AFFECTIVE BEHAVIORS OF STUDENT TEACHERS

by

Charles Roe Stoughton

A Dissertation Submitted to the Faculty of the

DEPARTMENT OF SECONDARY EDUCATION

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

1 9 7 3

THE UNIVERSITY OF ARIZONA

GRADUATE COLLEGE

I hereby recommend that this dissertation prepared under my direction by Charles Roe Stoughton

entitled Affective Behaviors of Student Teachers

be accepted as fulfilling the dissertation requirement of the degree of Doctor of Philosophy

Charles J. Brown — March 21, 1973

Dissertation Director — Date

After inspection of the final copy of the dissertation, the following members of the Final Examination Committee concur in its approval and recommend its acceptance:*

[illegible]	March 21 '73
Richard A. Fredrickson	March 21, 1973
Henry E. Butler, Jr.	3-22-73
Kay H. Blake	3/21/73

*This approval and acceptance is contingent on the candidate's adequate performance and defense of this dissertation at the final oral examination. The inclusion of this sheet bound into the library copy of the dissertation is evidence of satisfactory performance at the final examination.

STATEMENT BY AUTHOR

This dissertation has been submitted in partial fulfillment of requirements for an advanced degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Brief quotations from this dissertation are allowable without special permission, provided that accurate acknowledgment of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the copyright holder.

SIGNED: Charles Rae Stoughton

ACKNOWLEDGMENTS

I would like to express gratitude to the members of my dissertation committee: Dr. Chester J. Brown, Chairman; Dr. Paul M. Allen, Dr. Roy F. Blake, Dr. Henry E. Butler, Jr., and Dr. Richard C. Krebs. I am especially indebted to Dr. Brown for his patience, humor, and editorial suggestions. The support of the chairman and committee members throughout my doctoral program is deeply appreciated.

The assistance of fellow graduate students, Mrs. Gerry Garner and Mr. Robert Lorch, in coding the audio-tapes is acknowledged with thanks. The support and aid of Dr. Ardeth P. Cropper, Dr. Reginald Barr, and Dr. Florence Reynolds is warmly appreciated.

Acknowledgment is due to the participants--the student teachers who contributed to the project while involved in their practice teaching. The assistance of professional semester coordinators, Dr. Jack Gyves and Dr. Donald Clark, and the several school administrators, among them Mr. Les Carrillo, deserves special credit. I am indebted to Dr. Robert Armstrong for statistical assistance.

The kindness of Mrs. Rita Mikula, "M", who counseled, kept her sense of humor, examined her crystal ball, and typed

the manuscript is remembered. Without the urging of my boss, Dr. Howard W. Leigh, the manuscript would still be in process.

Finally, this project is dedicated to my children, Gerald, Scott, and Christopher; my parents, Mr. and Mrs. Stiles Stoughton; and especially to my wife, Mary Jane, for her support, love, and understanding. She was able to keep her head when those about her were less able.

TABLE OF CONTENTS

TABLE OF CONTENTS--Continued

TABLE OF CONTENTS--Continued

LIST OF TABLES

LIST OF ILLUSTRATIONS

ABSTRACT

The focus of this study was student teacher preferences for affective objectives and frequency of their affective behaviors exhibited in the classroom. A review of related literature indicated that researchers have made few attempts if any to examine teacher preferences for instructional objectives and teacher behavior in the classroom. In this study these relationships were examined in an attempt to contribute to a theory of teaching and teacher preparation based on phenomenological premises.

A sample of thirty secondary student teachers participated in this project. They were randomly selected into either an experimental or a control group. Student teachers in both groups completed the Preferred Instructional Objective Scale and recorded on audio-tape, two periods of approximately twenty minutes of teaching activity in their classroom. In addition, participants in the experimental group completed a self-study guide entitled An Ari-Pac for Differentiation and Skill in Using Affective Objectives, which was developed for this study, and prior to completing the second audio-tape, individually received information on the coding of their first tape on the frequencies of behavior coded in each category. Coding was done using the Substantive Observation System which provided a framework for

determining the proportions of affective and cognitive content dealt with by the teacher.

The student teacher preferences for affective objectives and the frequency of affective behaviors exhibited in the classroom were examined by using the Student-t coefficient of correlation. Six hypotheses, tested at the .05 level of confidence, provided direction for the study. The investigator found no relationship in either teacher preferences for affective objectives or percentages of affective content exhibited in their classroom behavior.

The writer recommended that should this study be replicated, that a larger sample be obtained so that other factors such as subject taught and sex could be considered. It was strongly recommended that a longitudinal study be instituted since perceptual change takes time. It was also strongly suggested that the appropriateness of the philosophical base of the phenomenological system and the cognitive-affective dichotomy be reconsidered. This writer recommended that after the philosophic basis of this study had been reconsidered, appropriate instrumentation be developed to evaluate the behaviors studied.

CHAPTER 1

THE PROBLEM AND HYPOTHESES TO BE TESTED

Introduction

During the last decade, educators and the public have expressed increased concern about discrepancies between actual and desired performance in education. There has been an even greater concern with evaluating and using educational objectives.

Concern about educational objectives led to the development of a classification system of cognitive and affective domains by Bloom (1956) and Krathwohl, Bloom, and Masia (1964) which helped to clarify the language used in educational objectives. In Krathwohl's et al. (1964) Taxonomy of Educational Objectives - The Classification of Educational Goals, Handbook II: Affective Domain, the erosion of affective objectives over time was discussed. In original statements of objectives for general education courses, frequently as much emphasis was given to affective as to cognitive objectives. However, the intent of the courses has changed gradually to include only those objectives that could be explicitly evaluated and taught. A person's beliefs, attitudes, and values were held to be private, and consequently adequate appraisal techniques to evaluate such objectives have seldom been developed.

Barr (1972) found that teachers preferred cognitive oriented pupil instructional roles and cognitive instructional objectives. Barr also found that students preferred that their teachers take an affectively oriented instructional role and that their teachers give emphasis to achieving affective instructional objectives in the classroom.

Other researchers stated that research on teaching must include more than cognitive variables and that emotion, attitudes, ideals, values, and human relationships are equally important (Stern 1963, Anderson 1954, Combs 1965).

Research in the area of affective variables in teaching has progressed during recent years, as many concerned educators have attempted to develop observation instruments by which an individual teacher could code his behavior in the classroom to obtain objective data on his behavior in the classroom. Once the teacher began to assess his behavior in this manner, he had a better basis for assessing and possibly changing this behavior in order to become what he considered a more effective teacher.

Of eighty instruments for the observation of teacher behavior that were inspected, sixty-three were concerned either in whole or part with affective behaviors of teachers.

If teachers find objective coding procedures a help in assessing their behavior in the classroom, a conclusion research tends to support, then prospective teachers could profit from training specifically related to affective objectives and behaviors.

In this study student teachers will be systematically trained in recognition and use of affective objectives. The efficacy of such training will also be evaluated.

Statement of the Problem

What are the differences between two groups of secondary student teachers in their preferences for affective objectives and the frequency of affective behaviors exhibited in the classroom where one group will be provided training in recognition and use of affective objectives?

Significance of the Study

> Learning is internalized more rapidly as it is perceived by the learner as being related to positive aspects of his self. . . . The teacher needs to select those experiences which the child will first perceive as enhancing--probably those in which he feels he has a reasonable chance of success and which also test his untried strengths. . . (Landsman 1962, p. 290).

Johnson and Seagull (1968, p. 167) stated that since teachers transmit information and inculcate values, the training of teachers must encourage creativity and experimentation, which implies a tolerance of mistakes. Teacher educators must emphasize that both the technical and emotional processes of teaching and learning are as important as the course content.

Gage (1963, p. 138) stated:

> Theories of teaching need to develop alongside, on a more equal basis with, rather than by inference from, theories of learning. . . . Central in such paradigms must be the affective relationship between teacher and pupil, as seen by the pupil. What teachers do to influence this relationship, and how it shapes learning, will

> take dominant positions in paradigms built around the notion that teachers teach by exerting the psychological force of identification on their pupils.

Beck (1970) found that the behavioral objectives training phase for student teachers brought about significant changes in their ability to interpret and apply learner oriented objectives. St. John (1969) found in his study that reliable observations of teacher non-verbal behaviors which are affective in nature could be made with statistical support found in the realm of praising behaviors.

Research programs designed to change the affective behaviors of student teachers, if significant and effective, should be considered for incorporation into teacher preparatory programs.

Hypotheses to Be Tested

The following hypotheses (stated in null form, tested at the .05 level of significance) provided order and direction for this study:

1. There was no significant difference in scores obtained on the pre-test and post-test contained in the Ari-Pac (Appendix A) designed for this study, completed by the experimental group of student teachers.
2. There were no significant differences between the scores of the experimental group and the control group obtained from the three administrations of the "Preferred Instructional Objective Scale" (developed by Barr 1972).

3. For the experimental group, there were no significant differences in scores obtained from the three administrations of the "Preferred Instructional Objective Scale."
4. For the control group, there were no significant differences in scores obtained from the three administrations of the "Preferred Instructional Objective Scale."
5. There were no significant differences in the frequency or level of affective objectives used during teaching sessions for the experimental group (where feedback was used) or the control group (where feedback was not used).
6. Between the experimental group (where feedback was used) and the control group (where feedback was not used), there were no significant differences in the frequency or level of affective objectives used during teaching sessions.

Assumptions

The following assumptions were used in the conduct of this study:

1. The organization of all the ways an individual sees himself is the phenomenal self (Combs and Snygg 1959).
2. All behavior, without exception, is determined by and pertinent to the phenomenal field of the behaving organism (Combs and Snygg 1959).
3. Written responses by the study's subjects reflect their true beliefs (Wylie 1961).

4. Teacher behavior may be systematically described and codified (Medley and Mitzel 1963).
5. The class sessions used for coding purposes are typical of that student teacher's behavior in the classroom.
6. Different observers code the observed behavior in a similar fashion.
7. Beliefs and attitudes toward the self may be identified and measured (Combs, Soper, and Courson 1963).
8. Cognitive and affective instructional processes can be defined and classified.
9. Differentiation between cognitive and affective objectives is arbitrary and for analytical purposes (Krathwohl et al. 1964).

Limitations

The following were recognized as limitations of this study:

1. It was difficult to identify and differentiate affective objectives and to evaluate their frequency or their success.
2. Coding was a complex process of interpreting what the observer believed had happened.
3. While student teachers at The University of Arizona do come from many parts of the country, it was not certain that this sample was representative of all groups of student teachers throughout the country.

Definitions of Terms

1. Professional Semester Program: The student teacher spent a semester, full time in a school to obtain classroom internship experience concurrently with general methods under the supervision of a college supervisor also assigned full time to the school.

2. Affective Objectives are described by Krathwohl et al. (1967, p. 7) as:

> . . . objectives which emphasize a feeling tone, an emotion or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience. We found a large number of such objectives in the literature expressed as interests, attitudes, appreciations, values, and emotional sets or biases.

3. Cognitive Objectives are defined as:

> . . . objectives which emphasize remembering or reproducing something which has presumably been learned, as well as objectives which involve the solving of some intellective task for which the individual has to determine the essential problem and then reorder given material or combine it with ideas, methods, or procedures previously learned. Cognitive objectives vary from simple recall of material learned to highly original and creative ways of combining and synthesizing new ideas and materials (Krathwohl et al. 1964, p. 6).

4. Self-Report was defined as ". . . an individual's description of himself and his feelings as reported to another person (Combs et al. 1963, p. 494)."

5. Phenomenal Field: ". . . the entire universe, including himself, as it is experienced by the individual at the instant of action (Combs and Snygg 1959, p. 20)."

6. Self-Concept has been described by Good (1959, p. 493) as ". . . those parts of a phenomenal field which the individual has differentiated as relatively stable and definite parts or characteristics of himself."

Summary

In this chapter a specific training program was proposed in the understanding and use of affective objectives by student teachers through the use of a self study guide and by observation of classroom behavior of the student teacher. If training in the use of affective objectives could bring about significant changes in the classroom behavior of the student teacher, as theorists assert, then such a program should become an essential part of the preparation of prospective teachers.

In the ensuing chapters, literature pertinent to the theoretical framework of the study is reviewed, the design of the study established, the data presented and analyzed, and recommendations and conclusions presented.

CHAPTER 2

REVIEW OF SELECTED LITERATURE

In this section, literature pertinent to the affective behaviors of student teachers is reviewed in terms of (1) the role of the self-concept in the determination of individual behavior; (2) the cognitive and affective domains of educational objectives and goals; and (3) the observation and measurement of teacher behavior in the classroom.

The Self-Concept

The Phenomenological System--A Theoretical Frame of Reference

In this study the phenomenological system was chosen as the theoretical frame of reference to aid in understanding the function of the self-concept in determining individual behavior. Behavior is observed phenomenologically when it is observed from the point of view of the behaving person himself. Consequently, the learner remains unchanged, or rather it is his experience of the situation or task which changes. Thus, behavior is always relevant to the situation as the person interprets it at the moment. The basic postulates of a Phenomenological System (Snygg 1959) are:

1. All behavior is lawful.
2. Behavior is completely determined by and pertinent to the phenomenological field of the behaving organism.
3. There is some relationship between the phenomenological field of different individuals.
4. Greater precision of behavior (learning) is concomitant with greater differentiation of the phenomenological field.
5. The direction and degree of differentiation is determined by the phenomenological needs of the behaver. The fundamental need in a Phenomenological System appears to be the preservation of the organization and integrity of the phenomenological field. Hence we reject data inconsistent with our own beliefs.
6. Differentiation takes time.

Thus the frame of references based on these postulates is from the point of view of the behaving organism. Explanation of behavior is descriptive and prediction of behavior involves: (1) understanding of the subject's perceptual field, and (2) projection of the future field (Snygg 1959).

An individual's perceptual field has been defined by Combs and Snygg (1959, p. 20) to be "the entire universe, including himself, as it is experienced at the instant of action." If we are to work with and understand others, then the factors which

affect perceptions must be examined, especially the perception the individual has of self.

Combs and Snygg (1959) developed as a continuation of the Phenomenological System seven known variables of perception:

1. What do people need--the striving for adequacy.
2. The physical organism--vehicle of perception--growth of awareness.
3. Time and opportunity affect perception.
4. Goals, values, and techniques.
5. Development of the Phenomenal Self--real self through social interaction.
6. Effect of self on perceiving--the individual's frame of reference.
7. The availability of perception in the field--differentiation and need satisfaction--problem of threat.

Rogers (1959) made clear that when change occurs in the perception of self, perceptual reorganization then leads to alteration of behavior. Further clarified, perception is the stuff for growth in self. Thus, a fully functioning person: (1) thinks well of himself, (2) thinks well of others, (3) sees his stake in others, (4) is in the process of becoming optimistic, (5) develops and holds human values, (6) lives in keeping with his values, and (7) is cast in a creative role (Kelley 1962).

The Perception of Self

If, as Combs and Snygg (1959) suggested, all behavior of an individual is related to his perception of self, then the perceptions of most value to the individual will be the most helpful in understanding his behavior. These fundamental concepts of self become the essence of self-concept. What a person thinks about himself and how he behaves is therefore determined by his self-concept. Landsman (1962, p. 290) defined self-concept as ". . . being the central aspect of personality, consisting of a number of organized, defined objects, or ideas, each with a corresponding attitude indicating its adequacy in the eyes of the person who is literally looking at himself and judging himself." Raimy (1948), Rogers (1951), Allport (1955), Wylie (1968), and Hamachek (1971) gave similar definitions of the self, or self-concept.

The Self-Concept, Change, and Change in Behavior

Hamachek (1971) related that each person behaves in a manner consistent with his perceptual field. Awareness of change in our world with a corresponding change of the phenomenal environment results in a change of the self-concept. This concept of change of self-concept was supported by Lecky (1945), Raimy (1948), Hilgard (1949), Allport (1955), Combs and Snygg (1959), and Hamachek (1971).

Changes in self-concept do not occur easily because of defense mechanisms such as denial of reality, fantasy, projection, rationalization, and repression. These defense mechanisms help an adjustment in self-concept by maintaining the consistency of the self and reducing conflict and frustration (Hamachek 1971).

Self-Concept and Implication for Teacher Training

Historically there have been many conceptions of what a good teacher is. An early conception was that the person who knew could teach. Another supposition about the good teacher was the competency approach. Research produced many lists of teacher competencies but failed to show any specific trait(s) that clearly distinguished good teachers (Combs 1961).

Hughes (1959) developed a system of categorizing the teacher-learner situation. An outcome of the study was a model for some general teacher behaviors which was presumed to produce an optimum interaction pattern for learning in the elementary school. The Hughes system may be shown in the following condensation:

Behaviors	Percent of Total Teacher Behaviors
Controlling	20 - 40
Imposition	1 - 3
Facilitating	5 - 15
Content Development	20 - 40
Personal Response	8 - 10
Positive Affectivity	10 - 20
Negative Affectivity	3 - 10

However, the implications of the competency approach for prospective educators is not encouraging. Can or should the beginner use the methods of the expert? Are long lists of competencies discouraging to the novice? What about those competencies that do not fit the personality of the student teacher?

