that you will always know what is expected of you.

INDIVIDUALIZED INSTRUCTION AND COURSE MECHANICS

A second learning concept used in this course is that instruction is carried out through an individualized approach; the instruction is tailored to fit you in these specific ways:

Advanced Standing Exam. One way instruction is individualized is through the Advanced Standing Examination. This exam allows you to test out of certain parts of the course. The Advanced Standing Exam will be given Monday, January 20, in Seretean Center 125 at 11:30 a.m. and 12:30 p.m.

Textbook. A second way instruction is individualized in this course is through your textbook. Unlike most textbooks, Speech Communication: Foundations and Challenges contains almost all of the instruction you need. It provides explanations of assignments and criteria that will be used to evaluate your work. There are three kinds of objectives in this course.

First are self-assessed objectives. You test yourself on these objectives.

The second kind of objective is the instructor-assessed enabling objective. On these objectives your instructor evaluates your work and merely checks off whether you meet the 70% level of proficiency or not. Instructor-assessed enabling objectives in this course are numbered in your textbook as Objectives 3.2, 7.2, 9.2, 12.3, 13.2.

Finally, there are instructor-assessed terminal objectives. These have already been listed as the five objectives you will achieve in this

course. Instructor-assessed terminal objectives are evaluated and points are awarded that determine your course grade.

Following the listing of objectives in each unit is the learning sequence. The learning sequence shows you the relationship of one objective to another; it indicates the order in which the objectives should be taken up. The prerequisites for meeting the objectives come next. Then each specific objective is taken up, along with the necessary instructional material in the form of learning activities.

By providing all of these instructional materials in your textbook, you can do much of the learning necessary for this course in your own way. You can decide which activities do the best job of helping you meet the objectives.

The third learning concept used in this course is the concept of reassessment. Let's say you are working on Unit 7. (Give Unit 7 a good looking over.) When you can perform the self assessments, you are ready to meet the instructor-assessed enabling objective (Objective 7.2) for the unit. You go to your instructor and request an assessment for the objective you think you have mastered. After you complete the assessment, your instructor will check it. If your performance meets the 70% minimal standard we have set for acceptable performance, you will be given a "pass" for that instructor-assessed enabling objective.

But what if you mess up on the assessment for the instructor-assessed enabling objective? Is there a penalty for performing unacceptably on the enabling assessment? No! Unbelievable but true! You may perform an assessment for an instructor-assessed enabling objective more than once and there is <u>no</u> penalty, no "F," not even a dirty look from the instructor. But you cannot perform the assessment for that same enabling objective again until you complete one or more specified activities that we call a recycling program. If you do not perform an assessment acceptably, it means one of several things, one of which may be that you did not actually do the activities and self assessments in the instructional materials. Of course, we recommend that you do the activities (especially Activity A in each case) before being assessed by your instructor and REQUIRE that you do some of the activities before being assessed for a second time. In fact, your instructor may ask you to work and hand in a self assessment before he allows you to attempt reassessment on an objective you have not passed.

After performing successfully on the enabling assessments, you are in a position to meet the assessment for the terminal objectives. This task has points associated with it.

To pass the assessment you must make at least 60% of the points possible. If you do not pass or decide you want to do an assessment again in a try for a higher grade, you may ask for a second assessment for the objective, AFTER YOU HAVE GONE THROUGH THE RECYCLING PROGRAM SPECIFIED BY YOUR INSTRUCTOR. After the first trial on an assessment with points associated with it, 80% of the points is the highest possible score.

The second trial for any terminal objective must be executed within five days of the date indicated on the schedule. After that period, the original score is considered permanent.

Not only will you have the opportunity to be assessed during your regularly scheduled lab sessions but one evening a week there will be an Advanced Standing and Reassessment FEST (festival). This will be overtime for us, but we really want you to succeed in this course! (You will be given the day and time for the weekly FEST at your first class-meeting.)

GRADES

So the concept of "one shot" exams is out! Your grade in the course is determined by the proficiency by which you perform the assessments associated with the enabling and terminal objectives!

The final learning concept used in this course is that you will always know exactly how you are doing in the course. You can keep your own grade record. Here is a point breakdown on all terminal objectives in this course:

OBJECTIVE NUMBER	POINTS POSSIBLE	POINTS ACHIEVED
4.4	200	____
7.3	200	____
13.4	200	____
9.3	200	____
12.4	200	____
	1000 Total Possible	____ Total Achieved

The grading scale in this course is:

A = 90 - 100% (900 - 1000)
B = 80 - 89% (800 - 899)
C = 70 - 79% (700 - 799)
D = 60 - 69% (600 - 699)
F = 0 - 59% (0 - 599)

Believe it or not, we think everyone enrolled in this course is capable of getting an "A." Why? Because:

1. You have a "second shot" on assignments.

2. You always have an indication of how well you are doing on the material. The enabling objectives are checked off by your instructor before you are graded on a performance. This gives you a chance to increase your competency before points are awarded.

3. The instruction has been designed for efficient learning.

4. Everyone starts the course at his own level of ability.

5. The instructor sincerely wants you to succeed.

But what about you? You must want to succeed, too. We think you do, and we're counting on you!

SCHEDULE

Monday January 13	Tuesday & Wednesday January 14 & 15	Thursday & Friday January 16 & 17
Introduction to the course.	Introductions and Goal Setting.	Lecture-Discussion-Activities on Nature of Speech Communication.
Monday January 20	Tuesday & Wednesday January 21 & 22	Thursday & Friday January 23 & 24
Diagnostic and Advanced Standing Examination.	Lecture-Discussion-Activities in Inputting, Processing and Outputting.	Lecture-Discussion-Activities on Observation-Inference Confusion.
	Read Objective 4.1 before coming to class	Read Objective 4.2 before coming to class.
Monday January 27	Tuesday & Wednesday January 28 & 29	Thursday & Friday January 30 & 31
Multi-media presentation and lecture in Communication Barriers & Corrective Strategies.	Lecture-Discussion-Activities on Communication Barriers and Corrective Strategies.	Communication Problems and Corrective Strategies Conversations.
Read Objectives 4.3 & 4.4 before coming to class.		Terminal Assessment 4.4 due at beginning of period.
Monday February 3	Tuesday & Wednesday February 4 & 5	Thursday & Friday February 6 & 7
Lecture and Film on Self Concept and Interviewing.	Communication Problems and Corrective Strategies Conversations.	Lecture-Discussion-Activities on Transceiver Analysis.
Read Objectives 5.1, 5.2, 6.1, and 7.1 before coming to class.	Terminal Assessment 4.4 due at beginning of period.	Read Unit 6 before coming to class.

