DOCUMENT RESUME

ED 100 929 95 SP 008 859

AUTHOR Kravas, Constance H.
TITLE The Development and Validation of a Simulation Device to Measure Teacher Affective Sensitivity. Final Report.
INSTITUTION Washington State Univ., Pullman.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
BUREAU NO BR-3-0468
PUB DATE 74
NOTE 280p.

EDRS PRICE MF-$0.75 HC-$13.80 PLUS POSTAGE
DESCRIPTORS *Affective Behavior; *Affective Tests; Emotional Response; Empathy; Measurement Instruments; *Measurement Techniques; Nonverbal Communication; Simulation; Student Needs; Student Teacher Relationship; *Teacher Behavior; *Teacher Education; Teacher Responsibility; Verbal Communication; Video Tape Recordings
IDENTIFIERS TASS; *Teacher Affective Sensitivity Scale

ABSTRACT

This investigation developed and validated a simulation device to measure a teacher's ability to identify verbal and nonverbal emotions expressed by a student. The instrument, Teacher Affective Sensitivity Scale (TASS), consisted of videotaped excerpts of teacher-learner interactions from actual and simulated episodes. Each simulation excerpt was accompanied by two multiple-choice items. The subjects, preservice and in-service teachers and counseling practicum students, selected the answer from each multiple-choice that they believed most accurately described the affective state of the pupil viewed on the screen. Assessments of scale reliability; scale construct; and predictive, concurrent, and content validity were made. Based on the results of the tests of reliability, it was concluded that the current form of the TASS can be used as a research tool but not as an instrument for individual appraisal. Because the subject groups employed to obtain validity assessments did not experience a treatment specifically designed to increase levels of affective sensitivity, it was recommended that further validation studies be made. (MJM)

FINAL REPORT

THE DEVELOPMENT AND VALIDATION OF A SIMULATION DEVICE TO MEASURE TEACHER AFFECTIVE SENSITIVITY

National Institute of Education Project No. 3-0468

Constance H. Kravas

Washington State University
Pullman, Washington

1974

The research reported herein was performed pursuant to a grant contract with the National Institute of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official National Institute of Education position or policy.

ACKNOWLEDGMENTS

This project was supported by a grant from the National Institute of Education. The investigator would like to express appreciation to the representatives of this agency for their assistance.

I would also like to acknowledge a number of individuals who offered help and cooperation during the study. I am especially appreciative for the invaluable assistance of Dr. Donald C. Orlich, my teacher, graduate advisor, committee chairperson, and friend. His knowledgeable advice, encouragement, and lively humor greatly facilitated the development and completion of the research.

I owe special tribute to the other members of my committee, Dr. Gordon McCloskey and Dr. William P. McDougall. Throughout my studies at Washington State University both of these individuals have demonstrated unusual commitment and support for myself and the other students in the Department of Education.

I was fortunate to have the consultation of a creative mathematician, Dr. Sam C. Saunders, while conducting the project. His insight and sensitivity aided in the conceptualization and refinement of the instrument.

Numerous individuals assisted in the processes of scale development and validation. The contributions of the following instructors and their respective students are appreciated: Dr. Toshio Akamine, Ms. Cheryl Allen, Dr. Michael Balasa, Mr. Pio DeCano, Mr. Curtis Dreese, Mr. Ralph Downes, Dr. Robert J. Harder, Dr. Robert A. Littlewood, Ms. Gladys Loreen, Dr. William P. McDougall, Ms. Janet Randall, Dr. James Shoemaker, Mr. Randall Stocker,

Dr. Lloyd B. Urdal, Dr. Dennis A. Warner, Ms. Audrey Williams, and Dr. Stanley Zehm. In addition, I would like to thank Mr. Steve Franko and Dr. Jack Davis for their assistance with the media portion of the scale, and the teachers from the Pullman Public Schools and the counseling psychologists and counseling assistants at Washington State University who aided in the constructing of the multiple-choice part of the Teacher Affective Sensitivity Scale.

Finally, and most especially, I would like to express appreciation to my daughters, Heather and Khristina, and to my husband, Gus. Their unlimited encouragement, patience, and caring were the ingredients that made this study both possible and worthwhile.

THE DEVELOPMENT AND VALIDATION OF A SIMULATION DEVICE TO MEASURE TEACHER AFFECTIVE SENSITIVITY

ABSTRACT

by Constance H. Kravas, Ph.D.
Washington State University, 1974

Chairman: Donald C. Orlich

Statement of the Problem

A teacher's ability to understand the emotions expressed by students (affective sensitivity) has been found to be positively correlated with instructor competency. Every student enters the classroom with a large repertoire of emotions. These affective states influence student learning. The teacher needs to accurately assess what an individual pupil is feeling while a behavior is occurring so that he/she can more adequately facilitate the learning process.

It is one type of activity to proclaim that the affective dimension must be integrated into the teaching-learning process; it is quite another to create the conditions that make this goal a reality. Teachers need to be helped to increase their levels of empathic awareness. A major task of many teacher-education and in-service programs is to help teachers become sensitive to the perceptual and emotional forces operating in their classroom environments.

The purpose of this investigation was to develop and validate a simulation device to measure a teacher's ability to identify verbal and nonverbal emotions expressed by a student (teacher affective sensitivity). The instrument, Teacher Affective Sensitivity Scale (TASS), consisted of videotaped

excerpts of teacher-learner interactions from actual and simulated episodes. Each simulation excerpt was accompanied by two multiple-choice items (three responses per item). The subjects (pre-service and in-service teachers and counseling practicum students) selected the answer from each multiple-choice item that they believed most accurately described the affective state of the pupil viewed on the screen.