Research tends to support the idea that teaching is a highly individualized concern, that a good teacher is a personality. Attempts to find commonalities of good teachers have not been as useful as once thought and so teacher training institutions must shift emphasis from a competency approach to that of concern for the person (Combs 1961). This view of the good teacher is characterized by perceptual organization in the following general areas (Combs 1961):

1. His knowledge of his subject.
2. His frame of reference for approaching his problems.
3. His perceptions of others.
4. His perceptions of self.
5. His perceptions of the purpose and process of learning.
6. His perceptions of appropriate methods.

In a series of studies conducted by Combs, Soper, and Courson (1969) at the University of Florida, it was found that the effective teacher:

1. Saw people from the inside rather than the outside.
2. Was more sensitive to the feelings of students.
3. Was more concerned with people than things.
4. Saw behaviors as caused by here and now perceptions.

5. Saw themselves and others as able, worthy, and dependable.
6. Saw their task as freeing not controlling, and as an involved, revealing, and encouraging process.

Hart (1934), Witty (1947), and Jersild (1940) found that among the most frequently cited reasons for liking a teacher were that he was: (1) human, (2) interested in and understanding of pupils, and (3) fair. Teacher warmth was related to increased achievement by Cogan (1958), Reed (1962), Heil, Powell, and Peifer (1960).

In terms of self-perception, emotionally stable teachers, according to Ryans (1964), were apt to describe themselves as: (1) possessing self-confidence and cheerfulness as dominant traits, and (2) liking active contact with people. Other research supports the relation between a positive view of self or positive self-report and good teaching (Combs 1965, McCallon 1966, Salomon and McDonald 1970). However, Garvey (1971) found that success in student teaching was affected by but not necessarily determined by a positive view of self.

In reviewing several studies, Ryans (1964) found that when perceiving others, good teachers were higher in: (1) favorable opinions of students, (2) more favorable opinions of democratic classroom behavior, (3) more favorable opinions of colleagues, (4) an expressed liking for personal contacts with

other people, and (5) more favorable estimates of other people generally.

To facilitate growth and learning through self-concept enhancement, then, as teachers we must understand that:

1. We teach our own self-concepts far more often than our subject matter.
2. Anything we do or say could significantly change a student's attitude about himself for better or for worse.
3. Students, like us, behave in terms of what seems to be true.
4. Flexibility as to both situation and personality of the student must be considered (Hamachek 1971).

Landsman (1962) found that learning is internalized more rapidly as it is perceived by the learner as being related to positive aspects of his self. Several studies reviewed by Campbell (1967) showed that self-concept was related to school achievement.

The Cognitive and Affective Domains of Educational Objectives and Goals

Consanguinity of Cognitive and Affective Domains

Piaget and Inhelder (1969), Sears and Sherman (1964), and Bane (1969) discussed the relationship between cognitive and affective behaviors. Rokeach (1960) pointed out that each cognitive behavior has its affective counterpart. In people and at

all ages, cognitive organization, development, and change were inspired by a search for meaning which was affective in nature (Gordon 1970). "In fact, a large part of what we call 'good teaching' is the teacher's ability to attain affective objectives through challenging the students' fixed beliefs and getting them to discuss issues (Krathwohl, Bloom, and Masia 1964, p. 55)."

One of the concerns of behavioral research is producing lasting change in the behavior under consideration. Lewin (1947) found that if specific change was to occur, learning experiences had to be of an interactive nature, involving both student and teacher, rather than something presented or learned by the other. An individual must undergo a reorganization of his beliefs and attitudes and be involved in the change if the change is to be other than temporary (Mayer 1961, Morrison 1958). Allport (1954), Asch (1952), and Towle (1954) emphasized the basic reorganization that must take place within the individual if new affective behaviors or traits are to be formed. The cognitive and affective domains are usually separated only for research purposes.

Cognitive Domain

Objectives in the cognitive domain are concerned primarily with recall of knowledge and the development of critical intellectual abilities. In the Taxonomy of Educational Objectives, cognitive domain (hereafter referred to as the cognitive taxonomy) by Bloom (1956), cognitive objectives were structured into

the following ascending hierarchy: knowledge, comprehension, application, analysis, synthesis, and evaluation.

Krathwohl et al. (1964) in reviewing the effectiveness of the Taxonomy of the Cognitive Domain found evidence that the more complex and higher categories of the cognitive domain required far more sophisticated learning experiences. If significant growth was to take place in these objectives, then the learning environment had to give major emphasis to the more complex objectives. Crump (1970) and Davis, Morse, Rogers, and Tinsley (1969) found that a majority of teachers asked recall questions and that these teachers benefited from an instructional program designed to improve their questioning strategies. Taba, Levine, and Elzey (1964) demonstrated that teaching strategy and thought processes could be analyzed.

Murray and Williams (1970) found that cognitive instruction could increase cognitive behavior in the classroom. These authors developed a self-study guide, essentially a cognitive instrument, to study whether such an instrument could be used by student teachers to gain skill in recognizing affective objectives. Bowser (1969) found that a self-study guide was effective in changing perceptions of teachers in the experimental group. The experimental teachers made significant positive changes in knowledge in comparison with the control group as a result of a training program in behavior modification (Cantrell 1969).

Hill (1971) found that a training program could be used to affect positively, prospective elementary teachers.

Affective Domain

Jurco (1971) suggested that with respect to content, there had been a one-sided stress on development of the cognitive sphere and a neglect of development of the motivational aspects of a pupil's personality.

Since teachers transmit information and inculcate values, the training of teachers should encourage creativity and experimentation, which implies a toleration of false starts and mistakes. Teacher education must emphasize that both the technical and emotional processes of teaching and learning are as important as the course content (Johnson and Seagull 1968).

Values are suggested all the time by teachers. The very organization of a school system represents a moral enterprise, since it represents society's attempt to control the pattern of its own evolution. In the past teachers told about values in a moralistic way. It has been proposed that the best way to teach values is to pose two alternative solutions among which the student must choose (Fraenkel 1969).

Jacob (1957) suggested that affective behaviors develop when appropriate learning experiences are provided. A child's ability to do school work can be raised by stimulation, verbalization, warmth, affection, and personal attention (Wilhelms 1968). Rosenthal, Underwood, and Martin (1969) found that it

was important to make the first contact that the child has with school as positive in reinforcement as possible since, when teachers gave more approval and less disapproval, there was more student solicitation of teacher attention. Stern (1963) in reviewing thirty-four studies indicated that non-directive instruction facilitates a shift in a more favorable direction for affective gain. Hence, the good teacher is at peace with himself, flexible, a good person, and viewed teaching as a human process involving human relationships and meanings.

The question of how to assess affective behaviors has been attempted in several ways. Huff (1964) found that Q-sort methodology can be used effectively to assess changes in affective behaviors during student teaching. Welter (1968) and Welter and Hudson (1970) found the Taxonomy of Educational Objectives: Affective Domain (hereafter referred to as the affective taxonomy) useful as criteria. However, the affective taxonomy was found not to discriminate closely as to the intensity of emotional involvement. Where emotional involvement is not a relevant consideration the affective taxonomy appears to have considerable potential for assessment of affective behaviors. E. Smith (1969) successfully reiterated the feasibility of the reliable observation of teacher non-verbal behaviors which are affective in nature. He obtained statistical support in the realm of Praising Behaviors. Cropper (1971) developed the Substantive Code to aid in analyzing teacher statements as being predominantly cognitive

or affective in nature. This code can be found in Appendix B of this volume. The ten categories of this system closely parallel those developed in the affective and cognitive taxonomies and later refined by Roberson (1967), Barr (1972), and Cropper (1971).

Observation and Measurement of Teacher Behavior

Efforts to improve the quality of teaching in the classroom early in this century centered on studies about teachers and their characteristics. Following the second World War this emphasis shifted to the study of teacher behavior in the classroom and to what actually happens in the classroom. These efforts led to the development of many instruments for the analysis of teacher behavior and teacher-pupil interaction.

One of the earliest studies on teaching behavior was the classic study by H. H. Anderson (1939) in which he assessed the integrative and dominative behavior of teachers in their contacts with kindergarten children. Dominative behavior was the behavior of a person who was inflexible, deterministic, had the answers, and disregarded the opinions and wishes of others. Integrative behavior was the behavior of a flexible person who looked for new meanings and greater understandings in his contacts with others. Anderson (1939), Anderson and H. Brewer (1945), and Anderson and J. Brewer (1946) found that where integrative teacher behavior was predominant, children tended to show initiative and

spontaneity, while children with dominative teachers were more easily distracted from school work and less responsive to classroom activities. Anderson's ideas and categories are forebears of Flanders' concepts of indirect and direct influence (in Amidon and Hough 1967).

Another precursor of Flanders was the study by Lewin, Lippitt, and White (1939) on the effects of autocratic-democratic leadership on boys working in organized club activities. However, the inherent hypotheses of this study did not differ from those tested by Anderson. Autocratic leadership was associated with greater productive effort but increased aggression amongst the boys and greater dependence upon the leader. Democratic leadership was associated with a minimum of aggression but less production by the boys.

Withall (1949) developed the first instrument to measure classroom climate-interaction by means of a category system that classified teacher statements. His results gave support to the idea that classroom climate could be assessed and described by means of a category system.

Among others, Flanders (1951) used Withall's techniques in developing learner-centered and teacher-centered climates to study the behavior of seven university students. He found student anxiety, apathy, and hostility to be associated with directive, demanding teacher behavior in a teacher-centered climate. Students in the learner-centered environment were more problem

oriented and exhibited less anxiety. From these beginnings, Flanders (1960) developed the Flanders System of Interaction Analysis, a ten category instrument to record teacher behavior. Seven teacher-talk categories are divided into two areas of influence--Indirect influence: (1) accepts feeling, (2) praises or encourages, (3) accepts or uses ideas of students, and (4) asks questions; Direct influence: (5) lecturing, (6) giving directions, and (7) criticizing or justifying authority. Three remaining categories are characterized as student-talk: (8) student talk--response, (9) student talk--initiation, and a final category (10) silence or confusion.

Flanders (1967) tested the influence of direct and indirect teacher behavior on student achievement and behavior in eighth and ninth grade students in English, social studies, and mathematics classrooms. In social studies and mathematics, indirect teachers had higher student achievement. Indirect teachers were more flexible and alert to students' statements and accepted and used ideas of students more than direct teachers. Flanders invented a ten by ten matrix system for recording and tabulating communicative behavior at three-second intervals to preserve the sequence of teacher-pupil interaction. "Reliability coefficients of observer agreement using the Flanders System ranged from .88 to .96 (Forbes 1972, p. 24)."

The cognitive and affective taxonomies have been utilized extensively in the development of classroom observation systems.

The cognitive domain of educational objectives is classified into six categories (Bloom 1956):

1. Knowledge--emphasizes remembering of information.
2. Comprehension--emphasizes understanding of information communicated.
3. Application--use of abstractions in new situations.
4. Analysis--breakdown of information into its constituent parts and the relationships of the parts.
5. Synthesis--putting together of the parts to form a whole.
6. Evaluation--making judgments about the value of the information presented.

The affective domain of educational objectives is classified into five categories (Krathwohl et al. 1964):

1. Receiving--passive attention to stimuli.
2. Responding--reacting to various stimuli.
3. Valuing--voluntarily displaying behavior consistent with a belief.
4. Organization--display of a commitment to a set of values.
5. Characterizations by a value or value complex--total behavior consistent with value systems.

Roberson (1967) developed a coding instrument to be used by the teacher for self-appraisal. This code permitted a teacher to examine his behavior through three filters of: (1) objectives, (2) methods, and (3) expressions. Based on the taxonomies, objectives were subdivided into cognitive and affective domains.

Methods were classified as open or closed which was an extension of the work of MacDonald and Zaret (1966). Expressions were classified as verbal or non verbal as developed by Galloway (1962). Below is an abbreviated version of the Roberson Code (Allen, Barnes, Reece, and Roberson 1970):

Objectives	Methods	Expressions
(Cognitive)	(Closed)	(Verbal)
Knowledge	Information Giving	Inhibiting
Comprehension	Mastery	Routine
Application	Problem Solving	Encouraging
Analysis		
Synthesis		
Evaluation		
(Affective)	(Open)	(Non Verbal)
Receive	Clarification	Routine
Respond	Inquiry	Inhibiting
Values	Dialogue	Encouraging

Reliabilities based on coder agreement using the Roberson Code ranged from .69 to .98 (Forbes 1972).

Davis and Tinsley (1967) used the cognitive taxonomy in developing their Teacher-Pupil Question Inventory (TPQI). Each question, whether by teacher or pupil, was coded. The questions were judged by form, inferred intent, nature of elicited response, and reception. There were nine categories: (1) Memory, (2) Translation, (3) Interpretation, (4) Application, (5) Analysis, (6) Synthesis, (7) Evaluation, (8) Affectivity, and (9) Procedure.

A recent instrument showing the influence of the cognitive and affective taxonomies was the Substantive Observation System developed by Cropper (1971). This code was designed to examine the nature of the subject matter or content statements made by the teacher.

> In analyzing substantive teacher behavior as either affective or cognitive it is assumed that it is possible to observe and classify teacher statements as predominantly dealing with emotional or intellectual processes at any given time. Behaviors characterized by intellectual processes [cognitive] vary from simple recall through activities of increasing complexity to quite creative ways of synthesizing new ideas. Teacher behavior is classified as cognitive when the intellectual task is dominant. Behaviors characterized by emotional processes [affective] range from mild interest through activities of increasing involvement to valuing. Teacher behavior is classified as affective when the emotional processes are dominant (Cropper 1971, p. 55).

The categories of the cognitive domain developed by Bloom (1956) and extended by Roberson (1967) were accepted by Cropper (1971) with minor revisions. However, the categories developed by Krathwohl et al. (1964) in the affective domain were found not to be clearly dichotomous from the cognitive realm, hence other categories were developed. Evaluation was omitted from both categories as it was felt difficult to determine whether evaluative statements were predominantly cognitive or affective in nature (Cropper 1971).

Cropper's Substantive Observation System may be shown in the following condensation:

Cognitive - Intellectual	Affective - Emotional
Knowledge	Interests
Comprehension	Feeling
Application	Attitudes
Analysis	Biases
Synthesis	Values

The cognitive categories have been defined earlier in this chapter. In each of the affective categories, the teacher emphasizes:

1. Interests--student curiosity or involvement.
2. Feelings--sentiments such as happiness, sadness, anger, understanding, and sympathy.
3. Attitudes--an opinion, usually for or against some issues.
4. Biases--discrimination, indoctrination, or prejudgments.
5. Values--seeing the worth of some information or idea.

Sandefur and Bressler (1971), in reviewing forty-two articles on classroom observation systems, found that such systems can be used profitably to increase the humanization of teaching. Soar (1972) found that teachers who use an observation system to gain feedback on their teaching then are able to make changes and to increase the flexibility of their teaching style. Allen et al. (1970) found support for the development and use of observational systems by classroom teachers to appraise their own behavior. Furst (1971), in reviewing fourteen studies on the use

of interaction analysis in teacher education, found significant differences in either attitudes or behaviors of students trained in interaction analysis when compared to students not so trained. As Furst (1971, p. 7) put it, "you get what you train for."

If you can get what you train for, then the primary concern becomes, what do you wish to train for? If, as Beatty (1969, p. 75) suggested, the "key to effective behavioral change is an individual's personal discovery of meaning," then further exploration of affective teacher behavior is worthwhile.

The final instrument for observation and measurement of teacher behavior considered was the Preferred Instructional Objective Scale developed from the affective and cognitive taxonomies by Barr (1972). This forced-choice scale was used to determine student and teacher attitudes in selecting instructional objectives.

Except for the category of evaluation, the categories Barr developed in the cognitive realm were basically unchanged from those presented in the cognitive taxonomy. The evaluation category was felt to be an "indispensable link between cognitive and affective behaviors" and as such was "a purposeful role and did not represent an end process in examining behavior (Barr 1972, p. 58)."

After field testing and further research, Barr accepted four categories in the affective domain: (1) Receiving,

(2) Responding, (3) Valuing, and (4) Organizing. These categories were defined by Barr (1972) as:

1. Receiving--to passively experience or be conscious of words or acts.
2. Responding--to acquiesce by words or acts.
3. Valuing--to adopt as an idea or as a norm for acting.
4. Organizing--to integrate or organize norms into an action system.

Barr (1972) found that the Preferred Instructional Objectives Scale was internally consistent and assumed a reliable measure for defined cognitive and affective attitudes held by teachers and pupils for instructional objective preference.

Summary

The phenomenological system was chosen as the theoretical frame of reference to aid in understanding self-concept in determining individual behavior. Implications of self-perception and teacher training are just beginning to be researched.

Observation and measurement of teacher behavior in the classroom can contribute to empirical theories of teaching and thus to teacher training. While there are many observation systems, little research has been done to relate affective behaviors of teachers to their perceptions. Investigation of the relation between the variables identified in this study could contribute to a theory of teaching.