SCHEDULE

Monday February 10	Tuesday & Wednesday February 11 & 12	Thursday & Friday February 13 & 14
Lecture on Interviewing. Quiz on Interviewing. Enabling Assessment 7.2 due at the end of period. Read Unit 7 before coming to class.	Conduct Interviews for Terminal Assessment 7.3.	Lecture-Discussion-Activities on Nonverbal Components of Message. Read Unit 11 before coming to class.
Monday **February 17**	**Tuesday & Wednesday** **February 18 & 19**	**Thursday & Friday** **February 20 & 21**
Lecture on Information-Giving, Information from printed sources and Verbal Components of Message. Read Objective 5.3 and Units 8 & 10 before coming to class.	Oral Reports on Interviews. Terminal Assessment 7.3 due. We also will be doing Self-Assessment 11.1.	Oral Reports on Interviews. Terminal Assessment 7.3 due. We also will be doing Self-Assessment 11.1. Your instructor also will ask you to tell him what subject you have chosen for your public speech.
Monday February 24	Tuesday & Wednesday February 25 & 26	Thursday & Friday February 27 & 28
Lecture on Public Speaking. Read Unit 13 and Objective 12.2 before coming to class.	Oral Reports on Interviews. Terminal Assessment 7.3 due. We also will be doing Self-Assessment 11.1.	Public Speaking Activities. Audience Analysis Questionnaires.
Monday March 3	Tuesday & Wednesday March 4 & 5	Thursday & Friday March 6 & 7
Lecture on Public Speaking.	Impromptu Speeches. Enabling Assessment 13.2 Planning stage of Terminal Assessment 13.4 due for Group I.	Impromptu Speeches. Enabling Assessment 13.2 Planning stage of Terminal Assessment 13.4 due for Group II.

SCHEDULE

Monday March 10	Tuesday & Wednesday March 11 & 12	Thursday & Friday March 13 & 14
SPRING RECESS	SPRING RECESS	SPRING RECESS
Monday March 17	Tuesday & Wednesday March 18 & 19	Thursday & Friday March 20 & 21
Lecture on Private Discussion.	Information-Giving Speeches, Group I.	Information-Giving Speeches, Group II.
Read Unit 9 and Objective 5.4 before coming to class.	Planning stage of Terminal Assessment 13.4 due for Group III.	Planning stage of Terminal Assessment 13.4 due Group IV.
		Evaluation stage due for Group I.
Monday March 24	Tuesday & Wednesday March 25 & 26	Thursday & Friday March 27 & 28
Preliminary Group Meeting.	Information-Giving Speeches, Group III.	Information-Giving Speeches, Group IV.
	Planning stage of Terminal Assessment 13.4 due for Group V.	Planning Stage of Terminal Assessment 13.4 due for Group VI.
	Evaluation stage due for Group II.	Evaluation stage due for Group III.
Monday March 31	Tuesday & Wednesday April 1 & 2	Thursday & Friday April 3 & 4
Group Quizzes on Private Discussion.	Information-Giving Speeches, Group V.	Information-Giving Speeches, Group VI.
Enabling Assessment 9.2.	Evaluation stage due for Group IV.	Evaluation stage due for Group V.
Monday April 7	Tuesday & Wednesday April 8 & 9	Thursday & Friday April 10 & 11
Communication Challenges Lecture.	Private Group Meetings.	Private Group Meetings.
Read Units 14, 15, 16, 17, and 18 before coming to class.		
Evaluation stage due for Group VI.		

SCHEDULE

Monday April 14 Lecture-Discussion. Activities on Public Discussion. Read Unit 12 before coming to class.	Tuesday & Wednesday April 15 & 16 Debriefing on Private Discussion Experience. Terminal Assessment 9.3 due at beginning of class period.	Thursday & Friday April 17 & 18 Lecture-Discussion. Activities on Persuasion. Read Objective 5.5 before coming to class.
Monday April 21 Group Quizzes on Public Discussion. Enabling Assessment 12.3. Communication Challenges Reports due.	Tuesday & Wednesday April 22 & 23 Public Discussion Presentations, Group I.	Thursday & Friday April 24 & 25 Public Discussion Prestations, Group II. Evaluation Stage, Group I.
Monday April 28 Communication Challenge. Oral Reports.	Tuesday & Wednesday April 29 & 30 Public Discussion Presentations, Group III. Evaluation Stage, Group II.	Thursday & Friday May 1 & 2 Public Discussion Presentations, Group IV. Evaluation Stage, Group III.

FINAL EXAM PERIOD

Evaluation stage, Group IV.

Make-ups.

Consultation.

APPENDIX C

DEPARTMENTAL COURSE EVALUATION

(SATISFACTION SCALE)

SPEECH 2713

NAME_____ Section Number_____

INSTRUCTIONS: IN THE BLANK PROVIDED PUT THE NUMBER INDICATING THE RESPONSE MOST APPLICABLE, IN YOUR OPINION. THE FIRST 10 ITEMS REFER TO ACTIVITIES IN YOUR DISCUSSION SECTION IN SPEECH 2713. ITEMS 11-20 RELATE TO THE FIVE TERMINAL OBJECTIVES IN SPEECH 2713. ITEMS 21-22 RELATE TO YOUR GENERAL REACTION TO SPEECH 2713. LEAVE NO BLANKS.

SPEECH 2713 -- ACTIVITIES IN DISCUSSION SECTIONS (Tues. & Thurs. or Wed. & Fri.)

____ 1. I enjoyed discussion section activities that provided interpersonal interaction.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 2. I learned a lot from discussion section activities that provided interpersonal interaction.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 3. I enjoyed the lecture approach used in my discussion section.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 4. I learned a lot from the lecture approach used in my discussion sections.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 5. I liked the fact that most of the needed instructions for assignments were in the text.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 6. I learned a lot from the textbook.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 7. I was satisfied with the manner in which my discussion section instructor interacted with me.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 8. I learned a lot from my discussion section instructor.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 9. I was satisfied with the opportunity for becoming acquainted with the students in my discussion sections.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 10. I learned a lot through my interaction with students in my discussion section.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

PART II -- TERMINAL OBJECTIVES (In order as they were covered in Speech 2713)

____ 11. I enjoyed the communication problem assignment (4.4).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 12. I learned a lot from the communication problem assignment (4.4).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 13. I enjoyed the interview assignment (7.3).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 14. I learned a lot from the interview assignment (7.3).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 15. I enjoyed the information speech assignment (13.4).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 16. I learned a lot from the information speech assignment (13.4).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 17. I enjoyed the private discussion assignment (9.3).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 18. I learned a lot from the private discussion assignment (9.3).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 19. I enjoyed the public discussion assignment (12.4).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 20. I learned a lot from the public discussion assignment (12.4).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 21. I enjoyed this course (Speech 2713).
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

____ 22. I learned a lot from this course.
1. Strongly agree
2. Agree
3. Neutral (or does not apply)
4. Disagree
5. Strongly disagree

APPENDIX D

FIRO-B

FOR EACH STATEMENT BELOW, DECIDE WHICH OF THE FOLLOWING ANSWERS BEST APPLIES TO YOU. PLACE THE NUMBER OF THE ANSWER OF YOUR CHOICE ON YOUR ANSWER SHEET. PLEASE BE AS HONEST AS YOU CAN.