Procedures

Previously produced media focusing on classroom interactions were analyzed (utilizing specified selecting and editing criteria) to obtain examples of learner affective expressions. Expert judges were employed to construct two multiple-choice items for each simulation episode. A computer program was written and utilized to identify highly discriminating multiple-choice items. A pilot test was administered to identify scale errors. The preliminary scale form was administered to a sample group to obtain item analysis data which were used for scale revisions. Assessments of scale reliability, and scale construct, predictive, concurrent, and content validity were made.

Findings and Implications

Based on the results of the tests of reliability, it was concluded that the current form of the TASS can be used as a research tool, but not as an instrument for individual appraisal. Because the subject groups employed to obtain validity assessments did not experience a treatment specifically designed to increase levels of affective sensitivity, it was recommended that further validation studies be made.

The Teacher Affective Sensitivity Scale developed in this study requires further refinement and validation. In the future, the TASS may be useful to (a) assess the effects of educational training programs that attempt to increase teacher levels of empathy and affective sensitivity; (b) assess teacher and teacher-candidate levels of affective sensitivity; and (c) develop a teaching-learning device aimed at helping subjects become aware and increase their levels of affective sensitivity.

TABLE OF CONTENTS

LIST OF TABLES

Table | Page

LIST OF ILLUSTRATIONS

CHAPTER 1

THE PROBLEM

Introduction and Statement of the Problem

The affective and cognitive domains are separable logically, but they are inseparable in actuality. In any classroom, during any lesson, on any subject, a subtle dimension--the feelings of the students and the teacher--is always present. Each pupil reacts to the class members, to the teacher, to her or himself, to the subject content, and to the instructional methodology emotionally and intellectually.

It is difficult for any teacher to understand the feelings and generalizations about the self and others that are generated by students. There is no magical entrance into the inner self of another human being. Traditional psychological testing measures have been utilized to gain interpretations of behavior, but these instruments are seriously limited for classroom use because they are unable to explain the meanings of a student's behavior during a given moment; and their administration and interpretation requires considerable expertise and time. The teacher needs to be able to ascertain what the student is feeling while the behavior is occurring, rather than an hour, a day, or a week later. Even a teacher's sophisticated understanding of the principles of human psychology is insufficient. More than demonstrating a knowledge <u>about</u> affective sensitivity, the teacher needs to <u>be</u> affectively sensitive to student feelings in the classroom.

The purpose of the current investigation thus, was to develop and validate a simulation device capable of measuring a teacher's ability to

identify verbal and non-verbal emotions expressed by a student (teacher affective sensitivity).

Need for the Study

In 1957 Soper and Combs wrote that research about student feelings and perceptions was urgently needed in education (Soper & Combs, 1957, p. 315). Fifteen years later, exploration into the emotional forces in learning is still a neglected area of investigation. By accepting the premise that a primary objective of education is student learning, then emphasis must be given to the dimension of feelings. Thoughts are enriched by feelings, just as feelings are enriched by thoughts. When affect is truncated from cognition, learning itself is impaired.

Feelings and attitudes are learned early in life and each student enters the classroom with a large repertoire of emotions ranging from happiness and joy to fear and sorrow. As psychologist Clark Moustakas observed, affective states influence the student's ability to learn (Moustakas, 1966, p. 37). One of the findings of the Coleman report, Equality of Educational Opportunity, was that a student's feelings about himself and others were highly correlated with academic achievement (Coleman, 1966). Prescott demonstrated that "mild" frustrations and fears have a constructive impact on student learning in that they encourage an individual to exert special effort or to attempt previously avoided risks to achieve a goal. But recurrent and forceful emotions can have the reverse effect (Prescott, 1958, pp. 47-49).

Many academic deficiencies have been traced to emotional and attitudinal problems. For example, students who participate in special reading clinics do not usually have physical eye impairments. Rather, they have developed negative feelings about themselves as people who are not capable of reading (Combs, 1965, pp. 14-15). While studying the thought processes of

students, Bloom found that, although individuals most prone to anxiety performed as well as their classmates on a comprehensive achievement examination in demonstrating the learning of specific knowledge, they did significantly poorer on problems involving analysis, application and synthesis (Bloom, 1954, pp. 40-41). The anxious students were unable to concentrate on the contect being considered by the rest of the class because they spent relatively more time thinking about their own problems.

In distinguishing mentally "healthy" from "unhealthy" individuals, Maslow (1962) indicated that healthy people are more "integrated" in that their cognitive, affective and motor dimensions work collaboratively toward the same ends. Kelley drew a similar conclusion when he stated that an educational system that hopes to change learner behavior will fail if it focuses exclusively on "facts." Individual perceptions and feelings, according to Kelley, provide the source of growth; they are the bases of intelligent behavior (Combs, 1962, pp. 68-89). The models of Maslow and Kelley differ significantly from other theoretical frameworks which hierarchically depict rationality as the most significant human characteristic. Figure 1, Domains of Learning--Two Conceptualizations, pictorally contrasts these separate frameworks.

Despite the evidence that knowledge must be related to an affective state if it is likely to influence learner behavior, affective learning and expression continue to hold a subordinate position in the classroom. Encouraged by such proclamations as Jerome Bruner's classic assumption that ". . . any subject can be taught effectively in some intellectually honest form to any child at any stage of development [Bruner, 1960, p. 33]," teachers have continued to place emphasis on the teaching and learning of cognitive structure. Amidon and Flanders vividly demonstrated this point in their analyses