CHAPTER 3

RESEARCH PROCEDURES

The procedures used in this study are described in this chapter under the following headings: (1) a description of the community, university, and school districts in which the study took place; (2) the sample of student teacher participants; (3) the design of the study; and (4) the instrumentation and sources of data.

The Community, University, and School Districts

Tucson, Arizona, the community in which this study was conducted has grown rapidly in the last twenty years. The Arizona Statistical Review (Valley National Bank 1972) listed the total population in 1950 as 121,000 and 389,000 in 1972. Spanish-American influences are prevalent. Major economic influences on this community are mining, tourism, agriculture, a military Air Force base, and a large land-grant university.

Pima County Planning Department (1971-73) reports indicated that the past decade saw significant changes in the economic life of the community. Large in-migrations and out-migrations due to large government construction contracts tended to distort estimates of growth, birth, and change rates. The county birth

rate has climbed from 17.0 births per thousand population in 1968 to 20.0 in 1970.

In its eighty-seven years of existence, The University of Arizona has become one of the nation's major state universities. The University is organized into fourteen colleges, four schools, ninety-seven academic subdivisions and departments, and twenty-nine divisions of research and special services. One hundred twenty-eight majors are offered for the bachelor's degree, over one hundred for the master's degree, and over sixty for the doctorate (Associated Students, University of Arizona 1972, p. ii). The University's enrollment for the fall semester of the 1972-73 school year was 30,045 students (First National Bank of Arizona 1972, p. 4).

One of the school districts in which this study took place is the largest in the state (Tucson District #1). It serves a diverse population with many ethnic, cultural, and socio-economic groups represented in the schools. District #1 presently consists of eight high schools, one combined junior-senior high school, fourteen junior high schools (grades 7-8), and sixty-four elementary and special education schools with a combined student population of 62,878 students. Of these, approximately 18,900 were high school students and 10,500 junior high students (Tucson Public Schools Pupil Data Sheet 1972). For the 1972-73 school year there were 2,820 certificated personnel, of whom 1,666 were

either in the secondary schools or central office staff (Tucson Public School Personnel Data Sheet 1972).

Sunnyside School District in which this study also took place also serves a diverse population. This suburban district consists of one high school, two junior high schools (grades 7-9), and seven elementary and special education schools. The total student enrollment of this district was 9,692 and 467 certificated personnel of whom 184 were in the secondary schools (Virginia Spencer, Director of Information on Certified Personnel, Sunnyside School District, phone conversation, January 3, 1973).

These two school districts serve an ethnically diverse population (United States Commission on Civil Rights 1972):

	Tucson District #1	Sunnyside School District
American Indian	1.3%	2.1%
Anglo	66.9%	50.1%
Black	5.2%	1.6%
Mexican-American	25.7%	45.6%
Oriental	.7%	.6%

The Sample

The sample on which this study was based was comprised of secondary student teachers, fall semester 1972, in two school districts in the Tucson metropolitan area. The number of secondary student teachers for this fall semester totaled 170.

Secondary student teachers at the University may participate in one of two student teaching programs. In the regular program, the student completes most of his professional course

work at the University and as a culminating experience participates as a student teacher, a half-day, for a semester, in a secondary school. In the professional semester program, the student participates as an intern, full day for a semester, in a secondary school. A student in the regular program obtains ten units of university credit while a student in the professional program obtains sixteen units of university credit, upon successful completion of the program.

Because of practical limitations of time and expenditure, it was necessary to limit the size of the sample. To help reduce variation in professional background of the participants, the population was limited to student interns participating in the professional semester program, fall semester 1972. Of the fifty-five students in this program, fifty-one initially agreed to participate in the study.

Using the matriculation numbers of the participants, and the Random Numbers Table (Popham 1967), twenty-six students were selected to be in the experimental group and twenty-five to be in the control group.

The students involved in this study completed their internship in four high schools and two junior high schools located in the school districts previously mentioned. Thirteen of the participants were in the two junior high schools (grades 7-9), both located in Sunnyside School District. Five students were in Sunnyside High School. The remaining twenty-three participants

did their internship in three of the high schools in Tucson District #1. Fourteen were at one school, eighteen in another, and one in a third high school.

No attempt was made in this study to control variables such as: teaching major, sex, grade level taught, or ethnic group. It was assumed that the intent of the research pertained to the student teacher preparation program itself, rather than the specific teaching situation where the internship took place.

After approval of the research proposal was obtained from the Department of Secondary Education of the University, its student teaching office, and the two participating school districts, the principals of each of the participating schools were contacted and approval obtained.

During the first week of the semester each of the interns was contacted at his school and the study detailed for him at that time. Each learned that he would (1) complete a scale designed to determine preference for objectives in either the cognitive or affective domains three times during the semester, and (2) audio-tape two twenty-minute periods of a reasonably typical day in his classroom.

The intern teachers learned that if they were selected for the experimental group they would in addition (1) complete a self-study guide, to develop in the reader an appreciation for and understanding of affective objectives, and (2) prior to completing the second tape, individually receive information on the

coding of their first tape on the frequencies of behavior coded in each category.

All potential participants were informed that in no way would the results of any part of this study affect their grade in student teaching. Only the director of the research would have access to the statistical data for any individual participant. All data would be coded in such a way as to protect the identity of the student at all times.

While fifty-one students agreed to participate in the study, it was expected that some could not complete the study, due to the time involvement necessary to complete all parts of the study.

The final sample consisted of thirty interns, 59% of those who originally agreed to participate. During the data gathering process, one person withdrew from the University and twenty did not complete all data needed for inclusion in the statistical analysis.

The Design

The design of this study was based on the definition of a field study as described by Kerlinger (1964) and Katz and Festinger (1953). Kerlinger reported that for scientific advancement in the social sciences, research should attempt to discover relations between variables in a real social setting or structure.

Kerlinger (1964) reported the strengths of field studies to be: realism, significance, strength of variables, theory

orientation, and heuristic quality. However, there were methodological weaknesses of ex post facto character and lack of precision in the measurement of field variables in a field study.

In the present study the relationships between the student teachers' reported preferences for affective objectives and selected categories of observed teacher behavior in the classroom setting were examined. The instruments used in this study are explained in detail later in this chapter.

The following procedures were utilized in implementing the design of the study:

1. Through utilization of the Random Numbers Table, intern teachers in the professional semester program who agreed to participate in this study, were assigned to either the experimental group or to the control group.
2. All of the intern teachers involved in the study completed the Preferred Instructional Objective Scale. This scale, developed and utilized in a prior study by Barr (1972), was a self-report, forced-choice scale, designed to determine student teacher attitudes toward preferred cognitive or affective instructional objectives employed in teaching-learning tasks. This scale was completed three times by all intern teachers involved in this study: at the beginning of the semester before they began their teaching internship; three weeks later after the experimental group completed a self-study instrument; and the last day of the fall semester 1972.

3. Only students in the experimental group completed a self-study guide designed to develop in the reader an appreciation for and understanding of affective objectives. This instrument titled an "Ari-Pac for Differentiation and Skill in Using Affective Objectives" (Appendix A) was developed for this study by this author. It consisted of a pre-test, a body of information on affective objectives, and a post-test. The pre-test was completed at the beginning of the semester. The post-test was completed and collected two weeks later after the students had finished this self-study guide.

4. The Substantive Observation System (Cropper 1971) was used to differentiate the nature of subject matter or content development statements made by the intern teachers in the classroom.

   Each of the intern teachers participating in the study was supplied with enough audio-tape to record two twenty-minute segments of his verbal classroom behavior. The first taping occurred at mid-semester and each tape was analyzed according to the categories of the Substantive Observation System. Interns in the experimental group received information on the frequencies of behavior coded in each category. Participants in the control group received no information at this time. All participants then completed a second twenty-minute tape during the

last three-four weeks of the semester which was then analyzed as previously described.

5. For the hypotheses that contained continuous variables which could be measured on an interval scale, the Pearson Product-moment correlation was used. This correlation test was used with the data obtained from the Preferred Instructional Objective Scale to determine if there were significant differences in mean scores obtained from the three administrations of this scale for both the experimental and the control groups.
6. The student -t correlation was used for statistical treatment of all remaining hypotheses (Glass and Stanley 1970). This test was deemed appropriate since: (1) the student teachers were selected into experimental and control groups using the Random Numbers Table, (2) the sample was assumed to be representative of a normally distributed population, and (3) interval data were obtained.

Instrumentation and Sources of Data

The theory of the instrumentation used in data-gathering for this research study was reviewed in the second chapter of this manuscript. At that time attention was directed to theoretical constructs of self-report and systematic observation systems of teacher and student teacher classroom behavior. Additional information supportive of the design of the study is presented in the following sections describing (1) the Preferred Instructional

Objective Scale, (2) the Substantive Observation System, and (3) an Ari-Pac for Differentiation and Skill in Using Affective Objectives.

The Preferred Instructional Objective Scale

This scale, developed by Barr (1972), a self-report, forced-choice instrument, was used to determine teacher intern attitudes toward preferred cognitive or affective instructional objectives employed in teaching-learning tasks. This scale was developed to be used with pupils and with teachers. This population was extended in this study to include student teachers in their practice teaching situation.

The scale consisted of thirty-two paired cognitive and affective items or objectives. The directions indicate that for each item the reader must make a choice.

For the purposes of scoring this instrument, a choice of a cognitive objective received a value of 2 while a choice of the corresponding affective item would receive a value of 1. A high score, then, would indicate a preference for cognitive objectives and a low score a preference for affective objectives. The maximum scale score was sixty-four and the minimum score was thirty-two.

To develop this scale, Barr found support in the literature indicating that self-report inventories are valuable as research tools (Nunnally 1967, Kerlinger 1964). A forced-choice

scale was chosen by Barr (1972, p. 41) to "control factors which limit the analysis of measures" and to insure "that subjects were unable to ascertain the specific intent of the researcher." Theoretically, subjects then cannot tell which items were discriminators or basic to preference values. Cues which reward any specific responses were controlled, thereby presumably increasing validity.

Instrument design was related to an assumption that it was possible to define and classify cognitive and affective instructional objectives and processes. These objectives were derived from those defined in the cognitive and affective taxonomies.

Definitions that were accepted and used by Barr (1972) in developing his scale have been defined previously in this manuscript. Barr also related the reciprocal relationship between cognition and affect in the instructional setting as discussed by Gordon (1970). Therefore, the apparent dichotomy of the two domains of objectives was employed only for the purpose of examining objective preferences held by a teacher for instruction.

While the taxonomies provided a point of departure from which to define the instrument, further refinement within each domain was required.

In the cognitive domain, all categories were retained except for evaluation which was omitted as "it was regarded as a phenomenon which occurs within and between defined categories of

both the cognitive and affective domains (Barr 1972, p. 56)." Barr (1972, pp. 57-58) continued, "Evaluation represented an indispensible link between both cognitive and affective behaviors [see Figure 1]. Evaluation was assigned a purposeful role and did not represent an end process in examining behavior."

To develop the thirty-two paired item scale, Barr constructed at least twenty items for each category, which were then classified as to category by a panel of ten judges. Only those items were retained that were unanimously classified as to category by the judges. Then these items were resubmitted to the panel to determine which ones best exemplified each category. These items that received the highest cumulative ranking were selected for the scale. The final format of the scale was reported in Appendix C with permission of the author.

Trial tests of the instrument were made on pupils and teachers and the instrument modified accordingly.

The validity of the instrument was established by a panel of judges. Coefficient alpha as a test of reliability of .92 was obtained for the teacher sample and .85 for the pupil sample (Barr 1972).

The Substantive Observation System

This study utilized the Substantive Observation System designed by Cropper (1971). This observation instrument was designed to differentiate the nature of the subject matter or

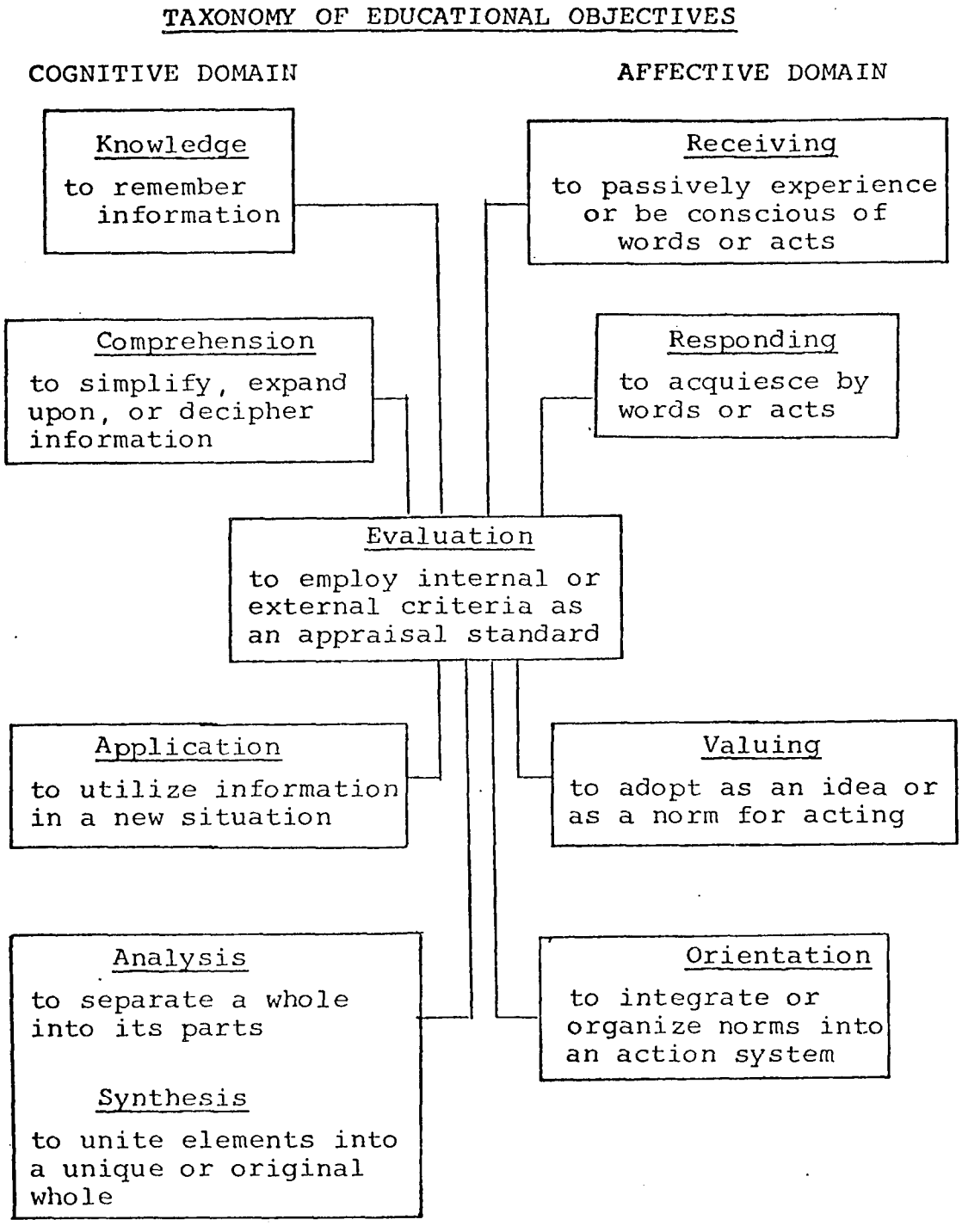

Figure 1. Definitions for the Instructional Objectives Scale. (Barr 1972, p. 57)

content statements made by the teacher in the classroom. Cropper had developed and field tested this instrument with selected teachers. The population was extended by using the instrument to evaluate student teachers in their teaching situation.

In developing the Substantive Observation System for analysis of teacher classroom behavior, Cropper (1971, p. 54) utilized the following criteria set forth by Medley and Mitzel as characteristics of analysis:

> 1. The record obtained must show the total number of units of behavior which occurred and the number classification in each category.
>
> 2. Since every statement the teacher makes is recorded, it is supposed to be exhaustive of all behaviors of the type recorded.
>
> 3. The code should be developed from some relatively sound theory.
>
> 4. The number of categories into which the behavior is to be classified should not be too large.
>
> 5. There is usually a category for neutral, unclassifiable behaviors.
>
> 6. The unit of behavior to be tallied may be a natural one such as a single statement or it may be a brief time-unit. The natural unit tally is usually preferable.
>
> 7. Categories should be defined so that the discrimination of the observer is as easy and free from other judgments as possible.

The Substantive Observation System was developed to help determine the nature of subject matter statements made by a teacher in a classroom. No attempt was made in the construction of this code to analyze procedure statements, teacher evaluative

remarks, or student talk. The categories and definitions of the code shown in Figure 2 are adapted from Cropper's (1971) system.