1. usually	2. often	3. sometimes
4. occasionally	5. rarely	6. never

21. I try to be with people.

22. I let other people decide what to do.

23. I join social groups.

24. I try to have close relationships with people.

25. I tend to join social organizations when I have an opportunity.

26. I let other people strongly influence my actions.

27. I try to be included in informal social activities.

28. I try to have close, personal relationships with people.

29. I try to include other people in my plans.

30. I let other people control my actions.

31. I try to have people around me.

32. I try to get close and personal with people.

33. When people are doing things together I tend to join them.

34. I am easily led by people.

35. I try to avoid being alone.

36. I try to participate in group activities.

FOR EACH OF THE NEXT GROUP OF STATEMENTS, CHOOSE ONE OF THE FOLLOWING ANSWERS:

1. most people 2. many people 3. some people
4. a few people 5. one or two people 6. nobody

37. I try to be friendly to people.

38. I let other people decide what to do.

39. My personal relations with people are cool and distant.

40. I let other people take charge of things.

41. I try to have close relationshionships with people.

42. I let other people strongly influence my actions.

43. I try to get close and personal with people.

44. I let other people control my actions.

45. I act cool and distant with people.

46. I am easily led by people.

47. I try to have close, personal relationships with people.

FOR EACH OF THE NEXT GROUP OF STATEMENTS, CHOOSE ONE OF THE FOLLOWING ANSWERS:

1. most people 2. many people 3. some people
4. a few people 5. one or two people 6. nobody

48. I like people to invite me to things.

49. I like people to act close and personal with me.

50. I try to influence strongly other people's actions.

51. I like people to invite me to join in their activities.

52. I like people to act close toward me.

53. I try to take charge of things when I am with people.

54. I like people to include me in their activities.

55. I like people to act cool and distant toward me.

56. I try to have other people do things the way I want them done.

57. I like people to ask me to participate in their discussions.

58. I like people to act friendly toward me.

59. I like people to invite me to participate in their activities.

60. I like people to act distant toward me.

FOR EACH OF THE NEXT GROUP OF STATEMENTS, CHOOSE ONE OF THE FOLLOWING ANSWERS:

1. usually	2. often	3. sometimes
4. occasionally	5. rarely	6. never

61. I try to be the dominant person when I am with people.

62. I like people to invite me to things.

63. I like people to act close toward me.

64. I try to have other people do things I want done.

65. I like people to invite me to join their activities.

66. I like people to act cool and distant toward me.

67. I try to influence strongly other people's actions.

68. I like people to include me in their activities.

69. I like people to act close and personal with me.

70. I try to take charge of things when I'm with people.

71. I like people to invite me to participate in their activities.

72. I like people to act distant toward me.

73. I try to have other people do things the way I want them done.

74. I take charge of things when I'm with people.

APPENDIX E

PILOT SATISFACTION SCALE

1. Strongly Agree 2. Agree 3. Neutral (doesn't apply)
4. Disagree 5. Strongly Disagree

___ 1. I enjoyed lab activities that involved small groups.

___ 2. I learned something of value from others in small groups in my lab.

___ 3. I participated willingly when I was working in small group activities.

___ 4. I preferred small group activities to working by myself.

___ 5. I liked being included in class discussion.

___ 6. Other students in my lab included me in activities.

___ 7. My lab instructor included me in activities.

___ 8. I was included in activities to a satisfying degree.

___ 9. The more I was included in lab activities, the more I felt I was learning.

___ 10. Lectures bothered me because I felt I was not personally involved.

___ 11. I made a strong effort to become involved in lab activities.

___ 12. I felt my presence as a listener in my lab was important to my classmates when they were performing.

___ 13. I was more likely to become bored in my lab when I felt I was being ignored.

___ 14. The arrangement of the chairs in my lab affected my sense of involvement.

___ 15. I was glad that I was encouraged to participate in activities I might not have participated in voluntarily.

___ 16. Those in my lab who were included in activities seemed to be enjoying the class more than those who were not.

___ 17. I was glad that lab met more often than the lecture.

___ 18. I felt frequency of attendance affected the student's sense of involvement in lab.

___ 19. I believe that the amount of interaction among people in a speech course is strongly related to how much students benefit from such a course.

___ 20. The opportunity for interaction in this course is sufficiently high.

1. Strongly Agree 2. Agree 3. Neutral (doesn't apply)
4. Disagree 5. Strongly Disagree

___ 1. Students in my lab knew my first name.

___ 2. Students in my lab liked me.

___ 3. My lab instructor liked me as a person.

___ 4. I like a warm personal atmosphere in lab.

___ 5. One-to-one relationships in my lab were satisfying to me.

___ 6. The interview assignment made me feel more personally involved in my lab.

___ 7. There was a warm, personal atmosphere in my lab.

___ 8. There were adequate opportunities to develop close relationships in my lab.

___ 9. I came to better understand myself and my personal needs as a communicator because of personal interaction in my lab.

___ 10. My lab instructor cared about me as a student.

___ 11. My classmates in my lab seemed to want me to do well in public speaking situations.

___ 12. I made a strong effort to be warm and friendly to others in my lab section.

___ 13. There were sufficient opportunities from which I could draw conclusions about how much people liked me in my lab.

___ 14. I saw evidence in my lab experiences that "liking" among communicators does affect the nature of communication encounters.

___ 15. I was satisfied with my contribution to the communicative climate in my lab.

___ 16. I could see evidence that my classmates were satisfied with my contribution to the communication climate in my lab.

___ 17. I enjoyed seeing signs of approval (verbal and non-verbal) from my lab classmates.

___ 18. Communicating with others seems easier when they are warm, friendly, and accepting.

___ 19. No one in my lab seemed to condemn me as a person.

___ 20. I believe that lecture alone (without a lab setting) would not have provided the desired atmosphere for discovering how attraction (liking) affects communication.

1. Strongly Agree 2. Agree 3. Neutral (doesn't apply)
4. Disagree 5. Strongly Disagree

___ 1. I enjoyed lab activities which allowed me to make decisions.

___ 2. My lab instructor encouraged me to make decisions.

___ 3. I accepted the reasons given for doing the assignments in this course.

___ 4. I did <u>not</u> expect to be given detailed instructions for doing assignments by my lab instructor.

___ 5. I made a strong effort to discover what was expected of me without becoming overly dependent on my lab instructor.

___ 6. I accepted responsibility in group activities willingly.

___ 7. I was given adequate opportunity to experience a leadership role in my lab.

___ 8. I was given adequate opportunity to experience the value of cooperation with others in my lab.

___ 9. I came to discover the significance and value of interdependence among people in my lab.

___ 10. My influence on my classmates was acceptable to me.

___ 11. My influence with my instructor was acceptable to me.

___ 12. There was a satisfactory relationship between responsibility I was given in this course and responsibility I was willing to assume.

___ 13. I was satisfied with the encouragement I was given to be an active student in my lab.

___ 14. If I had been given greater free choice, I would not have been able to improve on the basic assignments for a beginning speech course.

___ 15. I accept structure as a necessary element in any course.

___ 16. If I were in charge of this course, I would try to meet many students' needs.

___ 17. I was primarily responsible for how much I gained from this course.

___ 18. My responses and suggestions did not go unacknowledged in this course.

___ 19. I enjoyed lab activities that enabled me to help classmates who seemed to be having difficulties with an assignment.