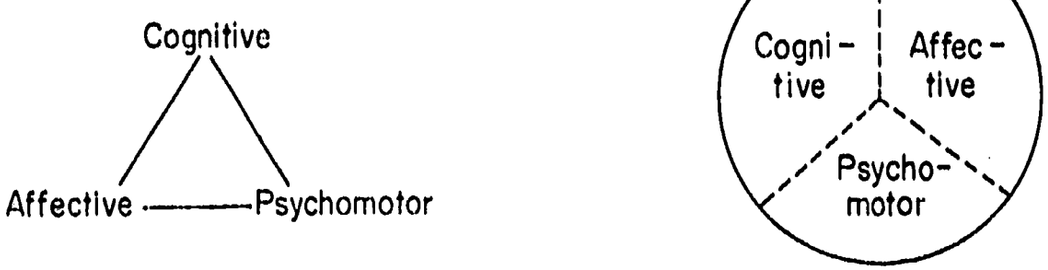


Fig. 1.--Domains of Learning--Two Conceptualizations

of teacher-student interactions in the classroom. Based on their two-year investigation of the relationship between teacher influence patterns and the achievement and attitudes of students (32 teachers, 16 teaching 7th grade social studies and 16 teaching 8th grade geometry; and 900 students, 450 in each subject area participated in the study), these authors found that "direct" teachers (identified as teachers who use considerably more than the average amount of class time for lecturing, giving directions, and justifying authority) devoted less than one-tenth of one percent of their teaching time to accepting and clarifying student feelings (Amidon & Flanders, 1967, pp. 38-39). Even the "indirect" teachers (identified as teachers who use considerably more than the average amount of class time for praising, accepting ideas and feelings, and asking questions) devoted only one-half of one percent of their classroom interaction time to recalling and predicting student feelings.

As elucidated by Krathwohl, Bloom and Masia in their introduction to the Taxonomy of Educational Objectives: Affective Domain, ". . . there still persists an implicit belief [among educators] that if cognitive objectives are developed, there will be a corresponding development of appropriate affective behaviors [Krathwohl, Bloom & Masia, 1964, pp. 19-20]." These same authors further postulated that, although additional research in this area is needed, it appears that the development of cognitive learning sometimes negatively influences affective behavior. One possible reason for this inverse relationship was suggested by Moustakas in his case study analysis of 92 Detroit school teachers and their pupils. He observed that many teachers deny or suppress such student emotions as anger and fear in hopes that their influence on the pupil and the rest of the class will be minimized. This treatment, however, often has the reverse effect. The feelings, rather than being

mitigated, remain, intensified, and more strongly influence the student's affective and cognitive responses (Moustakas, 1966, p. 44).

In reaction to the disparity between cognitive and affective emphases, many educators have called for a vigorous exploration and inclusion of emotional-affective learnings in the schools (Alpren, 1972; Weinstein & Fantini, 1970; Borton, 1969; Enterline, 1970; Jones, 1968; Milam, 1972; Moustakas, 1966; Rogers, 1969 a, b; Jersild, 1952; and Asbury & Constantino, 1972, to cite but a few). These authors have not asserted the primacy of affect over cognition, but rather, have called for the dissolution of the artificial, if not dangerous, barrier that has been erected between them (Weinstein & Fantini, 1970; p. 24).

Since the interpersonal dynamics and the concurrent feelings generated between the teacher, the student, and the student group effect the ultimate learning of each member, the teacher needs to accurately assess what individual students are feeling so that he can utilize this awareness to make adjustments in his own behavior and teaching methods, adjustments which, in turn, facilitate student learning. Concerning the impact of the relationship between the teacher and students in facilitating learning, Rogers made the following speculation in his book The Freedom to Learn.

> We know--and I will briefly describe some of the evidence--that the initiation of such learning (the function of facilitating) rests not upon the teaching skills of the leader, not upon his scholarly knowledge of the field, not upon his curricular planning, not upon his use of audiovisual aids, not upon the programmed learning he utilizes, not upon his lecture and presentations, not upon an abundance of books, though each of these might at one time or another be utilized as an important resource. No, the facilitation of significant learning rests upon certain attitudinal qualities which exist in the personal relationship between the facilitator and the learner [Rogers, 1969a, p. 106].

It is one type of activity to proclaim that it is time for the integration of affect into the teaching-learning process, and it is quite another

to create the conditions that make this goal a reality. Thus, a major task of current teacher-education and in-service programs in that of helping teachers become sensitive to the perceptual and emotional forces operating in their classroom environments (Gooding, 1969, p. 34; Milam, 1972, pp. 11-15; Combs, 1962, p. 81). If teachers are expected to be "indispensible human beings" (Skinner, 1968), or "counselor-teachers," (Costantino & Asbury, 1969), if they are expected to understand and facilitate student affective learning (Rogers, 1969a), they must first be helped to detect and describe the emotional states of their students. This means that teachers need to increase their levels of empathic awareness (affective sensitivity). As the editors of the 1962 yearbook of the Association for Supervision and Curriculum Development, Perceiving, Behaving, Becoming: A New Focus for Education noted,

> To deal with a child effectively in the classroom, it is necessary not only to know about his past history--teachers need also to know about how he sees himself and the world in which he is living today. We need teachers who are able to perceive youngsters, not only in the historical, but also in the immediate, frame of reference. This is a question of sensitivity to how a child is thinking and feeling as well as an understanding of the factors that may have contributed to his present state [Combs, 1962, p. 81].

The research of Arthur Combs (1969) has lent support to the value of helping teachers become more sensitive to the perceptions and feelings of individual students. He found that effective teachers ". . . were more concerned with seeing the child's point of view and were more concerned with people and their reactions than with material things. Further, the effective teachers had more concern for perceptual meanings than had their less effective colleagues [p. 34]."

Similarly, studying the relationship between teacher personality characteristics and student perceptions of these teachers, Emmerling (1961) found positive correlations between teacher levels of empathic understanding, acceptance of students, congruence, and pupil-centeredness. Hawks and Egbert

(1954), Dixon and Morse (1961), Diskin (1956), and Lifton (1958) all reported significant correlations between teacher competency, as determined by pupil and supervisor ratings and empathic understanding.

Utilizing a different criterion of teacher effectiveness, Aspy found that the students of primary teachers rated high in "empathy, respect and genuineness" scored significantly higher in the subtests of paragraph meaning, language word meaning, and word study skills (but not on the spelling subtest) of a reading achievement battery (Aspy, 1969, pp. 39-48). The students with warm, empathic and genuine teachers, thus, demonstrated greater behavioral change in terms of the criterion--overall reading achievement.