To develop this code Cropper utilized the categories beveloped in the taxonomies. In categorizing substantive teacher behavior as either cognitive or affective, Cropper (1971, p. 55) noted that it was assumed "possible to observe and classify teacher statements as predominantly dealing with emotional or intellectual processes at any given time." Intellectual (cognitive) behaviors vary from simple recall through activities of increasing complexity to creative ways of synthesizing new ideas. When the intellectual task was dominant, teacher behavior was classified as cognitive. Emotional (affective) behaviors vary from mild interest through activities of increasing involvement to valuing. If the emotional processes are dominant, teacher behavior was classified as affective. This apparent dichotomy of behaviors is used for research purposes, since both dimensions exist in all learning situations (Gordon 1970, Krathwohl, Bloom, and Masia 1964).

The cognitive categories were essentially the same as those developed by Bloom (1956) and Roberson (1967) with only minor revisions. "The wide acceptance and use of the taxonomy made it an especially appropriate basis from which to develop a code to analyze teacher behavior (Cropper 1971, p. 56)."

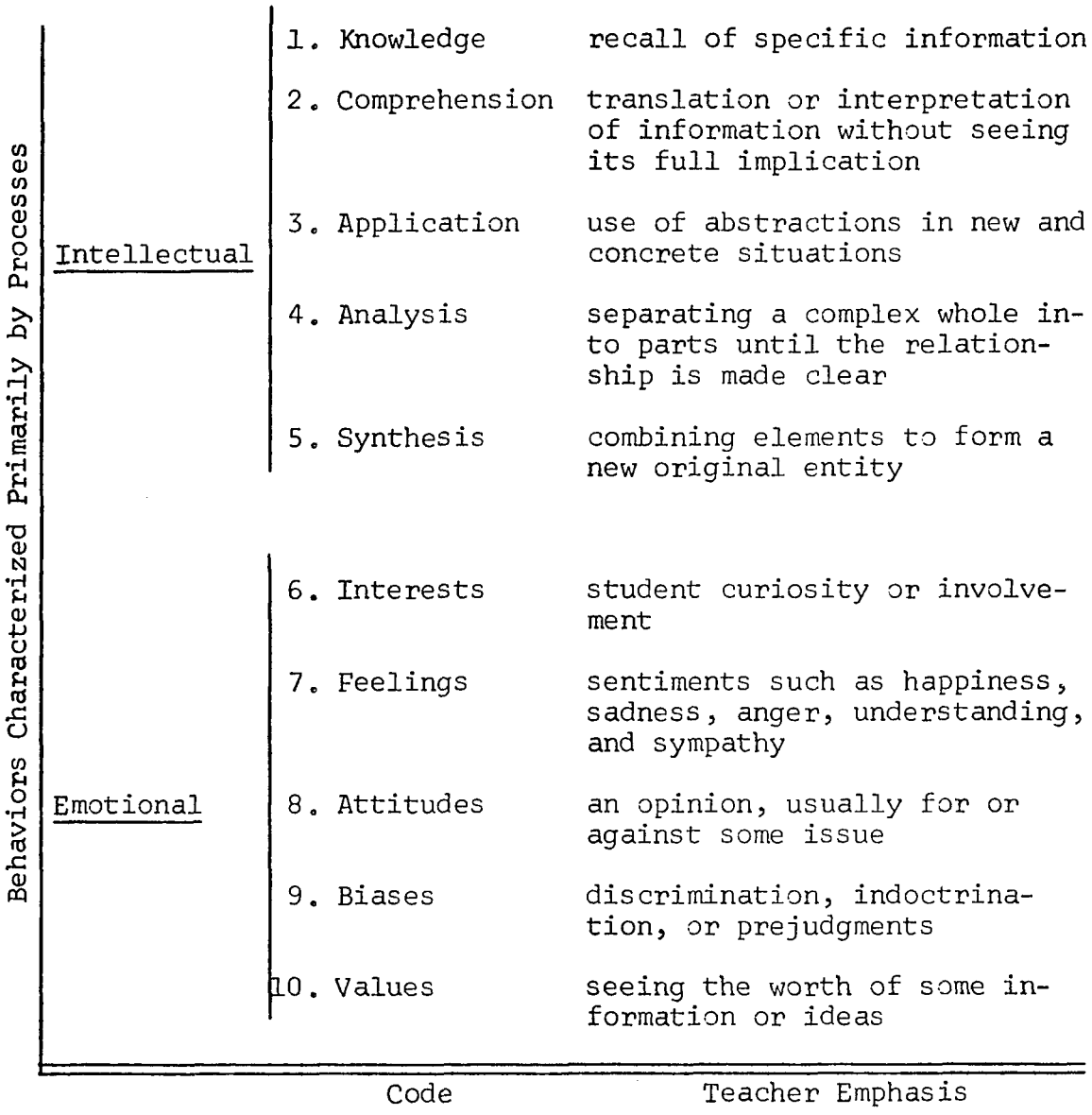

Figure 2. The Substantive Observation System

However, the categories developed by Krathwohl et al. (1964) did not lend themselves to the development of a clearly dichotomous system from the cognitive domain. Consequently, Cropper (1971) developed and field tested a number of categories that were felt to be representative of nearly all teacher statements emphasizing emotional processes.

The category of evaluation was omitted from both dimensions as it was extremely difficult to determine whether such statements were predominantly cognitive or affective in nature (Barr 1972, Cropper 1971).

Cropper hypothesized that teachers who express positive views of self will exhibit classroom behaviors which are primarily affective. Beatty (1969, p. 75) asserted that "research supports the idea that feelings and emotion play a critical role in blocking and enhancing learning. Further, they are a major determinant of what will be learned in any situation."

In training personnel to use the Substantive Observation System, Cropper (1971) obtained coder agreement of .88. In mid-October this researcher met twice with Cropper and established coder agreements of .94, .90, and .83 on three separate trials.

Two graduate students in the College of Education were then trained in Cropper's system obtaining coder agreement of .87. These graduate students had the primary responsibility for analyzing the audio-tapes. Coder agreement was maintained by

having the graduate students and this researcher jointly code a tape every week for the duration of the research.

An Ari-Pac for Differentiation and Skill in Using Affective Objectives

An Ari-Pac (Appendix A) is a device used by a teacher for individual instruction. The student is to receive all the material needed in this self-contained package. The package format for an Ari-Pac was developed at The University of Arizona (L. Smith 1971).

The particular Ari-Pac utilized in this study was a self-study guide on affective objectives developed by this author for use with student teachers. The intent was to provide prospective teachers with information on the affective domain. The instrument was developed using information contained in the affective taxonomy. The wide use and acceptance of this taxonomy made it an especially appropriate basis from which to develop this self-study guide.

This self-study guide contained a pre-test in which the reader was asked to categorize twelve affective objectives by checking the appropriate category. The intent of the pre-test was to discover how much information the reader knew prior to beginning the Ari-Pac.

All quotations, definitions, explanations, and examples of each category of the affective domain were taken from the affective taxonomy.

The central core of the instrument included definitions of cognitive and affective objectives, an explanation of the need for a classification of affective objectives, and a consideration of the hierarchal structure of the levels of the affective domain.

The affective domain consists of the levels of:

1. Receiving--passive attention to stimuli.
2. Responding--reacting to various stimuli.
3. Valuing--voluntarily displaying behavior consistent with a belief.
4. Organization--display of a commitment to a set of values.
5. Characterization--total behavior consistent with value systems.

Each level was further classified into two or three sub-categories. For each level, each of the sub-categories was defined and examples given. Then a self-test was administered after each level followed on a separate page by the answers to the test.

In this fashion a person completing this instrument was exposed to information about the affective domain and received immediate feedback on his progress in his understanding of each of the levels of the affective domain. The pre-test was used to determine the background level of knowledge about affective objectives and the post-test was used to determine whether a gain in knowledge had occurred.

This instrument was pilot tested during August 1972 with a group of approximately twenty-five teachers varying in experience from two to twenty years. Their suggestions on format and timing were helpful in refining the instrument for presentation in the fall semester to the intern teachers. The complete instrument is in Appendix A of this manuscript.

Summary

In this chapter, the community in which this study was conducted, the sample, the design of the study, and the instrumentation and the sources of data were described. In Chapter 4 the statistical analysis of data and the testing of the several hypotheses of the study will be presented.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

It was the purpose of this study to examine the relationships between student teachers' self report in their preferences for affective objectives and the frequency of affective behaviors exhibited in the classroom. In this chapter the data collected on self report of preferences for affective objectives and the frequency of affective teacher behaviors are examined, and the results of the statistical analysis presented.

The Instrumentation

Affective Objective Preferences

Student teacher self report scores in their preferences for affective objectives were obtained by having the student teachers complete the Preferred Instruction Objective Scale (PIOS) three different times during the fall semester, 1972. The scores for each student teacher on the three administrations of the PIOS are presented in Table 1.

Student teacher scores on the PIOS ranged from 32 to 64. The distribution of the raw scores obtained from this instrument is illustrated in Figures 3, 4, and 5.

Table 1. Raw Scores Obtained from the Three Administrations of the Preferred Instructional Objectives Scale

Teacher Number	First Administration	Second Administration	Third Administration
1	38	37	36
2	39	44	44
3	44	42	45
4	44	43	47
5	40	38	35
6	43	39	42
7	54	44	52
8	35	32	32
9	41	44	43
10	42	37	41
11	34	34	49
12	42	34	34
13	38	45	42
14	38	32	37
15	32	33	34
16	43	38	42
17	41	33	40
18	33	37	32
19	64	63	62
20	35	38	32
21	42	48	42
22	36	45	36
23	37	34	32
24	35	37	35
25	44	41	42
26	49	46	48
27	34	34	32
28	35	36	32
29	39	36	37
30	42	44	51

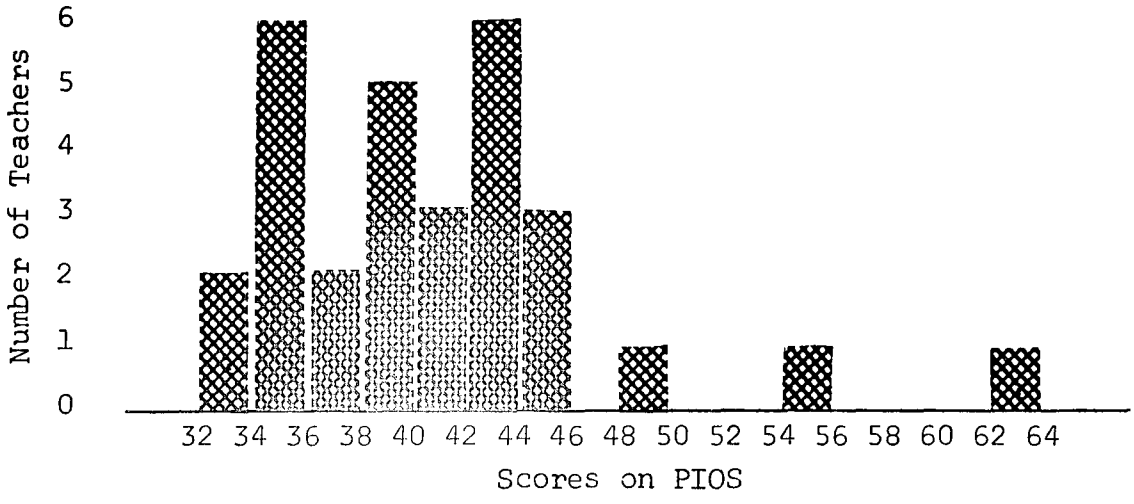

Figure 3. Distribution of Raw Scores from the First Administration of the PIOS

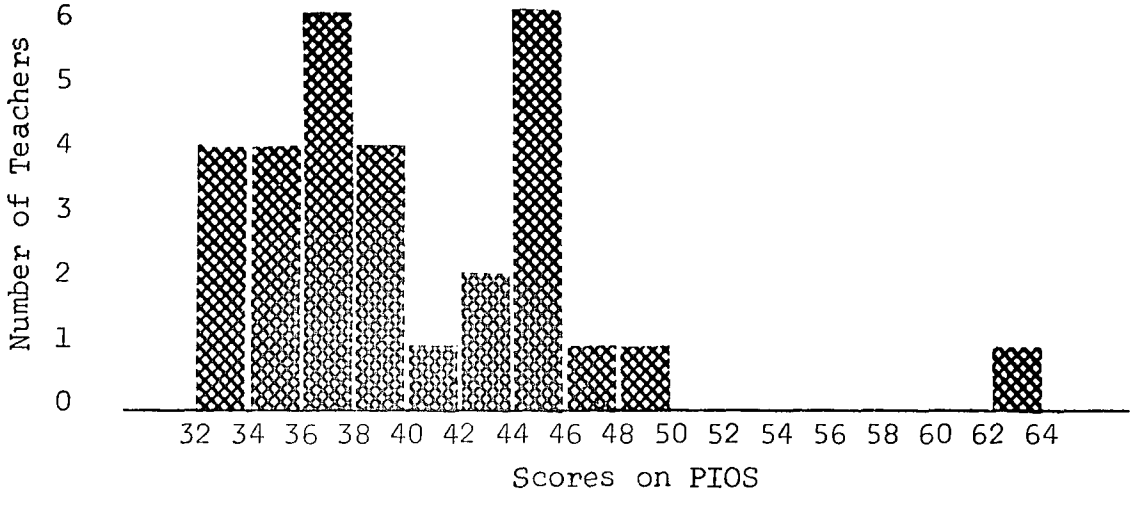

Figure 4. Distribution of Raw Scores from the Second Administration of the PIOS

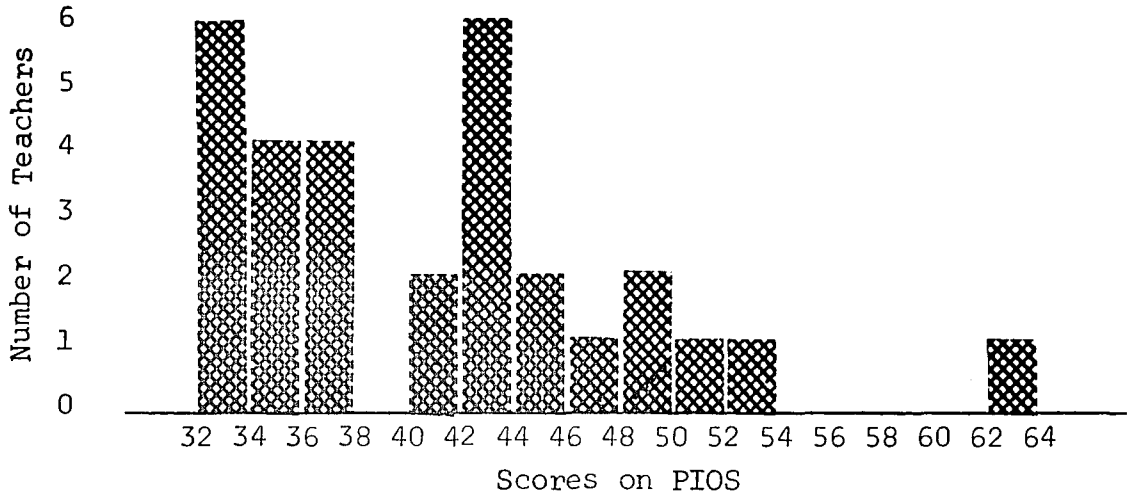

Figure 5. Distribution of Raw Scores from the Third Administration of the PIOS

The mean scores for the three administrations of the PIOS were 40.40, 41.53, and 41.32 which indicated a decided preference for affective objectives by the student teachers.

In order to establish evidence of the consistency of the three administrations of the PIOS, the Pearson product-moment coefficient of correlation was computed for the scores as given in Table 1. For the first and second administrations there was a positive correlation between the two sets of scores of .84. For the first and third administrations there was a positive correlation of .83. For the second and third administrations there was a positive correlation of .78. All three correlations were significant at the .05 level.

Self-Study Guide on Affective Objectives

An Ari-Pac for Differentiation and Skill in Using Affective Objectives (ADSAO) was given to the experimental group of student teachers. Pre-test scores were obtained to discover how much information about affective objectives the reader knew prior to using the Ari-Pac. A post-test was used to determine whether a gain in knowledge had occurred.

The scores on the pre-test ranged from 0 to 6 and on the post-test ranged from 2 to 10. The scores for each student teacher in the experimental group on these two tests are presented in Table 2. The mean scores were 3.6 for the pre-test and 6.67 for the post-test.

Frequency of Affective Teacher Behavior

The Substantive Observation System used to analyze teacher behaviors was presented in Chapter 3. The raw data, in the form of tallies, were converted to percentages due to some variations in the actual number of teacher statements analyzed during the taping period. These data are presented in Tables 3 through 6.