___ 20. This course is designed to improve a person's ability to control the responses of others in communication encounters.

APPENDIX F

INSTRUCTORS OF SPEECH 2713, SPRING, 1975

EDUCATIONAL PROFILE

INSTRUCTOR	HIGHEST EARNED DEGREE: JAN., 1975*	HOURS ABOVE THAT DEGREE: JAN., 1975	YEARS OF TEACHING EXPERIENCE INCLUDING SPRING, 1975	NUMBER OF SEMESTERS TEACHING SPEECH 2713 AT OSU, INCLUDING SPRING, 1975
1	Ph.D.	0	10	4
2	Ph.D.	0	6	1
3	M.A.	30	13	5
4	M.A.	0	3½	7
5	M.A.	0	13	1
6	B.A.	30	3	4
7	B.A.	24	5½	4
8	B.A.	24	1½	3
9	B.A.	18	1	1
10	B.S.	12	½	1
11	B.A.	9	3	2

*One M.A. reported was not in Speech Communication, but in English. All other degrees reported are in Speech Communication.

APPENDIX G

INSTRUCTORS OF SPEECH 2713, SPRING, 1975

ATTITUDES TOWARD SPEECH 2713

ITEMS ON AN ANONYMOUS SURVEY AMONG THE ELEVEN INSTRUCTORS IN SPEECH 2713	NUMBER OF INSTRUCTORS RESPONDING IN EACH CELL				
	Very Positive	Positive	Positive With Reservations	Negative	Very Negative
1. Course in general	3	5	3	0	0
2. Communication Problem Assignment (4.4)	3	4	4	0	0
3. Interview Assignment (7.3)	1	2	7	1	0
4. Informative Speech Assignment (13.4)	1	3	7	0	0
5. Private Discussion Assignment (9.3)	0	1	8	2	0
6. Public Discussion Assignment (12.4)	1	4	4	2	0
7. Text, 1975 Edition	0	1	8	2	0
8. Format of Course	0	2	5	3	1

APPENDIX H

STATISTICAL ANALYSIS SYSTEM

	1	2	3	4	5
R1	0.077	-0.481*	-0.330	0.057	-0.358
R2	0.171	-0.515*	-0.206	0.184	-0.362
R3	0.168	-0.754*	-0.030	0.141	0.009
R4	0.263	-0.764*	0.000	0.165	-0.090
R5	0.065	-0.128	-0.110	0.830*	-0.023
R6	0.121	-0.180	-0.073	0.807*	-0.187
R7	-0.071	-0.742*	-0.172	0.077	-0.151
R8	0.122	-0.740*	-0.118	0.000	-0.314
R9	0.204	-0.164	-0.694*	0.114	0.055
R10	0.241	-0.138	-0.734*	0.046	-0.115
R11	0.209	-0.171	-0.171	0.345	-0.543*
R12	0.265	-0.121	-0.167	0.360	-0.608*
R13	0.128	-0.058	-0.749*	0.090	-0.223
R14	0.184	-0.090	-0.709*	0.067	-0.350
R15	0.149	-0.168	-0.101	-0.076	-0.733*
R16	0.238	-0.164	-0.141	0.028	-0.744*
R17	0.791*	-0.095	-0.233	0.033	-0.164
R18	0.791*	-0.162	-0.178	0.111	-0.234
R19	0.744*	-0.153	-0.244	0.083	-0.202
R20	0.772*	-0.151	-0.165	0.151	-0.237
R21	0.245	-0.428	-0.246	0.342	-0.464*
R22	0.283	-0.420	-0.127	0.330	-0.526*

FACTOR	VARIANCE	PERCENT
1	3.06072	21.66
2	3.39902	24.05
3	2.63952	18.68
4	1.98699	14.06
5	3.04560	21.55

*A factor loading of .46 or above was required for including an item in a particular factor.

APPENDIX I

STATISTICAL ANALYSIS SYSTEM (Computer Printout)

```
DATA:
INPUT GRADE 10-12 INSTR 14 COLL1 15 COLL2 16 COLL3 17 FIROB1 19-20 FIROB2 21-22 FIROB3 23-24
     FIROB4 25-26 FIROB5 27-28 FIROB6 29-30
     R1 32 R2 33 R3 34 R4 35 R5 36 R6 37 R7 38 R8 39 R9 40 R10 41 R11 42 R12 43 R13 44 R14 45
     R15 46 R16 47 R17 48 R18 49 R19 50 R20 51 R21 52 R22 53;
FACTOR1 = R17 + R18 + R19 + R20;
FACTOR2 = R1 + R2 + R3 + R4 + R7 + R8;
FACTOR3 = R9 + R10 + R13 + R14;
FACTOR4 = R5 + R6;
FACTOR5 = R11 + R12 + R15 + R16 + R21 + R22;
FACTOR6 = R1 + R2 + R3 + R4 + R5 + R6 + R7 + R8 + R9 + R10 + R11 + R12 + R13 + R14 + R15 + R16 + R17 + R18 +
          R19 + R20 + R21 + R22;
CARDS

 435 OBSERVATIONS IN DATA SET DATA000 1       39  VARIABLES

PROC REGR S C;
MODEL FACTOR1 = FIROB6 FIROB5 FIROB4 FIROB3 FIROB2 FIROB1 COLL3 COLL2 COLL1 INSTR GRADE/P;
MODEL FACTOR2 = FIROB6 FIROB5 FIROB4 FIROB3 FIROB2 FIROB1 COLL3 COLL2 COLL1 INSTR GRADE/P;
MODEL FACTOR3 = FIROB6 FIROB5 FIROB4 FIROB3 FIROB2 FIROB1 COLL3 COLL2 COLL1 INSTR GRADE/P;
MODEL FACTOR4 = FIROB6 FIROB5 FIROB4 FIROB3 FIROB2 FIROB1 COLL3 COLL2 COLL1 INSTR GRADE/P;
MODEL FACTOR5 = FIROB6 FIROB5 FIROB4 FIROB3 FIROB2 FIROB1 COLL3 COLL2 COLL1 INSTR GRADE/P;
MODEL FACTOR6 = FIROB6 FIROB5 FIROB4 FIROB3 FIROB2 FIROB1 COLL3 COLL2 COLL1 INSTR GRADE/P;
```