Another criterion of teaching effectiveness, the promotion of student emotional stability, was studied by Moustakas when he analyzed teacher anecdotal recordings and noted that a teacher's ability to listen to the verbal and non-verbal expression of pupil feeling is one of the fundamental methods of achieving student emotional health (Moustakas, 1966, p. 42).

All of these investigations suggest that the teacher who is able to understand student feelings and communicate this understanding to the students (empathy) is more likely to be effective in his interpersonal relationships with students and in the fostering of student learning.

Since 1963, Norman Kagan, David Krathwohl, and other members of a research team at Michigan State University have attempted to discover new ways to help people become sensitive to the underlying thoughts and feelings in human interaction. The Interpersonal Process Recall system (IPR), as well as various other training techniques, have been developed as products of their explorations. From the beginning, these researchers encountered a problem in obtaining an adequate measurement instrument to determine if the members of their experimental groups were becoming more affectively sensitive as a result

of participation in various treatments. Thus, Kagan decided to develop and validate a scale to test a subject's ability to identify the emotions of others. The Affective Sensitivity Scale resulted from his efforts. The revised instrument (Revised Form C) consists of thirty-three videotape excerpts from actual clinical interviews and an accompanying questionnaire containing sixty-six multiple-choice items. The subject taking the test is asked to identify the emotions felt by the client on the screen at the end of each film selection. In general, after almost ten years of reformulation, the two forms of the test as they exist today ". . . have adequate reliability (above .70) and validity for a research instrument of its type [Kagan, Krathwohl, Goldberg, Campbell, Schauble, Greenberg, Danish, Reshkoff, Bowes, & Bondy, 1967, p. 42]."

As supported by studies previously discussed, teachers, as well as counselors and others in helping professions, need to be sensitive to the affective expressions of the individuals with whom they interact. It seems possible that the Kagan Affective Sensitivity Scale could be used to measure teacher awareness of the emotional states of students, as well as counselor sensitivity. However, because the particular videotaped selections all entail counselor-client interviews, the scale is not ideally suited for utilization with teachers. In private correspondence addressed to this investigator, Dr. Kagan mentioned that he considers the construction of a Teacher Affective Sensitivity Scale to be "sorely needed" (See Appendix A). The current study, thus, represented an attempt to develop and validate a new scale containing film segments and response items that seem more analogous to encounters actually experienced by teachers in the classroom setting. Each videotaped excerpt on this new instrument consists of actual or simulated teacher-student interactions. To accomplish the main purposes of the investigation, the following objectives, general procedures and hypotheses were proposed.

Objectives of the Study

The primary objectives of this study were to develop, refine, and validate an audiovisual instrument to measure teacher affective sensitivity.

General Procedures of the Study

To facilitate the achievement of the objectives, the investigator proposed to:

1. Define and describe teacher affective sensitivity and related variables.
2. Substantiate the need and pertinence of a teacher affective sensitivity scale.
3. Collect, systematically, media excerpts depicting teacher-learner interactions in a classroom setting.
4. Evaluate each media excerpt in terms of specified selection and editing criteria and to eliminate simulation episodes that failed to meet these standards.
5. Construct (via expert opinions) two multiple-choice items for each simulation episode.
6. Validate judge "expertise" by obtaining an index of inter-judge agreement.
7. Develop a computer program to help identify "highly discriminating" multiple-choice items.
8. Pilot test the instrument.
9. Administer the preliminary Teacher Affective Sensitivity Scale to a sample group, conduct item analysis procedures, and revise the scale based on the results.
10. Assess construct, predictive, concurrent, and content validity of the scale.
11. Indicate implications of the study and suggest possible sources of application of the Teacher Affective Sensitivity Scale.

Assumptions

The number of assumptions were made by the investigator at the start of the project. These are listed below. Empirical support for each assumption has been previously cited.

1. Students have feelings. These feelings (e.g., rage, joy, discomfort) may be limited to particular situations. However, it is from these specific feelings that people make generalizations about themselves (i.e., "I'm worthless," "I'm dumb," "I'm physically attractive"). Identifying feelings in particular situations is the first step in understanding people.

2. The way a student feels influences the manner in which he presents himself, how he relates to others and how he behaves in a total sense. If, for example, a student feels frightened, this affects the way that he relates verbally and nonverbally to the teacher and other students.

3. Messages of feeling are always being communicated. Some examples are fear ("He won't like me"), and anxiety ("The teacher sure makes me feel uncomfortable").

4. Feelings are also communicated nonverbally. Attention needs to be placed on <u>how</u> feelings are being communicated (i.e., facial expression, body posture, and voice intonation) as well as to what is being said.

5. Sometimes students are not completely open and honest in communicating their feelings. Intensity of communicated feelings can be denied verbally with statements such as "It's no big thing to me," or they can be covered with behaviors such as laughter.

6. Teacher affective sensitivity is positively related to teacher effectiveness.

7. A teacher can more effectively aid student learning by accurately identifying what the individual is feeling and assessing why the individual behaves in a particular way.

8. Teacher affective sensitivity can be measured.

9. An instrument composed of videotaped excerpts of pupil-teacher interaction is similar enough to real classroom situations to provide a valid measurement of teacher affective sensitivity.

10. The learning programs of Education 300, Human Development and Education, and Education 562, Practicum in School Counseling, at Washington State University increase the levels of affective sensitivity of the participants. If these courses do not actually positively affect this dimension, then they cannot be used to help determine an index of the construct validity of the Teacher Affective Sensitivity Scale.

Operational Definitions

Affective Sensitivity

A subject's (i.e., teacher's or teacher candidate's) ability to detect and describe the immediate emotional state of a student, as measured by his score on the Teacher Affective Sensitivity Scale.