Table 2. Raw Scores Obtained from the Pre-Test and Post-Test of an Ari-Pac for Differentiation and Skill in Using Affective Objectives

Teacher Number	Pre-Test	Post-Test
1	2	5
2	2	5
3	3	10
4	5	4
5	1	4
6	5	8
7	6	8
8	5	10
9	6	10
10	6	7
11	0	2
12	5	6
13	2	6
14	3	10
15	3	5

Table 3. Percentages of Teacher Behavior Classified as Affective by the Substantive Observation System by Category--Experimental Group-First Coding

Teacher Number	Percentages of Behavior Classified as Affective by Category or Total					
	Interests	Feelings	Attitudes	Biases	Values	Total
1	2.2	4.4	1.1	4.4	-	12.1
2	-	-	7.9	-	-	7.9
3	8.9	4.4	46.6	8.9	2.2	71.0
4	-	3.0	3.0	.8	-	6.8
5	.7	-	7.5	7.8	1.0	17.0
6	3.0	1.0	-	12.0	-	16.0
7	-	-	7.6	7.6	-	15.2
8	3.6	.9	3.6	6.3	-	14.4
9	-	1.3	8.7	4.7	-	14.7
10	15.8	-	21.0	5.3	-	42.1
11	2.0	-	2.0	2.0	2.0	8.0
12	-	-	31.4	2.9	-	34.3
13	1.6	3.2	15.2	4.0	-	24.0
14	-	-	4.4	2.2	-	6.6
15	-	-	-	5.1	-	5.1

Table 4. Percentages of Teacher Behavior Classified as Affective by the Substantive Observation System by Category--Experimental Group-Second Coding

Teacher Number	Percentages of Behavior Classified as Affective by Category or Total					
	Interests	Feelings	Attitudes	Biases	Values	Total
1	-	-	5.7	-	-	5.7
2	-	.6	21.1	6.6	.6	28.9
3	.6	-	14.7	2.9	.6	18.8
4	27.5	5.0	5.0	10.0	-	47.5
5	-	-	6.7	2.5	-	9.2
6	-	-	11.8	3.4	-	15.2
7	3.4	-	10.2	1.7	-	15.3
8	-	-	14.9	2.1	-	17.0
9	10.0	-	-	-	-	10.0
10	2.0	-	26.0	-	-	28.0
11	-	-	16.7	7.4	1.9	26.0
12	-	-	14.3	8.6	-	22.9
13	18.9	-	29.7	-	-	48.6
14	-	-	4.2	-	-	4.2
15	-	1.1	15.6	7.5	2.7	26.9

Table 5. Percentages of Teacher Behavior Classified as Affective by the Substantive Observation System by Category--Control Group-First Coding

Teacher Number	Percentages of Behavior Classified as Affective by Category or Total					
	Interests	Feelings	Attitudes	Biases	Values	Total
16	-	-	16.2	9.5	-	25.7
17	6.1	-	2.0	-	-	8.1
18	-	1.7	5.2	.9	-	7.8
19	-	-	9.0	7.0	-	16.0
20	11.1	-	3.2	6.3	-	20.6
21	-	-	2.9	11.4	-	14.3
22	3.0	-	-	1.0	-	4.0
23	.4	.4	6.3	2.1	-	9.2
24	-	-	-	-	-	0.0
25	-	-	12.0	24.0	-	36.0
26	-	-	7.1	4.4	-	11.5
27	5.8	1.0	4.8	-	-	11.6
28	-	-	2.7	-	-	2.7
29	1.4	.9	6.8	4.1	-	13.2
30	1.8	-	9.1	12.7	-	23.6

Table 6. Percentages of Teacher Behavior Classified as Affective by the Substantive Observation System by Category--Control Group-Second Coding

Teacher Number	Percentages of Behavior Classified as Affective by Category or Total					
	Interests	Feelings	Attitudes	Biases	Values	Total
16	-	-	13.5	11.0	-	24.5
17	17.4	4.3	17.4	10.9	-	50.0
18	10.1	-	5.8	1.4	-	17.3
19	-	-	12.0	1.2	1.2	14.4
20	6.1	.9	2.6	4.4	-	14.0
21	-	-	29.0	-	-	29.0
22	-	-	4.7	5.9	-	10.6
23	-	2.1	2.1	1.0	-	5.2
24	-	-	-	17.4	-	17.4
25	-	-	7.7	11.5	-	19.2
26	-	-	15.6	1.1	-	16.7
27	3.5	-	12.8	-	-	16.3
28	-	-	-	-	-	0.0
29	1.2	1.2	12.5	-	-	14.9
30	8.9	-	13.3	13.3	-	35.5

The proportion of total behavior classified as affective of the Substantive Observation System ranged from 00.0% to 71.0%. Figure 6 illustrates the distribution of percentages of affective behaviors as measured by this analysis system for the first coding and Figure 7 for the second coding. "The positive skewness of this distribution indicates that most teachers were dealing with cognitive content in the classroom (Cropper 1971, p. 71)."

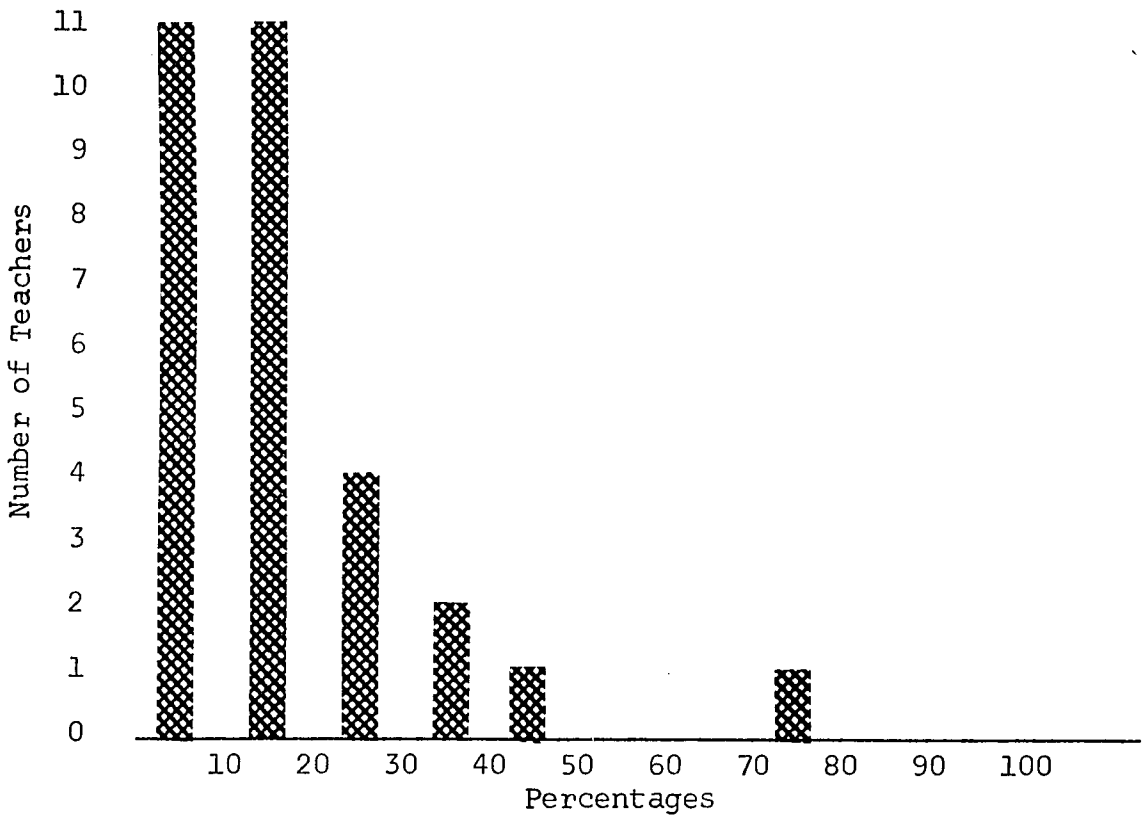

Figure 6. Percentages of Teacher Behavior Classified as Affective--First Coding

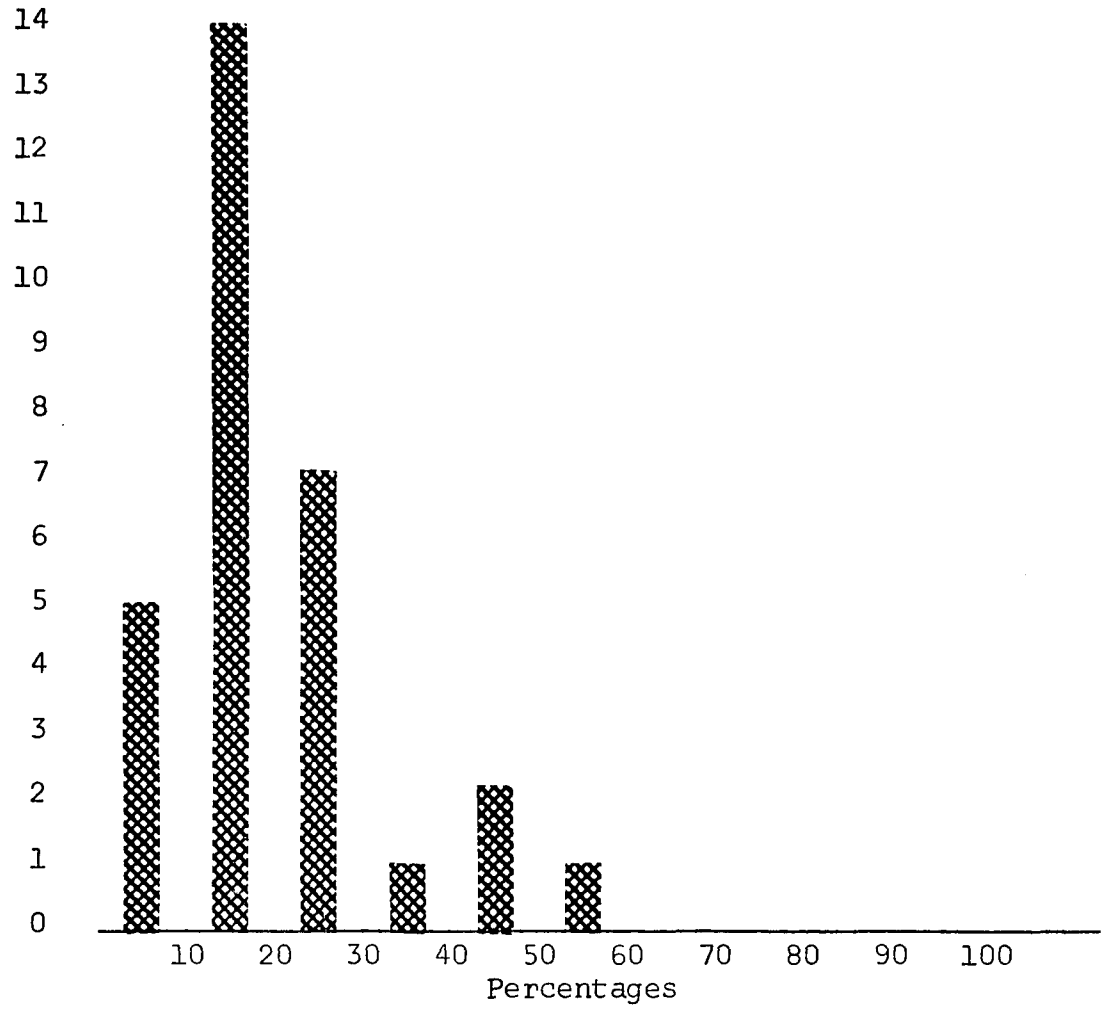

Figure 7. Percentages of Teacher Behavior Classified as Affective--Second Coding

Analysis of the Data

The following hypotheses stated in null form were developed for this investigation. They were tested at the .05 level of significance.

Hypothesis 1

There was no significant difference in scores obtained on the pre-test and post-test contained in the Ari-Pac designed for this study, completed by the experimental group of student teachers.

The Student-t test of significance was used to compare mean scores on the pre-test and post-test. The coefficient of correlation obtained was 1.4. Using the .05 level of significance, the hypothesis must be retained.

Hypothesis 2

There were no significant differences between the scores on the experimental group and the control group obtained from the three administrations of the Preferred Instructional Objective Scale.

The Student-t test of significance was used to compare mean scores of the experimental and control groups on the three administrations of the Preferred Instructional Objective Scale. The coefficients of correlation obtained were: .133 for the first administration, .105 for the second administration, and .163 for the third administration. Using the .05 level of significance, the hypothesis must be retained.

Hypothesis 3

For the experimental group, there were no significant differences in scores obtained from the three administrations of the Preferred Instructional Objective Scale.

The Student-t test of significance was used to compare mean scores of the experimental group in the three administrations of the Preferred Instructional Objective Scale. The coefficients of correlation obtained were: .04 for the first and second administrations, .03 for the first and third administrations, and .013 for the second and third administrations. Using the .05 level of significance, the hypothesis must be retained.

Hypothesis 4

For the control group, there were no significant differences in scores obtained from the three administrations of the Preferred Instructional Objective Scale.

The Student-t test of significance was used to compare mean scores of the control group on the three administrations of the Preferred Instructional Objective Scale. The coefficient of correlations obtained were: .068 for the first and second administrations, .004 for the first and third administrations, and .071 for the second and third administrations. Using the .05 level of significance, the hypothesis must be retained.

Hypothesis 5

There were no significant differences in the frequency or level of affective objectives used during teaching sessions for the experimental group (where feedback was used) or the control group (where feedback was not used).

The Student-t test of significance was used to compare mean scores of the control group and of the experimental group for both frequency and level of affective objectives used during teaching. The coefficients of correlation obtained are shown in Table 7.

Table 7. t-Correlations Obtained from Comparing Mean Scores of First and Second Tapings of the Control and Experimental Groups for Both Level and Frequency of Affective Objectives Used

Group	Level					Frequency of Composite Scores
	Interests	Feelings	Attitudes	Biases	Values	
Control	.63	.79	1.06	.09	.96	1.02
Experimental	.59	1.17	.397	.689	.124	.29

Using the .05 level of significance, the hypothesis must be retained.

Hypothesis 6

Between the experimental group (where feedback was used) and the control group (where feedback was not used), there were no significant differences in the frequency or level of affective objectives used during teaching sessions.

The Student-t test of significance was used to compare mean scores of the control and experimental groups for both

frequency and level of affective objectives used during teaching. The coefficients of correlation obtained are shown in Table 8.

Table 8. t-Correlations Obtained from Comparing Mean Scores of the Control and Experimental Groups for Each Taping by Both Level and Frequency of Affective Objectives Used During Teaching

Taping	Level					Frequency of Composite Scores
	Interests	Feelings	Attitudes	Biases	Values	
First	.33	1.67	1.01	.24	1.59	1.03
Second	.35	.24	.60	.72	1.24	.397

Using the .05 level of significance, the hypothesis must be retained.

Summary

This chapter included a presentation of the data collected during the investigation and a description of the results obtained from the statistical analyses of these data.

The six hypotheses, stated in the null form, were retained. This investigator found no relationships between preferences for affective objectives and the frequency of affective behaviors exhibited by the student teacher in the classroom.

CHAPTER 5

SUMMARY AND RECOMMENDATIONS

Summary

This research study was developed to examine student teacher preferences for affective objectives and frequency of affective behaviors exhibited in the classroom. In this chapter the study is summarized and recommendations given.

Rationale for the Study

The phenomenological system was chosen as the theoretical frame of reference to aid in understanding the self-concept in determining individual behavior. It was assumed that the individual behaves in terms of his perceptions of himself and of his environment. Therefore, if we are to work with and understand others, the factors which affect perceptions had to be examined, especially the perception the individual has of self.

Literature pertinent to this study was reviewed in the following categories: the role of self-concept and implications for teacher training, the cognitive and affective domains of educational objectives and goals, and the observation and measurement of teacher behavior. Particular attention was given to relating the affective behaviors of teachers to their self perceptions. Studies have shown that observation and measurement of

of teacher behavior in the classroom could contribute to empirical theories of teaching and to teacher training.

Participants and Research Procedures

This investigation took place in the metropolitan community of Tucson, Arizona. The participants were selected from a population of fifty-five student teachers participating in the professional semester program. In this program the student teacher participated as an intern, full day, for a semester, in a secondary school. Fifty-one students initially agreed to participate in the study. Since participation in this project necessitated extra time and effort it was expected that not all participants would complete all phases of the study. Thirty intern teachers completed the data required for this project.

The intern teachers were selected randomly into either an experimental or a control group. Each completed the Preferred Instructional Objectives Scale to determine preferences for objectives in either the cognitive or affective domain, three times during the semester, and audio-taped two twenty-minute periods of a reasonably typical day in his classroom. The participants that were selected into the experimental group, in addition: completed a self-study guide to develop in the reader an appreciation for and understanding of affective objectives, and prior to completing the second audio-tape, received information on the coding of their first tape on the frequencies of behavior coded in each category.

The research design utilized in this study was the field study which could be used to discover relations between variables in a real social setting or structure (Kerlinger 1964).

Self-report data was obtained from the Preferred Instructional Objective Scale and from an Ari-Pac for Differentiation and Skill in Using Affective Objectives which was designed for this study. The Substantive Observation System was used to determine whether the content of student teacher statements in the classroom was primarily cognitive or affective in nature.

Findings and Conclusions

The following hypotheses, stated in the null form, provided direction for and were tested in this investigation. The student teacher preferences for affective objectives and the frequency of affective behaviors exhibited in the classrooms were examined by using the Student-t coefficient of correlation and tested at the .05 level of significance.

1. There was no significant difference in scores obtained on the pre-test and post-test contained in the Ari-Pac (Appendix A) designed for this study, completed by the experimental group of student teachers.
2. There were no significant differences between the scores of the experimental group and the control group obtained from the three administrations of the Preferred Instructional Objective Scale.