STATISTICAL ANALYSIS SYSTEM

N = 435

SIMPLE STATISTICS

VARIABLE	SUM	MEAN	UNCORRECTED SS	CORRECTED SS	VARIANCE	STANDARD DEV
GRADE	388960.00000000	894.16091954	349062688.00000000	1269856.73563224	2925.93717888	54.09193266
INSTR	149.00000000	0.34252874	149.00000000	97.96321839	0.22572170	0.47510178
COLL1	54.00000000	0.12413793	54.00000000	47.29655172	0.10897823	0.33011851
COLL2	181.00000000	0.41609195	181.00000000	105.68735632	0.24351925	0.49347670
COLL3	198.00000000	0.45517241	198.00000000	107.87586207	0.24856189	0.49855982
FIROB1	10319.00000000	23.72183908	266017.00000000	21231.34252874	48.92014408	6.99429368
FIROB2	8416.00000000	19.34712644	186452.00000000	23626.58390805	54.43913343	7.37828797
FIROB3	10373.00000000	23.84597701	269127.00000000	21772.68045977	50.16746650	7.08289958
FIROB4	8348.00000000	19.19080460	179068.00000000	18863.16321839	43.46350972	6.59268608
FIROB5	14773.00000000	33.96091954	529931.00000000	28226.33563218	65.03763971	8.06459173
FIROB6	15858.00000000	36.45517241	596006.00000000	17899.87586207	41.24395360	6.42214556
FACTOR1	4749.00000000	10.91724138	58881.00000000	7035.02068966	16.20972509	4.02613029
FACTOR2	6205.00000000	14.26436782	96617.00000000	8106.59770115	18.67879655	4.32189733
FACTOR3	3659.00000000	8.41149425	34665.00000000	3887.34252874	8.95701043	2.99282650
FACTOR4	2614.00000000	6.00919540	17818.00000000	2109.96321839	4.86166640	2.20491868
FACTOR5	7133.00000000	16.39770115	127983.00000000	11018.19770115	25.38755231	5.03860619
FACTOR6	24360.00000000	56.00000000	1453176.00000000	89016.00000000	205.10599078	14.32152194

S T A T I S T I C A L A N A L Y S I S S Y S T E M

N = 435 CORRELATION COEFFICIENTS / PROB > |R| UNDER HO: RHO=0

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
GRADE	1.000000	0.011478	-0.078800	0.047292	0.000695	-0.116826	-0.052261	-0.132551	-0.140179	0.088334
	0.0000	0.8113	0.1007	0.3251	0.9885	0.0148	0.2768	0.0056	0.0034	0.0657
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	-0.000603	-0.029732	-0.080214	-0.106403	-0.157501	-0.113774	-0.119077			
	0.9900	0.5363	0.0947	0.0265	0.0010	0.0176	0.0129			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
INSTR	0.011478	1.000000	0.007396	0.108129	-0.105259	-0.021186	0.067228	0.028724	0.021017	-0.046412
	0.8113	0.0000	0.8778	0.0241	0.0282	0.6595	0.1616	0.5502	0.6620	0.3342
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	-0.047440	-0.095968	-0.145195	-0.042639	-0.152582	-0.105163	-0.140196			
	0.3236	0.0455	0.0024	0.3750	0.0014	0.0283	0.0034			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
COLL1	-0.078800	0.007396	1.000000	-0.317802	-0.344106	0.067879	0.070244	0.125463	0.086493	0.009616
	0.1007	0.8778	0.0000	0.0001	0.0001	0.1576	0.1436	0.0088	0.0715	0.8415
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	0.049364	0.021616	0.018934	0.004150	0.020587	0.024275	0.024368			
	0.3043	0.6530	0.6937	0.9312	0.6685	0.6136	0.6123			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
COLL2	0.047292	0.108129	-0.317802	1.000000	-0.771580	0.028270	-0.029003	0.018378	0.004578	0.015096
	0.3251	0.0241	0.0001	0.0000	0.0001	0.5565	0.5463	0.7023	0.9241	0.7535
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	-0.019911	-0.006982	-0.022526	0.013292	0.062122	0.056543	0.023474			
	0.6788	0.8845	0.6394	0.7822	0.1959	0.2393	0.6254			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
COLL3	0.000695	-0.105259	-0.344106	-0.771580	1.000000	-0.077260	-0.024260	-0.106686	-0.067844	-0.024219
	0.9885	0.0282	0.0001	0.0001	0.0000	0.1076	0.6138	0.0261	0.1578	0.6144
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	-0.008725	-0.011036	0.014602	-0.019266	-0.072986	-0.076814	-0.040983			
	0.8560	0.8185	0.7614	0.6886	0.1285	0.1096	0.3938			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5

FIROB1	-0.116826	-0.021186	0.067879	0.028270	-0.077260	1.000000	0.600439	0.531126	0.418098	0.230401
	0.0148	0.6595	0.1576	0.5565	0.1076	0.0000	0.0001	0.0001	0.0001	0.0001
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	0.087977	0.035183	0.095051	0.085504	0.054700	0.109653	0.103443			
	0.0668	0.4642	0.0476	0.0748	0.2549	0.0222	0.0310			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FIROB2	-0.052261	0.067228	0.070244	-0.029003	-0.024260	0.600439	1.000000	0.475746	0.563792	0.161743
	0.2768	0.1616	0.1436	0.5463	0.6138	0.0001	0.0000	0.0001	0.0001	0.0007
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	0.137724	0.020205	0.027536	0.130835	0.028696	0.069599	0.070235			
	0.0040	0.6743	0.5668	0.0063	0.5506	0.1473	0.1436			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FIROB3	-0.132551	0.028724	0.125463	0.018378	-0.106686	0.531126	0.475746	1.000000	0.661153	0.058546
	0.0056	0.5502	0.0088	0.7023	0.0261	0.0001	0.0001	0.0000	0.0001	0.2230
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	0.047033	0.018217	0.030463	0.115933	-0.019384	0.042654	0.050563			
	0.3277	0.7048	0.5263	0.0156	0.6868	0.3748	0.2927			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FIROB4	-0.140179	0.021017	0.086493	0.004578	-0.067844	0.418098	0.563792	0.661153	1.000000	-0.012861
	0.0034	0.6620	0.0715	0.9241	0.1578	0.0001	0.0001	0.0001	0.0000	0.7891
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	0.062868	0.019868	0.074726	0.150627	0.024289	0.058612	0.083974			
	0.1906	0.6794	0.1197	0.0016	0.6134	0.2225	0.0802			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FIROB5	0.088334	-0.046412	0.009616	0.015096	-0.024219	0.230401	0.161743	0.058546	-0.012861	1.000000
	0.0657	0.3342	0.8415	0.7535	0.6144	0.0001	0.0007	0.2230	0.7891	0.0000
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	0.080201	-0.078019	-0.001884	-0.058712	-0.024341	-0.061708	-0.060228			
	0.0948	0.1042	0.9687	0.2217	0.6127	0.1990	0.2100			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FIROB6	-0.000603	-0.047440	0.049364	-0.019911	-0.008725	0.087977	0.137724	0.047033	0.062868	0.080201
	0.9900	0.3236	0.3043	0.6788	0.8560	0.0668	0.0040	0.3277	0.1906	0.0948
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	1.000000	-0.038908	0.009850	-0.000776	-0.004690	-0.003685	-0.010146			
	0.0000	0.4182	0.8377	0.9871	0.9223	0.9389	0.8329			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5