Emotions

The eight affective dimensions and the three intensity levels per dimension that were utilized by the investigator to select media excerpts that depict student feelings. These dimensions and intensity levels are defined as follows:

1. Rage, Anger, Annoyance.--The student shows hostile feelings of displeasure ranging in intensity between violence and irritation.

2. Ectasy, Joy, Pleasure.--The student shows feelings of happiness ranging in intensity between overt delight and satisfaction.

3. Admission, Acceptance, Incorporation.--The student shows a willingness to take in (adopt) a stimulus. Intensity levels range from ready acknowledgment of benefit to involvement with the stimulus.

4. Astonishment, Amazement, Surprise.--The student contacts a stimulus and momentarily reacts with feelings ranging between shock and wonder or disbelief.

5. Terror, Fear, Timidity.--The student encounters an unpleasant stimulus and reacts with feelings ranging between intense anxiety or panic to apprehension or shyness.

6. Grief, Dejection, Gloominess.--The student experiences the loss of something enjoyable and reacts with feelings ranging between intense sorrow and depression.

7. Loathing, Disgust, Boredom.--The student dislikes or wants to be free of an unpleasant stimulus and reacts with feelings ranging between hatred and apathy.

8. Anticipation, Expectance, Attentiveness.--The student explores something and demonstrates feelings ranging between intense curiosity and casual observance.

Empathy

The two-fold process of (a) being sensitive to what another person is feeling, and (b) communicating this sensitivity to the other person at a level that is attuned to this person's current emotional state (Rogers, 1964). Affective sensitivity refers to the first aspect of empathy.

Expert Judges

Twenty-four counseling/clinical psychologists at Washington State University and graduate students majoring in clinical psychology or counseling and guidance at Washington State University (who have completed at least one semester of practicum and have been recommended by their instructors and supervisors) who create the multiple-choice portion of the Teacher Affective Sensitivity Scale. Judges write items for half of the scale and demonstrate their "expertise" by answering the remaining scale items (i.e., taking the part of the scale that they did not formulate.)

Nonverbal Behavior

Bodily movements and expressions made by a learner during a classroom interaction that are recorded on a videotape excerpt that is included on the Teacher Affective Sensitivity Scale.

Simulation Device

A series of videotaped excerpts depicting teacher-learner interactions in classroom settings that are used as a situational measurement of affective sensitivity.

Teacher Affective Sensitivity Scale

An instrument composed of selected scenes of videotaped recordings of classroom interactions. Each scene is followed by two multiple-choice items.

Subjects were requested to select the response in each multiple-choice item that accurately describes the feelings of the student viewed on the videotaped episode. The following is a sample item:

SCENE 1 (Example)

_____1. At the end of this scene, the feelings I had about myself and/or the subject matter were:

a. Boy, that really made me feel good!

b. I'm busy, but I'll listen a bit.

c. How embarrassing!

_____2. The feelings I was experiencing toward the teacher or the student(s) with whom I was interacting were:

a. I'm relieved. For a minute there, I thought I was going to get it.

b. I'm glad the teacher saw me pitch.

c. Hey thanks! You care about me.

Verbal Behavior

Words spoken by a learner during a classroom interaction that are recorded on a videotaped excerpt that is included on the Teacher Affective Sensitivity Scale.

Limitations of the Instrument

A fundamental question concerning the validity of this type of simulation device must be raised by the researcher. Does a subject react to the videotaped scenes in the same way that one would to the same students if one were confronted with their actual, rather than simulated, presence? Unfortunately, there does not seem to be any absolute way to test this possibility (Kagan, et al., 1967, p. 190). Any situational approach to sensitivity measurement necessitates that the subject be provided with a testing procedure

that is as analogous to real life as possible. Ideally, to measure teacher affective sensitivity, the subjects would be confronted with live students in a usual classroom setting, and some procedure would then be used to obtain an assessment of their individual sensitivity to feelings. But obviously, the problems of scoring and standardizing such an evaluation technique would make this approach highly impractical. However, research assessing (a) the benefits of instructional simulations versus direct (face-to-face) instruction (Carpenter and Greenhill, 1955; Dreher and Beatty, 1958); (b) clase correlations between subject performance in simulated situations and subject performance in real-life settings (Frederiksen, 1966; Bray and Campbell, 1968; Krumboltz and Bergland, 1969); and (c) beneficial outcomes accrued from the utilization of simulation experiences as training techniques (Gustafson, 1971; Eisenberg, 1971; Boocock, 1967) lend support to the validity of measuring behaviors and even psychological constructs (such as affective sensitivity) by means of a simulation protocol.

Tierney (1970) reported additional evidence concerning the appropriateness of using simulation materials to elicit subject responses. In a review of literature, Tierney noted a paucity of efforts aimed at measuring the effects of audio-visual devices on the answering behaviors of subjects. In his own study, he compared three data collection procedures--a mailed questionnaire, a personal interview, and an audio-visual device called "Audiscan." Tierney found "the mechanical aspects of the Audiscan question posing and responding procedures did not exert an undue influence on the survey respondents or their responses [p. 63]."

Another limitation of this study relates to the situation that many feeling messages are communicated nonverbally. It is technically difficult to incorporate these types of nonverbal messages on film. Even though each

excerpt was carefully edited (see "Technical Editing Procedures," in Chapter 5), the possibility remains that important aspects of communication were not transmitted via the videotape. The use of videotape, rather than kinescope or other media forms, was made to guarantee that as much student nonverbal behavior was depicted as possible.

Conclusion

In this chapter, a delineation of the problem--the measurement of teacher affective sensitivity--has been presented. In addition, the need for the study, the objectives, research hypotheses, general procedures, assumptions, operational definitions, and limitations have been described.