3. For the experimental group, there were no significant differences in scores obtained from the three administrations of the Preferred Instructional Objective Scale.
4. For the control group, there were no significant differences in scores obtained from the three administrations of the Preferred Instructional Objective Scale.
5. There were no significant differences in the frequency or level of affective objectives used during teaching sessions for the experimental group (where feedback was used) or the control group (where feedback was not used).
6. Between the experimental group (where feedback was used) and the control group (where feedback was not used), there were no significant differences in the frequency or level of affective objectives used during teaching sessions.

All the null hypotheses were retained.

Implications and Recommendations

No significant relationships were found among the variables investigated in this study. This study could therefore be reconsidered on the following levels: the philosophical frame of reference, the differentiation of educational objectives as primarily cognitive or affective in nature, the instrumentation, and the sample.

The Philosophical Frame of Reference Reconsidered

In a discussion of the need for a phenomenological system of psychology, Snygg (1959) stated that behavior may be observed from two frames of reference. Behavior may be observed objectively by an outside observer or phenomenologically, from the point of view of the behaving organism itself. Within the former frame of reference, learning would be viewed as a process of progressive change in the learner's response to a static situation. From the phenomenological point of view the learner remains unchanged, rather, it is his experience of the situation which changes. Thus, behavior is always insightful and relevant to the situation as the learner interprets it at the moment. Change in behavior is a result of a perceived need to change and the restructuring of the value complex which will then encompass the change. However, this differentiation of the individual's perceptual field takes time.

The objective approach for prediction of human behavior assumed that behavior is initiated externally, that man reacts to his environment, and that environment is either good or bad. In this system, control the stimulus, shape the response, and change is brought about. The use of positive reinforcement with either the stimulus or desired response would help bring about change.

The objective approach for prediction of human behavior has several inadequacies which include too many independent

causal variables, inaccessibility of the organic state to the observer, and the tendency to be restricted to prediction of normative behavior which is of little value when diagnosing individual behavior.

The phenomenological system has advantages of being concerned with prediction and control of individual behavior and a descriptive process rather than causal or explanatory in nature. An inherent disadvantage of this system is that subjective methods yield results which may not be necessarily evaluated by objective means.

If the phenomenological system is the most appropriate philosophical basis for an investigation of this type, and since differentiation of a person's perceptual field takes time, it is strongly recommended that a study of this type be longitudinal in nature. Such a study could begin with preparatory teachers in their junior year and continue through the participants' first year of teaching.

The Cognitive-Affective Dichotomy

The relationships between cognitive and affective behaviors have been discussed by many people including Piaget and Inhelder (1969), Sears and Sherman (1964), Bane (1969), and Krathwohl, Bloom, and Masia (1964). Rokeach (1960) pointed out that each cognitive behavior has its affective counterpart. Krathwohl et al. (1964) pointed out that the converse is also true. In fact, since each behavior may be used to achieve the

other, perhaps cognitive and affective goals should be sought simultaneously. Is it more important to consider the joint aspects of these behaviors or, for research purposes, separate objectives as being primarily cognitive or affective in nature? Scheerer (1954, p. 123) wrote: ". . . behavior may be conceptualized as being embedded in a cognitive-emotional-motivational matrix in which no true separation is possible. No matter how we slice behaviors, the ingredients of motivation-emotion-cognition are present in one order or another."

However since 1890, James, while recognizing the unity of the two domains, felt it acceptable and of value for research purposes to separate the domains into their components. Bloom, Krathwohl, and others have developed an extensive taxonomy for each domain and felt that such taxonomies are justifiable although arbitrary if useful results emerge from corresponding research.

Consideration of the cognitive-affective dichotomy has led this researcher to pose the following questions: Is the cognitive-affective dichotomy justifiable for research purposes? Could equally useful results emerge from research based on a cognitive-affective continuum? These questions should be considered by future researchers and appropriate instrumentation developed to test the validity of the assumptions made.

The Instrumentation

The Preferred Instructional Objective Scale was completed by all participants, three times, during the study. No evidence was found to show any significant difference in mean scores either between the experimental and control group or differences over time for either of the groups in subsequent administrations of the scale.

In comparing the mean scores of this sample of student teachers with mean scores of groups of pupils and experienced teachers, the student teacher group obtained the lowest mean score of the three groups tested and would be characterized by Barr (1972) as preferring primarily affective educational objectives. Perhaps eighteen weeks was insufficient time for this sample in which to obtain significant shifts in preferences for educational objectives. Some recommendations for consideration are as follows:

1. Replicate the study.
2. Extend the time period and administer this scale to prospective student teachers in the first semester of their junior year, at the beginning, and at the end of student teaching.
3. Extend this study and obtain scores on this scale at the end of the first and second year from full time teachers who participated in the study as student teachers.
4. Reconsider the instrumentation used.

Mean scores for the experimental group on the pre-test and post-test from an Ari-Pac for Differentiation and Skill in Using Affective Objectives were not significantly different. However, all but one of the students had higher post- than pre-test scores. The time allotted for this self-study guide was a period of two weeks at the beginning of the student's intern program. Some recommendations for consideration are as follows:

1. The students should be exposed to this material on the affective domain over a shorter period of time.
2. More consideration for the application of the materials presented to practical teaching situations could be included in the self-study guide.
3. This material could be combined with relevant discussion on the implementation of affective objectives in the classroom and the entire unit spaced throughout the semester.
4. The sample could be enlarged to include students in both student teaching programs.
5. Replicate the study.

The Substantive Observation System which was used to classify teacher statements as primarily cognitive or affective in nature was an effective instrument to use for coding purposes. A possible defect of the code was that the categories were not so clearly disciminating that a trained coder could use this system in a live classroom situation. The use of audio-tape with its obvious playback aspect overcame this objection. In this

research it was felt that the category of evaluation should not be deleted from the code. Further modification and clarification of the category definitions would be appropriate for subsequent research.

No attempt was made in this study to control variables such as: teaching major, sex, grade level taught, or ethnic group. It was assumed that the intent of the research pertained to the student teacher preparation program itself, rather than the specific teaching situation where the internship took place. A recognized limitation of this study was that conclusions could be drawn only from data that was submitted by those student teachers who were willing to report their self-concepts and to tape segments of their classroom behavior. Some recommendations for consideration are as follows:

1. Increase the number of participants to be able to examine such factors as teaching major, sex, and grade level taught.
2. Increase the number of audio-tapes from two to three, obtained from each participant and representative of teaching during the first week of teaching, mid-way during the semester, and during the final week of the semester.

APPENDIX A

COVER LETTERS AND ARI-PAC FOR DIFFERENTIATION AND SKILL IN USING AFFECTIVE OBJECTIVES

THE UNIVERSITY OF ARIZONA
TUCSON, ARIZONA 85721

COLLEGE OF EDUCATION
DEPARTMENT OF SECONDARY EDUCATION

Professional Semester Program - Secondary Student Teachers

Dear Student Teacher:

Public concern for finances and teacher accountability in today's schools has caused corresponding concern with educational goals and objectives. Thus the prospective teacher needs to be knowledgeable about educational objectives whether cognitive or affective in nature.

You are being asked to participate in a research project on affective objectives and behaviors.

At no time will the results of any part of this research study have an effect on your student teaching program. The only person who could identify you would be the research director who will release information only to you, upon request. Identification for statistical work within the design of the experiment will be by matriculation number. General results of the study will be given to you at the end of the research.

If at any time you wish to discontinue participation in this research, your name will be deleted at your request.

I hope that you will participate in this research fully and that it will be of help in your becoming a more effective teacher. Thank you for your cooperation.

Sincerely,

Charles R. Stoughton
Research Director

Chester J. Brown
Director of Secondary
Student Teaching

. . . . . .

PLEASE SIGN, TEAR OFF, AND RETURN TO THE RESEARCH DIRECTOR:

I _____ wish to participate in this research study.

_____ matric no.

_____ date

TO: ALL PROFESSIONAL SEMESTER STUDENT TEACHERS

RE: OBSERVATION OF YOUR CLASS THROUGH USE OF AN AUDIO TAPE

FOR: RESEARCH ON STUDENT TEACHER BEHAVIOR IN THE CLASSROOM

---

1. Obtain permission through your supervisor to use your school's cassette tape recorder.

2. Your supervisor will supply you each with one cassette of tape.

3. Put your matric no. on your cassette. This will be the only identification of the tape.

4. If at all possible, during the week of Oct. 30, tape 30 minutes of one of your classes (one side only of the tape), where you anticipate a class discussion or hope for some student-teacher interaction.

5. Begin the tape recorder after routine matters of the class are finished, and at the point where your lesson is to begin.

6. Return the exposed tape to your supervisor noting the date recorded on the tape.

7. Students in the experimental group will receive information from the researcher as to the coding of their tape shortly after the tape is coded.

8. The tape and its contents will not be available to your supervisor or affect your student teaching experience in terms of grade. This information will be available only to the researcher and yourself, upon request at the end of the research.

I wish to sincerely thank you for your participation and help with this project.

Charles R. Stoughton

AN ARI-PAC FOR DIFFERENTIATION AND SKILL IN USING AFFECTIVE OBJECTIVES

DIRECTIONS

What are affective objectives? How are affective objectives differentiated and used? In the following Ari-Pac, the affective domain is illustrated and explained. Complete the pre-test and return it to your supervising professor before reading furthur in the body of the Ari-Pac. For effective learning complete approximately one section per day for the next two weeks. Then complete the post-test upon finishing the Ari-Pac and return it to your supervising professor.

AN ARI-PAC

for

DIFFERENTIATION AND SKILL IN USING AFFECTIVE OBJECTIVES

by

Charles R. Stoughton
Department of Secondary Education
University of Arizona

August 1972

TABLE OF CONTENTS

AFFECTIVE OBJECTIVES PRE-TEST

Matric No. _____

"Affective objectives are those that emphasize a feeling tone, an emotion, or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience."

Krathwohl, Bloom, and Masia have divided affective objectives into five major categories of: Receiving, Responding, Valuing, Organization, and Characterization. Categorize the following affective objectives by checking the appropriate category.

		Receiving	Responding	Valuing	Organ-ization	Character-ization
1. Develops a conscience	1.					
2. A sense of responsibility for listening to and participating in public discussion	2.					
3. Begins to form judgments as to the major directions in which American society should move	3.					
4. Observes the traffic rules on foot, on a bicycle, or on another conveyance at intersections and elsewhere	4.					
5. Views problems in objective, realistic, and tolerant terms	5.					
6. Assumes an active role in current literary activities	6.					
7. Finding out and crystallizing the basic assumptions which underlie codes of ethics and are the basis of faith	7.					
8. Develops a tolerance for a variety of types of music	8.					
9. Loyalty to the various groups in which one holds membership	9.					
10. Willingness to be of service to the group of which he is a member	10.					
11. Listens for rhythm in poetry or prose read aloud	11.					
12. Enjoys constantly increasing variety of good dramatic and other programs on radio, television, and recordings	12.					

DEFINITIONS

Cognitive Objectives: "Cognitive objectives vary from simple recall or material learned to highly original and creative ways of combining and synthesizing new ideas and materials. Cognitive objectives emphasize remembering or reproducing something which has presumably been learned, as well as objectives which involve the solving of some intellective task for which the individual has to determine the essential problem and then reorder given material or combine it with ideas, methods, or procedures previously learned."

Affective Objectives: "Affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience. Affective objectives emphasize a feeling tone, an emotion or a degree of acceptance or rejection. A large number of such objectives are expressed in the literature as interests, attitudes, appreciations, values, and emotional sets or biases."

Note:

All quotes, definitions, explanations, and examples of each category were taken from:

Krathwohl, David., Bloom, Benjamin S., and Masia, Bertram B., Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook II: Affective Domain. New York: David McKay Company, Inc., 1964.

WHY AFFECTIVE OBJECTIVES

or

THE NEED FOR A CLASSIFICATION OF AFFECTIVE OBJECTIVES

"In the original statement of a course's objectives, frequently as much emphasis is given to affective objectives as to cognitive objectives. However, over a period of years, a rather rapid dropping of the affective objectives from the statements about the course occurs concurrently with an almost complete disappearance of efforts at appraisal of student growth in this domain. Cognitive achievement is regarded as fair game for grading purposes but it is not regarded as appropriate to grade students with respect to their interests, attitude, or character development. A considerable part of the hesitation in the use of affective measures for grading purposes stems from the inadequacy of the appraisal techniques and the ease with which a student may exploit his ability to detect the responses which will be rewarded and the responses which will be penalized."

"Another cause of the erosion in affective objectives has to do with the immediacy of results. A particular item of information or a very specific skill is quickly learned and shows immediate results on cognitive examinations. In contrast, interests, attitudes, and personality characteristics are assumed to develop relatively slowly and to be visible in appraisal techniques only over long periods of time, perhaps even years."

"Evidence suggests that affective behaviors develop when appropriate learning experiences are provided for students much the same as cognitive behaviors develop from appropriate learning experiences."

"If affective objectives are to be realized, they must be defined clearly; learning experiences to help the student develop in the desired direction must be provided; and there must be some systematic method for appraising the extent to which students grow in the desired ways."

"It seems clear that the retention of affective changes produced in the schools is a function of how early in the individual's career the objective was developed, how deep-seated the learning has been, and the environmental forces to which the individual is subjected over the school and post-school years."

"Internalization is phenomenologically the process by which a value successively and pervasively becomes a part of the individual. It constructs a continuum of his behavior. Internalization is viewed as a process through which there is at first an incomplete and tentative adoption of only the overt manifestations of the desired behavior and later a more complete adoption."

"The fact that we attempt to analyze the affective area separately from the cognitive is not intended to suggest that there is a fundamental separation. There is none. Rokeach points out that in analyzing cognitive behavior, he is at the same time working with affective states, for every cognitive behavior has its affective counterpart."

"In fact, a large part of what we call "Good Teaching" is the teacher's ability to attain affective objectives through challenging the students' fixed beliefs and getting them to discuss issues."

"One of the main kinds of affective domain objectives which are sought as means to cognitive ends is the development of interest or motivation."

"The essential task in assigning a test item to a category of the Affective Taxomony is to determine what maximum degree of internalization can be assumed from the response situation."

HIERARCHAL STRUCTURE OF THE
LEVELS OF THE AFFECTIVE DOMAIN

RECEIVING Passive attention to stimuli
RESPONDING Reacting to various stimuli
VALUING Voluntarily displaying behavior consistent with a belief
ORGANIZATION Display of a commitment to a set of values
CHARACTERIZATION Total behavior consistent with value systems

Test Yourself

Select the appropriate level of the Affective Domain Hierarchal Structure for the following objectives. Use the code: 1 - receiving, 2 - responding, 3 - valuing, 4 - organization, and 5 - characterization.

____ (a) Seeks out examples of good art for enjoyment of them

____ (b) Develops some consciousness of the use of shading to portray depth and lighting in a picture

____ (c) Views all problems primarily in terms of their aesthetic aspects

____ (d) Desires to evaluate works of art which are appreciated

____ (e) Seeks what critics have said about a book, after having read it

____ (f) Willingness to comply with health regulations

____ (g) Derives satisfaction from singing with others

____ (h) Finds out and crystallizes the basic assumptions which underlie codes of ethics and are the basis of faith

____ (i) Alertness toward different types of voluntary reading

ANSWERS

Test Yourself - Affective Domain

(a) 3
(b) 1
(c) 5
(d) 4
(e) 3
(f) 2
(g) 2
(h) 4
(i) 1

TAXONOMY CONTINUUM

AFFECTIVE DOMAIN

1.0 Receiving	1.1 Awareness 1.2 Willingness to receive 1.3 Controlled or Selected attention
2.0 Responding	2.1 Acquiescence in responding 2.2 Willingness to respond 2.3 Satisfaction in response
3.0 Valuing	3.1 Acceptance of a value 3.2 Preference for a value 3.3 Commitment
4.0 Organization	4.1 Conceptualization of a value 4.2 Organization of a value system
5.0 Characterization by a value complex	5.1 Generalized set 5.2 Characterization

1.0 RECEIVING

At this level we are concerned that the learner be sensitized to the existence of certain phenomena and stimuli; that is, that he be willing to receive or to attend to them. This category has been divided into three subcategories.

1.1 Awareness - given appropriate opportunity, the learner will merely be conscious of something

1.2 Willingness to receive - being willing to tolerate a given stimulus, not to avoid it

1.3 Controlled or selected attention - the differentiation of a given stimulus into figure and ground at a conscious or perhaps semiconscious level

An example for each subcategory is:

1.1 Recognition that there may be more than one acceptable point of view

1.2 Accepts differences of race and culture, among people known

1.3 Listens for picturesque words in stories read aloud or told

Test Yourself 1.0

Select the appropriate subcategory of Receiving for the following objectives.