FACTOR1	-0.029732	-0.095968	0.021616	-0.006982	-0.011036	0.035183	0.020205	0.018217	0.019868	-0.078019
	0.5363	0.0455	0.6530	0.8845	0.8185	0.4642	0.6743	0.7048	0.6794	0.1042
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	-0.038908	1.000000	0.435327	0.516459	0.296498	0.597254	0.776197			
	0.4182	0.0000	0.0001	0.0001	0.0001	0.0001	0.0001			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FACTOR2	-0.080214	-0.145195	0.018934	-0.022526	0.014602	0.095051	0.027536	0.030463	0.074726	-0.001884
	0.0947	0.0024	0.6937	0.6394	0.7614	0.0476	0.5668	0.5263	0.1197	0.9687
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	0.009850	0.435327	1.000000	0.403601	0.362917	0.632876	0.787033			
	0.8377	0.0001	0.0000	0.0001	0.0001	0.0001	0.0001			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FACTOR3	-0.106403	-0.042639	0.004150	0.013292	-0.019266	0.085504	0.130835	0.115933	0.150627	-0.058712
	0.0265	0.3750	0.9312	0.7822	0.6886	0.0748	0.0063	0.0156	0.0016	0.2217
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	-0.000776	0.516459	0.403601	1.000000	0.257811	0.522694	0.699547			
	0.9871	0.0001	0.0001	0.0000	0.0001	0.0001	0.0001			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FACTOR4	-0.157501	-0.152582	0.020587	0.062122	-0.072986	0.054700	0.028696	-0.019384	0.024289	-0.024341
	0.0010	0.0014	0.6685	0.1959	0.1285	0.2549	0.5506	0.6868	0.6134	0.6127
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	-0.004690	0.296498	0.362917	0.257811	1.000000	0.442468	0.556376			
	0.9223	0.0001	0.0001	0.0001	0.0000	0.0001	0.0001			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FACTOR5	-0.113774	-0.105163	0.024275	0.056543	-0.076814	0.109653	0.069599	0.042654	0.058612	-0.061708
	0.0176	0.0283	0.6136	0.2393	0.1096	0.0222	0.1473	0.3748	0.2225	0.1990
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	-0.003685	0.597254	0.632876	0.522694	0.442468	1.000000	0.888061			
	0.9389	0.0001	0.0001	0.0001	0.0001	0.0000	0.0001			

	GRADE	INSTR	COLL1	COLL2	COLL3	FIROB1	FIROB2	FIROB3	FIROB4	FIROB5
FACTOR6	-0.119077	-0.140196	0.024368	0.023474	-0.040983	0.103443	0.070235	0.050563	0.083974	-0.060228
	0.0129	0.0034	0.6123	0.6254	0.3938	0.0310	0.1436	0.2927	0.0802	0.2100
	FIROB6	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6			
	-0.010146	0.776197	0.787033	0.699547	0.556376	0.888061	1.000000			
	0.8329	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000			

S T A T I S T I C A L A N A L Y S I S S Y S T E M

ANALYSIS OF VARIANCE TABLE , REGRESSION COEFFICIENTS , AND STATISTICS OF FIT FOR DEPENDENT VARIABLE FACTOR1

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F	R-SQUARE	C.V.
REGRESSION	11	156.49839219	14.22712656	0.87491	0.5657	0.02224562	36.93724 %
ERROR	423	6878.52229747	16.26128203				
						STD DEV	FACTOR1 MEAN
CORRECTED TOTAL	434	7035.02068966				4.03252799	10.91724

SOURCE	DF	SEQUENTIAL SS	F VALUE	PROB > F	PARTIAL SS	F VALUE	PROB > F
FIROB6	1	10.64988416	0.65492	0.4188	12.84263996	0.78977	0.3747
FIROB5	1	39.72012250	2.44262	0.1188	56.16948580	3.45419	0.0638
FIROB4	1	3.10514676	0.19095	0.6623	0.44929198	0.02763	0.8681
FIROB3	1	1.33589701	0.08215	0.7745	0.19903873	0.01224	0.9120
FIROB2	1	6.15506711	0.37851	0.5387	2.67260266	0.16435	0.6854
FIROB1	1	13.15765508	0.80914	0.3689	7.92075060	0.48709	0.4856
COLL3	1	0.70168911	0.04315	0.8355	3.49187907	0.21474	0.6433
COLL2	1	4.09826211	0.25203	0.6159	2.88137994	0.17719	0.6740
COLL1	1	3.23920699	0.19920	0.6556	1.95680047	0.12033	0.7288
INSTR	1	72.71981919	4.47196	0.0350	72.50918718	4.45901	0.0353
GRADE	1	1.61564218	0.09936	0.7528	1.61564218	0.09936	0.7528

SOURCE	B VALUES	T FOR H0:B=0	PROB > |T|	STD ERR B	STD B VALUES
INTERCEPT	15.38814762	3.27290	0.0012	4.70168745	0.0
FIROB6	-0.02718376	-0.88869	0.3747	0.03058861	-0.04336125
FIROB5	-0.04677657	-1.85854	0.0638	0.02516839	-0.09369640
FIROB4	-0.00713408	-0.16622	0.8681	0.04291917	-0.01168188
FIROB3	-0.00436968	-0.11063	0.9120	0.03949646	-0.00768728
FIROB2	0.01503315	0.40541	0.6854	0.03708174	0.02754975
FIROB1	0.02652588	0.69792	0.4856	0.03800704	0.04608143
COLL3	-1.33388577	-0.46340	0.6433	2.87850131	-0.16517643
COLL2	-1.21279671	-0.42094	0.6740	2.88114515	-0.14865066
COLL1	-1.01189550	-0.34689	0.7288	2.91702253	-0.08296936
INSTR	-0.87542418	-2.11164	0.0353	0.41457147	-0.10330406
GRADE	-0.00115535	-0.31521	0.7528	0.00366538	-0.01552239

S T A T I S T I C A L A N A L Y S I S S Y S T E M

ANALYSIS OF VARIANCE TABLE , REGRESSION COEFFICIENTS , AND STATISTICS OF FIT FOR DEPENDENT VARIABLE FACTOR2

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F	R-SQUARE	C.V.
REGRESSION	11	343.21934028	31.20175821	1.70008	0.0704	0.04233827	30.03327 %
ERROR	423	7763.37836087	18.35314033				
CORRECTED TOTAL	434	8106.59770115				STD DEV	FACTOR2 MEAN
						4.28405653	14.26437

SOURCE	DF	SEQUENTIAL SS	F VALUE	PROB > F	PARTIAL SS	F VALUE	PROB > F
FIROB6	1	0.78654456	0.04286	0.8361	0.08837918	0.00482	0.9447
FIROB5	1	0.05835919	0.00318	0.9551	1.67561350	0.09130	0.7627
FIROB4	1	44.65303251	2.43299	0.1196	39.75320118	2.16602	0.1418
FIROB3	1	5.17544354	0.28199	0.5957	23.12651505	1.26008	0.2623
FIROB2	1	1.79207924	0.09764	0.7548	12.81608488	0.69830	0.4038
FIROB1	1	89.43331819	4.87292	0.0278	63.88203989	3.48071	0.0628
COLL3	1	4.13487301	0.22530	0.6353	14.93102851	0.81354	0.3676
COLL2	1	2.11032850	0.11498	0.7347	14.12383680	0.76956	0.3809
COLL1	1	12.70519259	0.69226	0.4059	15.71484750	0.85625	0.3553
INSTR	1	155.18771692	8.45565	0.0038	153.95208102	8.38832	0.0040
GRADE	1	27.18245203	1.48108	0.2243	27.18245203	1.48108	0.2243