As defined in Chapter 1, teacher affective sensitivity entails an instructor's ability to identify verbal and nonverbal feelings expressed by students within the classroom environment. To facilitate a more comprehensive analysis of the problem, the following three chapters contain reviews of previous studies related to the definition, description and measurement of affective sensitivity. In Chapter 2, The Case for Student Emotional Expression in the Classroom, research is cited that further substantiates the pertinence of the current investigation. In Chapter 3, The Identification of Emotions, various theories and approaches developed to assess human emotions are enumerated. To conclude the review of the literature, Chapter 4, Empathy and Affective Sensitivity: Derivations, Meanings, Assessment Methodologies, and Training Strategies, contains a historical presentation of attempts to define and measure these two concepts.

CHAPTER 2

THE CASE FOR STUDENT EMOTIONAL EXPRESSION IN THE CLASSROOM

Theoretical Perspective: The Student as "Whole-Man"

In the verse "Portrait of the Artist as a Prematurely Old Man," the poet, Ogden Nash, drew sharp distinctions between two types of sin:

It is common knowledge to every schoolboy and even every Bachelor of Arts,
That all sin is divided into two parts.
One kind of sin is called a sin of commission, and that is very important,
And it is what you are doing when you are doing something you oughtant,
And the other kind of sin is just the opposite and is called a sin of omission and is equally bad in the eyes of all right-thinking people, from Billy Sunday to Buddha,
And it consists of not having done something you shudda.
I might as well give you my opinion of these two kinds of sin as long as, in a way, against each other we are pitting them.
And that is, don't bother your head about sins of commission because however sinful, they must at least be fun or else you wouldn't be committing them.
It is the sin of omission, the second kind of sin,
That lays eggs under your skin.
The way you get really painfully bitten
Is by the insurance you haven't taken out and the checks you haven't added up by the stubs of and the appointments you haven't kept and the bills you haven't paid and the letters you haven't written.
Also, about sins of omission there is one particularly painful lack of beauty,
Namely, it isn't as though it had been a riotous red-letter day or night every time you neglected to do your duty;
You didn't get a wicked forbidden thrill
Every time you let a policy lapse or forgot to pay a bill;
You didn't slap the lads in the tavern on the back and loudly cry, "Whee,
Let's all fail to write just one more letter before we go home, and this round of unwritten letters is on me."
No, you never get any fun
Out of things you haven't done,
But they are the things that I do not like to be amid,
Because the suitable things you didn't do give you a lot more trouble than the unsuitable things you did.

> The moral is that it is probably better not to sin at all, but if
> some kind of sin you must be pursuing,
> Well, remember to do it by doing rather than not doing.
> [Nash, 1969, p. 15].

An appraisal of curricular activities and instructional processes which permeate the classroom milieu would reveal that educators have been pursuing what Nash described as the wrong kind of sin--the sin of omission. Despite profuse admonitions against viewing students only as one-sided cognitive organisms, many teachers have focused almost exclusively on the development of pupil intellect. According to such writers as Milne and Kosters (1970), Dinkmeyer (1971b), Alschuler (1969), Borton (1970) as well as many of the investigators cited in the "Need for the Study" (Chapter 1), the goal of the educational process should not be limited to the mere accretion of knowledge, but must include varied and pervasive learnings that interpenetrate all aspects of the individual's existence. The type of education that involves the total-personality of the learner, by definition, must encompass personal-emotional, social, ethical, esthetic and physical, in addition to cognitive, components.

Unfortunately, as Inlow (1966) noted, the oft-phrased "whole-person" or "total-personality" position has offended many with its rhetoric. The logic behind the "whole-person" posture, however, remains convincingly intact. Advocates of this stance, one that is also referred to as a "confluent," or "humanistic," or "mental-health" approach to educational purposes and outcomes, have stressed the need for schools to assume responsibility for student development along multiple dimensions.

The courts have provided at least partial advocacy for the mental health movement in education (Inlow, p. 67). In handing down the 1954 Brown v. Topeka, Kansas Board of Education decision, the U. S. Supreme Court, through both direct statement and implication, recognized that the educational

enterprise must aim for more than cognitive student growth. Gunnar Murdal's sociological analysis of The American Dilemma, which contained a description of the gap between "creed-and-deed" in this country, provided pertinent data for the determination of this case. The justices cited the valuable outcomes of student personal-social learnings, as well as the aversive affects that inferiority feelings have on student ability to learn, in adjudicating their landmark decision concerning racial equality in the public schools of our nation.

The Relationship between Student Feelings and Educational Achievement

Student emotions, as well as their intellects, affect their performances in school. Prescott (1958) posited that the most integral factor influencing classroom learning is the emotions that the students experience in and outside of this setting. Feelings are powerful dictators of learner behavior because a student makes generalizations about himself and others based on them (e.g. "I am worthless;" "She is friendly;" "I can't read"). The way the individual reacts to the teacher, to his peers, even to the subject matter itself, appears to be at least partially dependent on how he feels about himself and others. Dinkmeyer (1971 b), and Combs and Soper (1963) have reported significant relationships between student feelings of adequacy and educational achievement.

The psychological investigations of Abraham Maslow and Eric Erikson, among others, have established that all human beings strive for such needs as physical safety, love, social acceptance, adequacy in fulfilling personal and social expectations and success in realizing personal goals and aspirations (Prescott, p. 48). Incidents at school that are perceived as blocking or threatening, or conversely, situations that are considered facilitative to the

satisfaction of these needs and striving produce diverse learner emotional reactions--some positive, some neutral and some conspicuously negative.

A survey conducted by Branan (1972) vividly illustrated the enduring impact that adverse school incidents can have on students. When freshman and sophomore psychology students (N=150) at a small private college were requested to describe their two most "negative experiences" (episodes that they believed had made their lives worse or had unfavorably affected their development), they most frequently identified incidents that had entailed interactions with teachers (84 responses). Forty-four of the reported negative school experiences had occurred in high school; 23 in college; 12 in elementary and 5 in junior high school. Included among the list of negative interactions were situations in which students felt they had been humiliated in front of a class, treated unfairly in evaluation, shaken in their self-confidence, embarrassed, or had experienced personality conflicts with teachers.