____ (a) Awareness of the importance of the prevention, early recognition, and treatment of marital discord

____ (b) Increase in sensitivity to human need and pressing social problems

____ (c) Preference for newspaper readings

____ (d) Sensitive to the importance of keeping informed on current social matters

____ (e) Listens to others with respect

____ (f) Sensitivity to social situations that are urgent

ANSWERS

Test Yourself - 1.0 Receiving

(a) 1.1
(b) 1.2
(c) 1.3
(d) 1.3
(e) 1.2
(f) 1.1

2.0 RESPONDING

At this level we are concerned with responses which go beyond merely attending to the phenomenon. This stage is a low level of commitment; i.e. he is doing something with or about the phenomenon besides merely perceiving it. This category has been divided into three subcategories.

2.1 Acquiescence in responding - the first level of active responding after the learner has given his attention

2.2 Willingness to respond - a voluntary response from choice

2.3 Satisfaction in response - in addition to the first two above, the behavior is accompanied by a feeling of satisfaction, an emotional response

An example for each subcategory is:

2.1 Completes his homework

2.2 Displays an interest in actively participating in research projects

2.3 Finds pleasure in reading for recreation

Test Yourself 2.0

Select the appropriate subcategory of Responding for the following objectives.

____ (a) Voluntarily seeks new information about his physical environment

____ (b) Plays real number games for fun

____ (c) Observes traffic rules when driving

____ (d) Listens with pleasure to good music

____ (e) Assumes full responsibility for his duties as a member of a family

____ (f) Visits museums when told to do so

ANSWERS

Test Yourself - 2.0 Responding

(a) 2.2
(b) 2.3
(c) 2.1
(d) 2.3
(e) 2.2
(f) 2.1

3.0 VALUING

This abstract concept of worth is in part a result of the individual's own valuing or assessment, but it is much more a social product that has been slowly internalized or accepted and has come to be used by the student as his own criterion of worth. This category has been divided into three subcategories.

3.1 Acceptance of a value - the lowest levels of certainty; that is, there is more of a readiness to re-evaluate one's position than at the higher levels

3.2 Preference for a value - a level of internalization between the mere acceptance of a value and commitment or conviction

3.3 Commitment - Belief at this level involves a high degree of certainty

An example for each subcategory is:

3.1 Desires to attain optimum health

3.2 Initiates group action for the improvement of health regulations

3.3 Loyalty to the various groups in which one holds membership

Test Yourself 3.0

Select the appropriate subcategory of Valuing for the following objectives.

____ (a) Recognition of companionship as an essential element in the success of marriage

____ (b) Acceptance of the role of religion in personal and family living

____ (c) Writes letters to the press on issues he feels strongly about

____ (d) Faith in the power of reason and in the methods of experiment and discussion

____ (e) Grows in his sense of kinship with human beings of all nations

____ (f) Deliberately examines a variety of viewpoints on controversial issues with a view to forming opinions about them

ANSWERS

Test Yourself - 3.0 Valuing

(a) 3.1
(b) 3.3
(c) 3.2
(d) 3.3
(e) 3.1
(f) 3.2

4.0 ORGANIZATION

As the learner successively internalizes values, he encounters situations for which more than one value is relevant. Thus necessity arises for (a) the organization of the values into a system, (b) the determination of the interrelationships among them, and (c) the establishment of the dominant and pervasive ones. This category has been divided into two subcategories.

4.1 Conceptualization of a value - may or may not be verbal. It will be abstract, and in this sense it will be symbolic

4.2 Organization of a value system - objectives properly classified here are those which require the learner to bring together a complex of values, possibly disparate values, and to bring these into an ordered relationship with one another

An example for each subcategory is:

4.1 Attempts to identify the characteristics of an art object which he admires

4.2 Judges people of various races, cultures, national origins, and occupations in terms of their behaviors as individuals

Test Yourself 4.0

Select the appropriate subcategory of Organization for the following objectives.

____ (a) Forms judgments as to the responsibility of society for conserving human and material resources

____ (b) Develops techniques for controlling aggression in culturally acceptable patterns

____ (c) Begins to form judgments as to the major directions in which American society should move

____ (d) Relates his own ethical standards and personal goals through the reading of biography and other appropriate literature

____ (e) Realistic acceptance of an emotional adjustment to the limitations inherent in his own aptitudes, abilities, interests, and physical conditions

ANSWERS

Test Yourself - 4.0 Organization

(a) 4.1
(b) 4.2
(c) 4.2
(d) 4.1
(e) 4.2

5.0 CHARACTERIZATION BY A VALUE OR VALUE COMPLEX

At this level of internalization the values already have a place in the individual's value hierarchy, are organized into some kind of internally consistent system, have controlled the behavior of the individual for a sufficient time that he has adapted to behaving this way; and an evocation of the behavior no longer arouses emotion or affect except when the individual is threatened or challenged. This category has been divided into two subcategories.

5.1 Generalized set - is that which gives an internal consistency to the system of attitudes and values at any particular moment

5.2 Characterization - the philosophy of life which emerges at this level can be viewed as a transfer of objectives and behaviors of the lower categories in the most general sense possible

An example for each subcategory is:

5.1 The habit of approaching problems objectively

5.2 Develops a conscience

Test Yourself 5.0

Select the appropriate subcategory of Characterization by a value or value complex for the following objectives.

____ (a) Develops a consistent philosophy of life

____ (b) Views problems in objective, realistic, and tolerant terms

____ (c) Readiness to revise judgments and to change behavior in the light of evidence

____ (d) Willingness to face facts and conclusions that can be logically drawn from them

____ (e) Develops for regulation of one's personal and civic life a code of behavior based on ethical principles consistent with democratic ideals

ANSWERS

Test Yourself - 5.0 Characterization by a value or value complex

(a) 5.2
(b) 5.1
(c) 5.1
(d) 5.1
(e) 5.2

AFFECTIVE OBJECTIVES POST-TEST

Matric No. _____

"Affective objectives are those that emphasize a feeling tone, an emotion, or a degree of acceptance or rejection. Affective objectives vary from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience."

Krathwohl, Bloom, and Masia have divided affective objectives into five major categories of: Receiving, Responding, Valuing, Organization, and Characterization. Categorize the following affective objectives by checking the appropriate category.

	Receiving	Responding	Valuing	Organization	Characterization
1. Takes pleasure in conversing with many different kinds of people	1.				
2. Develops a consistent philosophy of life	2.				
3. Continuing desire to develop the ability to speak and write effectively	3.				
4. Develops a plan for regulating his rest in accordance with the demands of his activities	4.				
5. Obeys the playground regulations	5.				
6. Readiness to revise judgments and to change behavior in the light of evidence	6.				
7. Assumes responsibility for drawing reticent members of a group into conversation	7.				
8. Forms judgments as to the responsibility of society for conserving human and material resources	8.				
9. Increase in sensitivity to human need and pressing social problems	9.				
10. Devotion to those ideas and ideals which are the foundations of democracy	10.				
11. Responds with consistent, active, and deep interest to intellectual stimuli	11.				
12. Alertness toward human values and judgments on life as they are regarded in literature	12.				

APPENDIX B

LETTER OF PERMISSION AND SUBSTANTIVE OBSERVATION SYSTEM

WILLCOX PUBLIC SCHOOL DISTRICT No. 13
240 N. Bisbee Ave.
WILLCOX, ARIZONA 85643
Area Code 602 - 384-2485

JIM HENDERSON, SUPERINTENDENT

February 27, 1973

Mr. Charles Stoughton
College of Education
University of Arizona
Tucson, Arizona 85721

Dear Mr. Stoughton:

In response to your recent request, I am very pleased to hear of your interest in using one of my analysis systems in your research project. As you know, the Substantive Observation Analysis System has not been widely used and I will be anxious to know what results you obtain.

The code has been copyrighted. You have my permission to use it and to reprint it in your dissertation.

Best wishes in your research efforts.

Yours very truly,

Ardeth P. Cropper

Ardeth P. Cropper
Principal
Willcox Middle School

APC/lf

OBSERVATION SYSTEM FOR THE ANALYSIS OF SUBSTANTIVE TEACHER BEHAVIORS

INTRODUCTION

In analyzing substantive teacher behavior as either affective or cognitive it is assumed that it is possible to observe and classify teacher statements as predominately dealing with either emotional or intellectual processes at any given time. Behaviors characterized by intellectual processes (cognitive) vary from simple recall to quite creative ways of synthesizing new ideas. Teacher behavior is classified as cognitive when the intellectual task is dominant. Behaviors characterized by emotional processes (affective) range from mild interest to valuing. Teacher behavior is classified as affective when the emotional processes are dominant.

It is recognized, however, that one does not find a single dimension present in any classroom situation. This dichotomy exists, then, only for purposes of examining the dominant patterns of teaching behavior.

Categories of the Substantive Observation Analysis System

COGNITIVE

Behaviors Characterized by Intellectual Processes

1. Knowledge
2. Comprehension
3. Application
4. Analysis
5. Synthesis

AFFECTIVE

Behaviors Characterized by Emotional Processes

6. Interests
7. Feelings
8. Attitudes
9. Biases
10. Values

Definitions and Sample Teacher Statements for the Analysis of Substantive Teacher Behavior

The following definitions and sample statements are guidelines to be used in the classification of substantive teacher behavior.

COGNITIVE

Behaviors Characterized by Intellectual Processes

1. Knowledge

Definition

Knowledge. The teacher emphasizes the recall of specific information.

Examples

T: When did Columbus discover America?

* * *

T: Name the three main causes of the Civil War which we discussed yesterday.

2. Comprehension

Definition

Comprehension. The teacher emphasizes the translation or interpretation of information without seeing its full implications.

Examples

T: We know that Abe Lincoln was a statesman and a politician. How else could you describe him?

* * *

T: What did Wilson mean when he said World War I would make the world safe for democracy?

* * *

T: What appears to be the most direct route from New York to Moscow by boat?

3. Application

Definition

Application. The teacher emphasizes the use of abstractions in new and concrete situations.

Example

T: How would you describe the route that Columbus would have sailed if he had taken the most direct route from Spain to the West Indies?

4. Analysis

Definition

Analysis. The teacher emphasizes separating a complex whole into its parts until the relationship among the elements is made clear.

Example

T: What conditions during the 19th Century accelerated the Industrial Revolution?

5. Synthesis

Definition

Synthesis. The teacher emphasizes combining elements to form a new original entity.

Example

T: Imagine you are a Peace Corps representative to the Philippine Republic. Write an essay describing your activities during your first two weeks in a small village.

AFFECTIVE

Behaviors Characterized by Emotional Processes

6. Interests

Definition

Interests. The teacher emphasizes student curiosity or involvement.

Example

T: If any of you are interested in working on topics of special concern to you, please see me after class.

7. Feelings

Definition

Feelings. The teacher emphasizes sentiments such as happiness, sadness, anger, understanding, and sympathy.

Example

T: Let's see if we can imagine how the French people might have felt when Charles DeGaulle died yesterday.

8. Attitudes

Definition

Attitudes. The teacher emphasizes an opinion, usually for or against some issue.

Example

T: Many of you have expressed opinions on the planned withdrawal from Vietnam. Tod, what do you think about this?

9. Biases

Definition

Biases. The teacher emphasizes discrimination, indoctrination, or prejudgments.

Example

T: If other minority groups had worked as hard as the Irish immigrants, there would be no racial problems today. Do you agree?

10. Values

Definition

Values. The teacher emphasizes seeing the worth of some information or idea.

Example

T: Was the U.S. landing on the moon worth all the money and risk involved?

THE SUBSTANTIVE OBSERVATION ANALYSIS SYSTEM

Behaviors Characterized by processes primarily	Code	The teacher emphasizes
INTELLECTUAL	1 - Knowledge	recall of specific information
	2 - Comprehension	translation or interpretation of information without seeing its full implication
	3 - Application	use of abstractions in new and concrete situations
	4 - Analysis	separating a complex whole into its parts until the relationship among the elements is made clear
	5 - Synthesis	combining elements to form a new original entity
EMOTIONAL	6 - Interests	student curiosity or involvement
	7 - Feelings	sentiments such as happiness, sadness, anger, understanding, and sympathy
	8 - Attitudes	an opinion, usually for or against some issue
	9 - Biases	discrimination, indoctrination, or prejudgements
	10 - Values	seeing the worth of some information or idea

SUBSTANTIVE CODE - TALLY SHEET

Cognitive (check a box for each occurrence) **Totals**

1. knowledge .....
2. comprehension ...
3. application .....
4. analysis .....
5. synthesis .....

Affective

6. interests .....
7. feelings .....
8. attitudes .....
9. biases .....
10. values .....

Evaluator _____ Date _____ Name or Matric no. _____

APPENDIX C

LETTER OF PERMISSION AND PREFERRED INSTRUCTIONAL OBJECTIVE SCALE

March 22, 1973

Mr. Charles R. Stoughton
College of Education
University of Arizona
Tucson, Arizona 85721

Dear Mr. Stoughton:

I hereby acknowledge and grant your request to employ the Preferred Instructional Objective Scale in the development of data for your dissertation. In addition, I further permit the inclusion of this instrument in the final copy of your dissertation and also release you from any legal obligations which may arise from this request.

Sincerely,

Reginald E. Barr

Reginald E. Barr
Tucson District #1
1010 East 10th Street
Tucson, Arizona 85718

REB:g

PREFERRED INSTRUCTIONAL OBJECTIVE SCALE

DIRECTIONS

What kind of instructional objectives do you prefer? In the following scale you will find thirty-two groups of instructional objectives which contain two statements each. Each statement is descriptive of an instructional objective. From each group of two statements choose the one you most prefer. On the attached answer sheet, place an X through the letter that corresponds to the statement you selected. Do not write on the instructional objectives scale. Do not fail to select one statement from each group. There are no right or wrong answers.

Preferred Instructional Objective Scale

I prefer instructional objectives which assist a student to:

1. a. Use problem solving procedures for finding answers to questions.
   b. Accept personal responsibility for making choices.

2. a. Recognize that circumstances affect people's lives differently.
   b. Examine the strengths and weaknesses of competing economic systems.

3. a. Accept personal responsibility for making choices.
   b. Recall factual information about subjects taught in school.

4. a. Consent to standards of conduct which respect other's welfare.
   b. Employ appropriate steps to improve man's environment.

5. a. Employ appropriate steps to improve man's environment.
   b. Recognize that circumstances affect people's lives differently.

6. a. Investigate which facts are most important to support an idea.
   b. Be aware of many things which change people as they grow up.

7. a. Be aware of many things which change people as they grow up.
   b. Use problem solving procedures in finding answers to questions.

8. a. Form judgments concerning the type of life to lead.
   b. Use problem solving procedures in finding answers to questions.

9. a. Believe in the worth of people regardless of their differences.
   b. Employ appropriate steps to improve man's environment.

10. a. Consent to standards of conduct which respect other's welfare.
    b. Draw conclusions from a report on current political issues.

11. a. Summarize and interpret written or oral communications.
    b. Comply with the need to consider others while working together.

12. a. Investigate which facts are most important to support an idea.
    b. Comply with the need to consider others while working together.

13. a. Recall factual information about subjects taught in school.
    b. Form judgments concerning the type of life to lead.

14. a. Draw conclusions from a report on current political issues.
    b. Revise personal conduct according to goals useful in everyday life.

15. a. Recall factual information about subjects taught in school.
    b. Comply with the need to consider others while working together.

16. a. Recall factual information about subjects taught in school.
    b. Be aware of many things which change people as they grow up.

17. a. Identify forces, past and present, which have influenced people.
    b. Recognize that circumstances affect people's lives differently.

18. a. Believe in the worth of people regardless of their differences.
    b. Draw conclusions from a report on current political issues.

19. a. Summarize and interpret written or oral communications.
    b. Be aware of many things which change people as they grow up.

20. a. Identify forces, past and present, which have influenced people.
    b. Consent to standards of conduct which respect other's welfare.

21. a. Investigate which facts are most important to support an idea.
    b. Accept personal responsibility for making choices.

22. a. Employ appropriate steps to improve man's environment.
    b. Revise personal conduct according to goals useful in everyday living.

23. a. Examine the strengths and weaknesses of competing economic systems.
    b. Revise personal conduct according to goals useful in everyday living.

24. a. Accept personal responsibility for making choices.
    b. Summarize and interpret written or oral communications.

25. a. Summarize and interpret written or oral communications.
    b. Form judgments concerning the type of life to lead.

26. a. Identify forces, past and present, which have influenced people.
    b. Revise personal conduct according to goals useful in everyday living.

27. a. Comply with the need to consider others while working together.
    b. Use problem solving procedures in findings answers to questions.

28. a. Believe in the worth of people regardless of their differences.
    b. Identify forces, past and present, which have influenced people.

29. a. Draw conclusions from a report on current political issues.
    b. Recognize the circumstances affect people's lives differently.

30. a. Believe in the worth of people regardless of their differences.
    b. Examine the strengths and weaknesses of competing economic systems.

31. a. Consent to standards of conduct which respect other's welfare.
    b. Examine the strengths and weaknesses of competing economic systems.

32. a. Investigate which facts are most important to support an idea.
    b. Form judgments concerning the type of life to lead.