SOURCE	B VALUES	T FOR H0:B=0	PROB > |T|	STD ERR B	STD B VALUES
INTERCEPT	15.25186424	3.05345	0.0024	4.99495474	0.0
FIROB6	-0.00225506	-0.06939	0.9447	0.03249657	-0.00335091
FIROB5	-0.00807914	-0.30216	0.7627	0.02673827	-0.01507554
FIROB4	0.06710578	1.47174	0.1418	0.04559624	0.10236415
FIROB3	-0.04710163	-1.12254	0.2623	0.04196005	-0.07719205
FIROB2	-0.03292005	-0.83565	0.4038	0.03939471	-0.05620068
FIROB1	0.07533141	1.86567	0.0628	0.04037773	0.12191173
COLL3	2.75825175	0.90196	0.3676	3.05804755	0.31818282
COLL2	2.68512243	0.87725	0.3809	3.06085629	0.30658881
COLL1	2.86759278	0.92534	0.3553	3.09897153	0.21903469
INSTR	-1.27560085	-2.89626	0.0040	0.44043032	-0.14022551
GRADE	-0.00473899	-1.21700	0.2243	0.00389401	-0.05931216

S T A T I S T I C A L A N A L Y S I S S Y S T E M

ANALYSIS OF VARIANCE TABLE , REGRESSION COEFFICIENTS , AND STATISTICS OF FIT FOR DEPENDENT VARIABLE FACTOR3

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F	R-SQUARE	C.V.
REGRESSION	11	162.27868365	14.75260760	1.67523	0.0761	0.04174540	35.27959 %
ERROR	423	3725.06384508	8.80629751				
						STD DEV	FACTOR3 MEAN
CORRECTED TOTAL	434	3887.34252874				2.96754065	8.41149

SOURCE	DF	SEQUENTIAL SS	F VALUE	PROB > F	PARTIAL SS	F VALUE	PROB > F
FIROB6	1	0.00234285	0.00027	0.9870	0.83632940	0.09497	0.7581
FIROB5	1	13.45808027	1.52823	0.2171	15.78832672	1.79285	0.1813
FIROB4	1	87.39563585	9.92422	0.0017	10.58648340	1.20215	0.2735
FIROB3	1	2.82740029	0.32107	0.5713	0.69541256	0.07897	0.7788
FIROB2	1	17.12454057	1.94458	0.1639	18.46459449	2.09675	0.1484
FIROB1	1	0.11415411	0.01296	0.9094	0.22222373	0.02523	0.8739
COLL3	1	0.43176102	0.04903	0.8249	1.33739217	0.15187	0.6970
COLL2	1	0.52378007	0.05948	0.8074	0.88597554	0.10061	0.7513
COLL1	1	1.35670208	0.15406	0.6949	1.52362679	0.17302	0.6777
INSTR	1	12.17804634	1.38288	0.2403	11.83839813	1.34431	0.2469
GRADE	1	26.86624020	3.05080	0.0814	26.86624020	3.05080	0.0814

SOURCE	B VALUES	T FOR H0:B=0	PROB > |T|	STD ERR B	STD B VALUES
INTERCEPT	13.08845070	3.78282	0.0002	3.45997564	0.0
FIROB6	-0.00693699	-0.30817	0.7581	0.02251018	-0.01488571
FIROB5	-0.02479968	-1.33897	0.1813	0.01852144	-0.06682624
FIROB4	0.03462978	1.09643	0.2735	0.03158425	0.07628350
FIROB3	0.00816774	0.28101	0.7788	0.02906548	0.01932999
FIROB2	0.03951415	1.44802	0.1484	0.02728848	0.09741519
FIROB1	-0.00444306	-0.15885	0.8739	0.02796941	-0.01038351
COLL3	-0.82550257	-0.38970	0.6970	2.11829147	-0.13751630
COLL2	-0.67250979	-0.31719	0.7513	2.12023707	-0.11088779
COLL1	-0.89289768	-0.41595	0.6777	2.14663927	-0.09848952
INSTR	-0.35372723	-1.15944	0.2469	0.30508348	-0.05615308
GRADE	-0.00471134	-1.74665	0.0814	0.00269735	-0.08515219

S T A T I S T I C A L A N A L Y S I S S Y S T E M

ANALYSIS OF VARIANCE TABLE , REGRESSION COEFFICIENTS , AND STATISTICS OF FIT FOR DEPENDENT VARIABLE FACTOR4

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F	R-SQUARE	C.V.
REGRESSION	11	137.16539965	12.46958179	2.67368	0.0028	0.06500843	35.93807 %
ERROR	423	1972.79781874	4.66382463				
						STD DEV	FACTOR4 MEAN
CORRECTED TOTAL	434	2109.96321839				2.15958900	6.00920

SOURCE	DF	SEQUENTIAL SS	F VALUE	PROB > F	PARTIAL SS	F VALUE	PROB > F
FIROB6	1	0.04640435	0.00995	0.9206	0.66579316	0.14276	0.7057
FIROB5	1	1.21959259	0.26150	0.6094	1.94742153	0.41756	0.5185
FIROB4	1	1.23611798	0.26504	0.6069	0.69503628	0.14903	0.6997
FIROB3	1	4.32509784	0.92737	0.3361	11.70524410	2.50980	0.1139
FIROB2	1	2.09108493	0.44836	0.5035	1.78594229	0.38294	0.5364
FIROB1	1	11.27417080	2.41737	0.1207	3.71504190	0.79657	0.3726
COLL3	1	11.64766044	2.49745	0.1148	0.29198369	0.06261	0.8025
COLL2	1	0.08033780	0.01723	0.8956	1.40536176	0.30133	0.5833
COLL1	1	0.85189318	0.18266	0.6693	0.94772203	0.20321	0.6524
INSTR	1	55.95241956	11.99711	0.0006	54.97041885	11.78655	0.0007
GRADE	1	48.44062019	10.38646	0.0014	48.44062019	10.38646	0.0014

SOURCE	B VALUES	T FOR H0:B=0	PROB > |T|	STD ERR B	STD B VALUES
INTERCEPT	11.79307311	4.68360	0.0001	2.51795214	0.0
FIROB6	-0.00618945	-0.37783	0.7057	0.01638149	-0.01802767
FIROB5	-0.00870980	-0.64619	0.5185	0.01347874	-0.03185649
FIROB4	0.00887315	0.38604	0.6997	0.02298503	0.02653062
FIROB3	-0.03350974	-1.58423	0.1139	0.02115202	-0.10764393
FIROB2	0.01228900	0.61882	0.5364	0.01985884	0.04112250
FIROB1	0.01816639	0.89251	0.3726	0.02035438	0.05762618
COLL3	0.38571660	0.25021	0.8025	1.54155898	0.08721537
COLL2	0.84699688	0.54894	0.5833	1.54297487	0.18956401
COLL1	0.70421112	0.45078	0.6524	1.56218873	0.10543388
INSTR	-0.76223089	-3.43316	0.0007	0.22202053	-0.16424064
GRADE	-0.00632625	-3.22280	0.0014	0.00196296	-0.15519802