The Relationship between Teacher Behaviors and Student Learning

Teacher behavior appears to be a particularly important variable which influences the attainment of the goals of education. Numerous researchers, studying the teaching-learning interaction, have concluded that student attitudes and feelings about learning, and hence, the quality and quantity of their educational attainments, are affected by teacher relationships with them. Webb (1971) found that teacher insensitivity to shy or insecure students or to students with low self-concepts and/or negative opinions about school adversely affected the self-esteem and subsequent learning attitudes of these pupils. The finding appeared particularly true for students of average ability. Getzels and Jackson (1963), Anderson and Kennedy (1932),

Carkhuff and Truax (1966), Isaacson, McKeachie, and Millholland (1963), have likewise described the teacher as a critical element in the classroom.

When Haberman (1965) studied the teaching behavior of teaching interns, he discovered five factors descriptive of the pre-service teachers considered most effective. These included (a) belief in individual student potential; (b) classroom organizational skills; (c) enthusiastic presentation of subject matter; (d) ability to listen to students and utilize their comments in teaching; and (e) ability to set standards of acceptable student behavior.

As a result of their analyses of teacher-learner interaction patterns, Amidon and Flanders (1967) outlined nine communication skills that seemed to facilitate learner participation levels. These included a teacher's ability to:

1. accept, clarify and use ideas
2. accept and clarify emotional expression
3. relate emotional expression to ideas
4. state objectively a point of view
5. reflect accurately the ideas of others
6. summarize ideas presented in group discussion
7. communicate encouragement
8. question others without causing defensive behavior, and
9. use criticism with the least possible harm to the status of the recipient.

In his report to the American Council on Education, Ryans (1960) isolated three basic dimensions that he observed to be descriptive of teacher behaviors. State as continua, these behaviors were

Positive		Negative
understanding and friendly	----------	aloof, egocentric, restricted
responsible, businesslike, systematic	---------	unplanned, slipshod
stimulating, imaginative	----------	dull, routine

In several subsequent investigations, Ryans reported significant correlations between these positive correlates of teacher behavior and

certain "productive pupil behaviors"--alertness, participation, confidence, responsibility, self-control, and initiating activities. These relationships held true for students at both the elementary and secondary levels (Ryans, 1961a, 1961b).

Gorman (1969) claimed that the teacher needs to develop a "we attitude" in the classroom, an outlook that encourages a student-teacher-working-together process. Such a "we attitude" facilitates the establishment of goals that revolve around teacher-student relationships, student-student relationships, the learning purposes of the classroom, and a supportive emotional climate. Gorman suggested that in the area of emotional growth, what needs to be sought is

a movement from:	toward:
guarded, hidden feelings	a norm of openness and spontaneous expression of feelings
unchecked assumptions	positive feelings that assumptions should be checked
neutral feelings toward the meaningfulness of the learning experience	positive feelings that the experience has personal meanings and values
neutral feelings toward the class group	positive, warm response toward others ("my group" feeling)
vague student anxiety: "Who am I in this group?"	personal security: "Am I, accepted and valued"
preoccupation with self and with projection of "good" self-image	sensitivity to verbally and non-verbally expressed needs of others
student fear of speaking in a group situation	confidence in expressing feelings, knowledge and direction
view of teacher as non-human object	view of teacher as human being with feelings similar to those of students

[pp. 40-41].

As summarized by Carkhuff (1971), "The teaching relationship is critical because it is the vehicle by which the teacher becomes both model and agent for the students change and gain. An effective relationship may become the modality through which a student functioning at low levels may learn to function at higher levels in physical and emotional-interpersonal as well as intellectual spheres of functioning [p. 11]."

There have been a growing number of studies investigating the interrelationships between measures of pupil adjustment/achievement and specific teacher-offered dimensions. Reports by Kratochvil, Carkhuff and Berenson (1968), Carkhuff (1969a, 1969b), Aspy (1965, 1969), Hefele (1971) and Truax and Tatum (1966), strongly suggest that students are likely to learn most from teachers who show high levels of such attributes as respect and understanding, genuineness, concreteness (or specificity), and empathy. Aspy and Hadlock (1967) found that students of teachers rated highest in these traits gained an average of 22 months academic growth during one school year, whereas, students of the lowest-rated teachers obtained an average of 9 months academic achievement during the same interval.

These studies imply that the teacher who is able to communicate warmth, genuineness and empathy is likely to be more effective in the establishment of satisfying interpersonal relationships, regardless of the specific goals of the interactions (Gregg, 1971). In this respect, the teacher may need to develop skills that are similar to those required of other helping professionals--psychiatrists, social workers, psychologists, counselors, nurses, ministers--individuals who operate in settings where the quality of the relationship is a strategic factor permeating their transactions.

Combs and Soper (1963) attempted to ascertain if certain dimensions are common to all helping relationships no matter where they are found or

what techniques are employed. Their investigation of this topic represented an extension of a 1950 study conducted by Fiedler. In this earlier endeavor, Fiedler had asked therapists of different schools of thought in psychology (e.g. client-centered, Freudian), and of wide ranges of experience to describe, via a Q-sort procedure, an "ideal therapeutic relationship." From their analysis of this data, Fiedler reported that

1. Therapists of different schools conceptualize the ideal therapeutic relationship similarly.

2. A therapist's ability to describe this concept of the ideal therapeutic relationship is more a function of his expertise than of his theoretical allegiance.

3. Nontherapists are able to describe the ideal therapeutic relationship in the same manner and about as well as the therapists [Soper and Combs, 1962, p. 285].