Preferred Instructional Objective Scale

ANSWER SHEET

Matric No. _____

1.	a	b	17.	a	b
2.	a	b	18.	a	b
3.	a	b	19.	a	b
4.	a	b	20.	a	b
5.	a	b	21.	a	b
6.	a	b	22.	a	b
7.	a	b	23.	a	b
8.	a	b	24.	a	b
9.	a	b	25.	a	b
10.	a	b	26.	a	b
11.	a	b	27.	a	b
12.	a	b	28.	a	b
13.	a	b	29.	a	b
14.	a	b	30.	a	b
15.	a	b	31.	a	b
16.	a	b	32.	a	b

LIST OF REFERENCES

Allen, Paul M., William D. Barnes, Jerald Reece, and Wayne Roberson. Teacher Self-Appraisal: A Way of Looking Over Your Shoulder. Belmont: Wadsworth Publishing Co., 1970.

Allport, Gordon W. The Nature of Prejudice. Cambridge, Mass.: Addison-Wesley, 1954.

_____. Becoming. New Haven: Yale University Press, 1955.

Amidon, Edmund J., and John B. Hough (eds.). Interaction Analysis: Theory, Research and Application. Reading, Mass.: Addison-Wesley Publishing Co., 1967.

Anderson, Harold H. "The Measurement of Domination and of Socially Integrative Behavior in Teachers' Contacts With Children," Child Development, Vol. 10 (March 1939), pp. 73-89.

_____ and Helen Brewer. "Studies of Teachers' Classroom Personalities I," Applied Psychology Monographs, No. 6 (July 1945), pp. 1-8.

_____ and John Brewer. "Studies of Teachers' Classroom Personalities II," Applied Psychology Monographs, No. 8 (July 1946), pp. 1-9.

Anderson, Harold M. "A Study of Certain Criteria of Teaching Effectiveness," Journal of Experimental Education, Vol. 23 (September 1954), pp. 41-69.

Asch, Solomon E. Social Psychology. New York: Prentice-Hall, 1952.

Associated Students, University of Arizona. Student Handbook. Tucson: Shandling Lithographing Co., August 15, 1972.

Bane, Robert King. "Relationships Between Measures of Experimental, Cognitive, and Affective Teaching Behavior and Selected Teacher Characteristics." Unpublished doctoral dissertation, University of Florida, 1969.

Barr, Reginald Earl. "Congruence and Disparity Between Teachers' and Pupils' Preferences for Instructional Objectives." Unpublished doctoral dissertation, University of Arizona, 1972.

Beatty, Walcott (ed.). "Emotion: The Missing Link in Education," Improving Educational Assessment and an Inventory of Measures of Affective Behavior. Washington, D.C.: ASCD-NEA, 1969.

Beck, Louis Logan. "Evaluating an Integrative Approach to the Teaching-Learning Act: Basic Encounter, Behavioral Objectives, an Interaction Analysis." Unpublished doctoral dissertation, United States International University, 1970.

Bloom, Benjamin S. (ed.). Taxonomy of Educational Objectives - The Classification of Educational Goals, Handbook I: Cognitive. New York: David McKay Co., 1956.

Bowser, Robert Allen. "The Effectiveness of a Self-Study Guide in Changing Teacher Perceptions." Unpublished doctoral dissertation, Pennsylvania State University, 1969.

Campbell, Paul B. "School and Self-Concept," Educational Leadership, Vol. 24, No. 6 (March 1967), pp. 510-515.

Cantrell, Robert Paul. "Efficacy of In-Service Training of Teachers in Operant Techniques." Unpublished doctoral dissertation, George Peabody College for Teachers, 1969.

Cogan, Morris L. "The Behavior of Teachers and the Productive Behaviors of Their Pupils," Journal of Experimental Education, Vol. 27 (December 1958), pp. 89-124.

Combs, Arthur W. "A Perceptual View of the Nature of 'Helpers'," Personality Theory and Counseling Practice. Papers of the First Annual Conference on Personality Theory and Counseling Practice. Gainesville: University of Florida, 1961.

_____. The Professional Education of Teachers: A Perceptual View of Teacher Education. Boston: Allyn and Bacon, Inc., 1965.

_____ and Donald Snygg. Individual Behavior. Rev. ed. New York: Harper and Row, 1959.

Combs, Arthur W., Daniel W. Soper, and Clifford C. Courson. "The Measurement of Self-Concept and Self-Report," Educational and Psychological Measurement, Vol. 23, No. 3 (Autumn 1963), pp. 493-500.

_____, Daniel W. Soper, and Clifford C. Courson. "Florida Studies in the Helping Professions," Social Science Monograph No. 37. Gainesville: University of Florida Press, 1969.

Cropper, Ardeth Parrish. "Categories of Observed Teacher Behavior as Related to Reported Self-Concept." Unpublished doctoral dissertation, University of Arizona, 1971.

Crump, Claudia. "Teachers, Questions, and Cognition," Educational Leadership, Vol. 27, No. 7 (April 1970), pp. 657-660.

Davis, O. L., Jr., and Drew C. Tinsley. "Cognitive Objectives Revealed by Classroom Questions Asked by Social Studies Student Teachers," Teaching: Vantage Points for Study, ed. Ronald T. Hyman. Philadelphia: J. B. Lippincott Co., 1967.

_____, Kevin R. Morse, Virginia M. Rogers, and Drew C. Tinsley. "Research in Review: Studying the Cognition Emphasis of Teachers' Classroom Questions," Educational Leadership, Vol. 26, No. 7 (April 1969), pp. 711-717.

First National Bank of Arizona. Profile of Arizona. Phoenix: First National Bank of Arizona, Marketing Department, November 1972.

Flanders, Ned A. "Personal-Social Anxiety as a Factor in Experimental Learning Situations," Journal of Educational Research, Vol. 45 (October 1951), pp. 100-110.

_____. Teacher Influence, Pupil Attitudes, and Achievement: Studies in Interaction Analysis. Final Report, Cooperative Research Project No. 397. Minneapolis: University of Minnesota Press, 1960.

_____. "Teacher Behavior and In-Service Programs," Interaction Analysis: Theory, Research, and Application, eds. Edmund J. Amidon and John B. Hough. Reading, Mass.: Addison-Wesley Publishing Co., 1967.

Forbes, Phyllis Elizabeth. "An Instrument for the Analysis of Foreign Language Teacher Classroom Behavior." Unpublished doctoral dissertation, University of Arizona, 1972.

Fraenkel, Jack R. "Value Education in the Social Studies," Educational Leadership, Vol. 26, No. 7 (April 1969), pp. 457-461.

Furst, Norma. "Interaction Analysis in Teacher Education: A Review of Studies," Interaction Analysis: Selected Papers. Washington, D.C.: Association of Teacher Education, NEA, 1971.

Gage, Nathaniel L. (ed.). Handbook of Research in Teaching. Chicago: Rand McNally and Co., 1963.

Galloway, Charles M. "An Exploratory Study of Observational Procedures for Determining Teacher Non-Verbal Communication." Unpublished doctoral dissertation, University of Florida, 1962.

Garvey, Reba. "Self Concept and Success in Student Teaching," Psychological Abstracts, Vol. 45 (May 1971), pp. 986-987.

Glass, Gene U., and Julian C. Stanley. Statistical Methods in Education and Psychology. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

Good, Carter V. (ed.). Dictionary of Education. New York: McGraw-Hill Book Co., 1959.

Gordon, Ira J. "Affect and Cognition: A Reciprocal Relationship," Educational Leadership, Vol. 27, No. 7 (April 1970), pp. 661-664.

Hamachek, Don E. Encounters With the Self. New York: Holt, Rinehart and Winston, Inc., 1971.

Hart, Frank W. Teachers and Teaching. New York: The Macmillan Co., 1934.

Heil, Louis M., Marion Powell, and Irwin Feifer. Characteristics of Teacher Behavior and Competency Related to the Achievement of Different Kinds of Children in Several Elementary Grades. U. S. Office of Education Cooperative Research Project No. 352. New York: Brooklyn College, 1960.

Hilgard, E. R. "Human Motives and the Concept of Self," The American Psychologist, Vol. 4, No. 9 (September 1949), pp. 374-382.

Hill, Shirley Louise. "The Effects of a Training Program on Adaptability of Prospective Elementary Teachers." Unpublished doctoral dissertation, University of Arizona, 1971.

Huff, George Perry. "Evaluation of Affective Behaviors in Student Teachers by Application of Q-Methodology." Unpublished doctoral dissertation, University of Southern California, 1964.

Hughes, Marie. Development of the Means for the Assessment of the Quality of Teaching in Elementary Schools. Salt Lake City: University of Utah, 1959.

Jacob, Phillip E. Changing Values in College. New York: Harper, 1957.

James, William. The Principles of Psychology. New York: Holt, 1890.

Jersild, Arthur T. "Characteristics of Teachers Who Are 'Liked Best' and 'Disliked Most'," Journal of Experimental Education, Vol. 9 (December 1940), pp. 139-151.

Johnson, John L., and Arthur A. Seagull. "Form and Function in the Affective Training of Teachers," Phi Delta Kappan, Vol. 50 (November 1968), pp. 166-170.

Jurco, Martin. "Some Psychological Aspects of the Contents and Structure of the Teaching Matter at Secondary General Education Schools," Psychological Abstracts, Vol. 45 (January 1971), p. 536.

Katz, Daniel, and Leon Festinger (eds.). Research Methods in the Behavioral Sciences. New York: Dryden Press, 1953.

Kelley, Earl C. "The Fully Functioning Self," Perceiving, Behaving, Becoming, 1962 Yearbook of the Association for Supervision and Curriculum Development. Washington, D.C.: ASCD-NEA, 1962.

Kerlinger, Fred N. Foundations of Behavioral Research. New York: Holt, Rinehart and Winston, Inc., 1964.

Krathwohl, David R., Benjamin S. Bloom, and Bertram B. Masia. Taxonomy of Educational Objectives - The Classification of Educational Goals, Handbook II: Affective Domain. New York: David McKay Co., 1964.

Landsman, Ted. "The Role of the Self-Concept in Learning Situations," High School Journal, Vol. 45, No. 7 (April 1962), pp. 289-295.

Lecky, Prescott. Self-Consistency: A Theory of Personality. Long Island, N.Y.: The Island Press, 1945.

Lewin, Kurt. "Group Decision and Social Change," Readings in Social Psychology, eds. Theodore M. Newcomb and Eugene L. Hartley. New York: Holt, 1947.

_____, Ronald Lippitt, and Ralph K. White. "Patterns of Aggressive Behavior in Experimentally Created 'Social Climates'," Journal of Social Psychology, Vol. 10 (May 1939), pp. 271-299.

MacDonald, James B., and Esther Zaret. Report of a Study of Openness in Classroom Interactions. National Institute of Mental Health, Public Health Service Research Grant No. MH07563-01. Milwaukee: University of Wisconsin, 1966.

Mayer, Martin. The Schools. New York: Harper, 1961.

McCallon, Earl L. "Interpersonal Perception Characteristics of Teachers," Journal of Experimental Education, Vol. 34, No. 3 (Spring 1966), pp. 97-100.

Medley, Donald, and Harold Mitzel. "The Scientific Study of Teacher Behavior," Theory and Research, ed. Arno A. Bellack. New York: Columbia University Bureau of Publications, 1963.

Morrison, J. Cayce. The Puerto Rican Study 1953-1957. New York: Board of Education, 1958.

Murray, C. Kenneth, and Tony L. Williams. The Effect of Cognitive Instruction on Secondary Social Studies Student Teachers and Their Pupils. New York: National Council for the Social Studies, November 1970.

Nunnally, Jum C. Psychometric Theory. New York: McGraw-Hill Book Co., 1967.

Piaget, Jean, and Bärbel Inhelder. The Psychology of the Child. New York: Basic Books, Inc., 1969.

Pima County Planning Department. "School Studies." Tucson: Pima County Planning Department, 1971-73.

Popham, W. James. Educational Statistics. New York: Harper and Row, 1967.

Raimy, Victor. "Self-Reference in Counseling Interviews," Journal of Consulting Psychology, Vol. 12, No. 3 (May-June 1948), pp. 153-163.

Reed, Homer B. "Implications for Science Education of a Teacher Competence Research," Science Education, Vol. 46 (March 1962), pp. 473-486.

Roberson, Earl Wayne. "The Preparation of an Instrument for the Analysis of Teacher Classroom Behavior." Unpublished doctoral dissertation, University of Arizona, 1967.

Rogers, Carl R. Client-Centered Therapy. Boston: Houghton-Mifflin Co., 1951.

_____. "Some Observations on the Organization of Personality," The Phenomenological Problem, ed. Alfred E. Kuenzli. New York: Harper and Brothers, 1959.

Rokeach, Milton. The Open and Closed Mind. New York: Basic Books, Inc., 1960.

Rosenthal, Ted L., Billie Underwood, and Marion Martin. "Assessing Classroom Incentive Practices," Journal of Educational Psychology, Vol. 60, No. 5 (October 1969), pp. 370-376.

Ryans, David G. "Research on Teacher Behavior in the Context of the Teacher Characteristic Study," Contemporary Research on Teacher Effectiveness, eds. B. J. Biddle, and W. J. Ellena. New York: Holt, Rinehart and Winston, Inc., 1964.

St. John, Leo. "An Exploratory Study of Some Affective Aspects of Teacher Non-Verbal Behavior." Unpublished doctoral dissertation, Wayne State University, 1969.

Salomon, Gabriel, and Frederick J. McDonald. "Pretest and Posttest Reactions to Self-Viewing One's Teaching Performance on Video Tape," Psychological Abstracts, Vol. 44 (December 1970), pp. 2190-2191.

Sandefur, J. T., and Alex A. Bressler. "Classroom Observation Systems in Preparing School Personnel," Interaction Analysis: Selected Papers. Washington, D.C.: Association of Teacher Education, NEA, 1971.

Scheerer, Martin. "Cognitive Theory," Handbook of Social Psychology, ed. Gardner Lindzey. Cambridge, Mass.: Addison-Wesley, 1954.

Sears, Pauline, and Vivian Sherman. In Pursuit of Self-Esteem. Belmont: Wadsworth Publishing Co., Inc., 1964.

Smith, E. Brooks. "An Exploratory Study of Some Affective Aspects of Teacher Non-Verbal Behavior." Unpublished doctoral dissertation, Wayne State University, 1969.

Smith, Laurence M. Ari-Pac 1971. Tucson: University of Arizona, September 1971.

Snygg, Donald. "The Need for a Phenomenological System of Psychology," The Phenomenological Problem, ed. Alfred E. Kuenzli. New York: Harper and Brothers, 1959.

Soar, Robert S. "Teacher-Pupil Interaction," A New Look at Progressive Education, 1972 Yearbook of the Association for Supervision and Curriculum Development. Washington, D.C.: ASCD-NEA, 1972.

Spencer, Virginia, Director of Information on Certified Personnel, Sunnyside School District, Tucson, Arizona. Phone conversation, January 3, 1973.

Stern, George G. "Measuring Noncognitive Variables in Research on Teaching," Handbook of Research on Teaching, ed. Nathaniel L. Gage. Chicago: Rand McNally and Co., 1963.

Taba, Hilda, Samuel Levine, and Freeman F. Elzey. Thinking in Elementary School Children. USOE Cooperative Research Project No. 1574. San Francisco: San Francisco State College, 1964.

Towle, Charlotte. Learning in Education for the Profession as Seen in Education for Social Work. Chicago: University of Chicago Press, 1954.

Tucson Public Schools Personnel Data Sheets. Tucson: Tucson District #1, 1972.

Tucson Public Schools Pupil Data Sheets. Tucson: Tucson District #1, 1972.

United States Commission on Civil Rights. Mexican-American Education Study. Washington, D.C.: U. S. Commission on Civil Rights, April 1972.

Valley National Bank. Arizona Statistical Review. Twenty-Eighth Annual Review. Phoenix: Valley National Bank, September 1972.

Welter, Paul Ray. "Group Counseling and the Assessment of Affective Learning: A Preliminary Investigation of the Utility of the Taxonomy of Educational Objectives: Affective Domain." Unpublished doctoral dissertation, University of South Dakota, 1968.

_____ and Wellborn R. Hudson. "The Assessment of Affective Learning in Counseling Groups Utilizing the Taxonomy of Educational Objectives: Affective Domain," Psychological Abstracts, Vol. 44 (November 1970), p. 19447.

Wilhelms, Fred T. "Spotlight," NASSP Bulletin. Washington, D.C.: National Association of Secondary School Principals, May-June, 1968.

Withall, John. "The Development of a Technique for the Measurement of Social-Emotional Climate in Classrooms," Journal of Experimental Education, Vol. 17 (March 1949), pp. 347-361.

Witty, Paul A. "An Analysis of the Personality Traits of the Effective Teacher," Journal of Educational Research, Vol. 40 (May 1947), pp. 662-671.

Wylie, Ruth C. The Self-Concept. Lincoln: University of Nebraska Press, 1961.

_____. "The Present Status of Self Theory," Handbook of Personality Theory and Research, eds. Edgar F. Borgatta and William W. Lambert. Chicago: Rand McNally and Co., 1968.