S T A T I S T I C A L A N A L Y S I S S Y S T E M

ANALYSIS OF VARIANCE TABLE , REGRESSION COEFFICIENTS , AND STATISTICS OF FIT FOR DEPENDENT VARIABLE FACTORS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F	R-SQUARE	C.V.
REGRESSION	11	545.63969771	49.60360888	2.00355	0.0265	0.04952168	30.34403 %
ERROR	423	10472.55800344	24.75782034				
						STD DEV	FACTORS MEAN
CORRECTED TOTAL	434	11018.19770115				4.97572310	16.39770

SOURCE	DF	SEQUENTIAL SS	F VALUE	PROB > F	PARTIAL SS	F VALUE	PROB > F
FIROB6	1	0.14958356	0.00604	0.9381	2.32054863	0.09373	0.7596
FIROB5	1	41.82415333	1.68933	0.1944	79.45872337	3.20944	0.0739
FIROB4	1	36.88811605	1.48996	0.2229	0.20857439	0.00842	0.9269
FIROB3	1	1.25962427	0.05088	0.8217	14.62998177	0.59092	0.4425
FIROB2	1	36.59144418	1.47798	0.2248	9.24159570	0.37328	0.5415
FIROB1	1	117.18205215	4.73313	0.0301	72.79980311	2.94048	0.0871
COLL3	1	56.97972016	2.30148	0.1300	14.74524856	0.59558	0.4407
COLL2	1	0.01277549	0.00052	0.9819	6.51298251	0.26307	0.6083
COLL1	1	9.08477428	0.36695	0.5450	8.16744138	0.32989	0.5660
INSTR	1	145.76855373	5.88778	0.0157	143.48982895	5.79574	0.0165
GRADE	1	99.89890051	4.03504	0.0452	99.89890051	4.03504	0.0452

SOURCE	B VALUES	T FOR H0:B=0	PROB > |T|	STD ERR B	STD B VALUES
INTERCEPT	27.86811240	4.80369	0.0001	5.80139677	0.0
FIROB6	-0.01155521	-0.30615	0.7596	0.03774319	-0.01472812
FIROB5	-0.05563510	-1.79149	0.0739	0.03105520	-0.08904732
FIROB4	0.00486076	0.09179	0.9269	0.05295782	0.00635999
FIROB3	-0.03746301	-0.76872	0.4425	0.04873456	-0.05266273
FIROB2	0.02795479	0.61097	0.5415	0.04575504	0.04093562
FIROB1	0.08041773	1.71478	0.0871	0.04689677	0.11163111
COLL3	-2.74103821	-0.77174	0.4407	3.55177335	-0.27122015
COLL2	-1.82338217	-0.51290	0.6083	3.55503557	-0.17858046
COLL1	-2.06730905	-0.57436	0.5660	3.59930456	-0.13544559
INSTR	-1.23149479	-2.40743	0.0165	0.51153838	-0.11612048
GRADE	-0.00908493	-2.00874	0.0452	0.00452270	-0.09753126

S T A T I S T I C A L A N A L Y S I S S Y S T E M

ANALYSIS OF VARIANCE TABLE , REGRESSION COEFFICIENTS , AND STATISTICS OF FIT FOR DEPENDENT VARIABLE FACTOR6

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB > F	R-SQUARE	C.V.
REGRESSION	11	4750.04726471	431.82247861	2.16767	0.0153	0.05336172	25.20391 %
ERROR	423	84265.95273529	199.21029015			STD DEV	FACTOR6 MEAN
CORRECTED TOTAL	434	89016.00000000				14.11418755	56.00000

SOURCE	DF	SEQUENTIAL SS	F VALUE	PROB > F	PARTIAL SS	F VALUE	PROB > F
FIROB6	1	9.16347137	0.04600	0.8303	50.90474248	0.25553	0.6135
FIROB5	1	316.27078315	1.58762	0.2084	532.31722305	2.67214	0.1029
FIROB4	1	623.91874884	3.13196	0.0775	103.60790806	0.52009	0.4712
FIROB3	1	0.15604049	0.00078	0.9777	136.12905773	0.68334	0.4089
FIROB2	1	163.21545966	0.81931	0.3659	45.26987760	0.22725	0.6338
FIROB1	1	762.03069189	3.82526	0.0511	432.44555183	2.17080	0.1414
COLL3	1	108.63212339	0.54531	0.4606	6.05476859	0.03039	0.8617
COLL2	1	6.67176714	0.03349	0.8549	0.06107383	0.00031	0.9860
COLL1	1	2.22378537	0.01116	0.9159	0.30622649	0.00154	0.9687
INSTR	1	1938.49414843	9.73089	0.0019	1914.64009984	9.61115	0.0021
GRADE	1	819.27024500	4.11259	0.0432	819.27024500	4.11259	0.0432

SOURCE	B VALUES	T FOR H0:B=0	PROB > |T|	STD ERR B	STD B VALUES
INTERCEPT	83.38964807	5.06734	0.0001	16.45630201	0.0
FIROB6	-0.05412046	-0.50550	0.6135	0.10706271	-0.02426903
FIROB5	-0.14400029	-1.63467	0.1029	0.08809150	-0.08108800
FIROB4	0.10833539	0.72117	0.4712	0.15022070	0.04987048
FIROB3	-0.11427632	-0.82665	0.4089	0.13824095	-0.05651688
FIROB2	0.06187104	0.47670	0.6338	0.12978922	0.03187527
FIROB1	0.19599835	1.47336	0.1414	0.13302786	0.09572098
COLL3	-1.75645819	-0.17434	0.8617	10.07499698	-0.06114570
COLL2	-0.17656936	-0.01751	0.9860	10.08425064	-0.00608405
COLL1	-0.40029833	-0.03921	0.9687	10.20982451	-0.00922708
INSTR	-4.49847794	-3.10019	0.0021	1.45103505	-0.14923238
GRADE	-0.02601687	-2.02795	0.0432	0.01282913	-0.09826488

VITA

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Candidate for the Degree of

Doctor of Education

Thesis: THE EFFECTS OF SELECTED FACETS OF STUDENT SELF-CONCEPT ON SATISFACTION IN THE BASIC SPEECH COURSE

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Professional Experience: Teacher of speech and English in the Sulphur Public Schools, 1962-63; teacher of speech and English in Lawton Public Schools, 1963-68; teacher of Speech I, debate, dramatics, play production, and director of extra-curricular speech activities in Duncan Public Schools, 1968-72; Fine Arts Coordinator for the Upward Bound Project on the East Central Oklahoma State University campus in the summers of 1968 and 1969; graduate teaching assistant in Speech 2713 and debate coach at Oklahoma State University, 1972-73; graduate teaching assistant in Speech 2713 at Oklahoma State University, 1973-75; instructor in the Speech Department at Oklahoma State University, 1975.

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