Combs and Soper utilized a similar procedure with teachers and found that both "good" and "poor" instructors used parallel terms to those identified by Fiedler's subjects (the therapists) in describing the ideal teacher-student relationship. The correlation between the teachers' Q-sort patterns and those of Fiedler's therapists was .809 (Combs, Soper, Gooding, Benton, Dickman, & Usher 1969, p. 7). Thus, their hypothesis concerning the presence of mutual elements basic to all helping professions was supported.

The eight "most ideal" items sorted by both the teachers in the Combs and Soper study and by the therapists in Fiedler's were:

	Teachers	Therapists
1.	The teacher directs and guides the student.	The therapist is able to participate completely in the patient's communication.
2.	The teacher sees the student as a co-worker on a common problem.	The therapist's comments are always right in line with what the patient is trying to convey.

	Teachers	Therapists
3.	The teacher greatly encourages and reassures the student.	The therapist is well able to understand the patient's feelings.
4.	The teacher really tries to understand the student's feelings.	The therapist really tries to understand the patient's feelings.
5.	The teacher usually maintains rapport with the student.	The therapist always follows the patient's line of thought.
6.	The teacher is well able to understand student's feelings.	The therapist's tone of voice conveys the complete ability to share the patient's feelings.
7.	The teacher is sympathetic with the student.	The therapist sees the patient as a co-worker on a common problem.
8.	The teacher gives and takes in the situation.	The therapist treats the patient as an equal [Combs, et al., 1969, p. 6].

For purposes of the current study, the fourth ranked dimension of the Combs and Soper study, "the teacher really tries to understand student's feelings" is of particular interest. Inlow (1966) claimed that teacher empathic acceptance of students is one of the most essential requirements for mental health in the classroom. Moustakas (1966) suggested that listening to children as they express themselves, "without trying to press our own thinking and feelings upon them" is possibly the most fundamental way of promoting student adjustment and achievement.

Similarly, while studying the ability of student-teachers to develop concordant interpersonal relationships in the classroom, Diskin (1956) found empathy to be a basic factor in teacher effectiveness. His findings indicated that the highly empathic student teachers facilitated harmonious classroom communication patterns. As previously reported in Chapter 1 of the current study, Dixon and Morse (1961), Lifton (1968), and Hawks and Egbert (1954), also reported empathy to be significantly related to teacher competency.

The Case against Student Emotional Expression in the Classroom

Despite the substantial evidence that student attitudes and learning are related to feelings about self-and-others and are affected by teacher characteristics, one of which is instructor ability to empathize with learners, many educators continue to avoid or suppress the incorporation of student affective expressions within their arena of influence--the classroom. Various writers have suggested possible explanations for this chasm between research evidence and educational practice. Most of these reports, unfortunately, have been based more on speculation or logical analysis than on empirical investigation. Although such observations and inferences are useful conceptual tools, their verification through organized study is yet required.

The numerous arguments that have been advanced against the position that affective objectives and student emotional verbalizations are appropriate vehicles for the promotion of pupil self-understanding, acceptance and achievement include the following.

1. The first rejoinder, and the one that is probably advanced most frequently, is that a teacher should not assume the role of a professionally trained psychologist or psychiatrist. Many educators maintain that only a professional worker in one of the other helping areas can, or should, identify and strive for the amelioration of student emotional problems. In addressing this issue, Arthur Jersild (1952) acknowledged the possibility that a teacher could psychologically harm rather than help an emotionally distraught student. Jersild further noted, however, that teachers continuously and inevitably must deal with psychological matters as they interact with students. Although for both ehtical and legal reasons, teachers should not "treat" the disorders of severely disturbed children who happen to be in their classes, they cannot

pretend that student emotional expressions do not exist or do not have major impact on whatever else transpires in their rooms.

This issue appears to be one of major significance for all helping professionals, and it is one for which no ready answers can (or indeed, should) be proposed. Educators such as Weinstein and Fantini (1970) and Krathwohl, et al. (1964) who have vigorously supported the embodiment of affective learnings within the school environment, have warned that the classroom is not the appropriate place for the solving of personal-emotional problems. These writers have maintained that affective curricula and instructional processes should not be confused with personal therapy.

In response to this critical issue, Borton (1970) suggested that the adoption of an "Information Prooessing Model" may provide one method to avoid many of the problems generated by a "turn kids on" approach (i.e., an educational program that tends to turn a curriculum of concerns into one of anxiety) to emotional expression. Such a methodology not only enables students to surfaoe their concerns, but in addition, provides a means (a process) through which they can deal and cope with them. Student insight into their emotions, thus, can be coupled with the learning of decision making skills and change strategies. Borton found that this model helped students gain confidence in the expression of their feelings and concerns, and also in identifying alternative approaches for their mitigation.

2. A second argument against mental health instructional programs is that it is difficult to uncover the feelings, the tangled and confused reasons that lie behind the behaviors of some children, especially in a typical school environment where the teacher may interact with thirty students. This attitude is central to the current investigation dealing with the measurement of teacher affective sensitivity. Because it will be examined in depth in the

two subsequent chapters of this literature review (The Identification of Emotions, and Empathy and Affective Sensitivity: Derivations, Meaning, Assessment Methodologies, and Training Strategies) only a brief discussion is presented here. The nationally recognized psychologist and researcher, Carl Rogers, stated that he has noticed it much more difficult to understand and communicate understanding (empathize) with students in a classroom than in an individual clinical setting. Instead of listening to pupils or allowing them opportunities to express their feelings and problems, he has observed that, in group settings, there is a strong temptation to "set students straight" or tell them what they ought to know (Rogers, 1961, p. 53). These same tendencies were recorded by Amidon and Flanders (1967) in their observations of classroom teacher-learner exchanges.

3. Another reason for the exclusion of affect in the schools is that a display of student emotion may be too threatening for the teacher. Jersild (1952) observed that many individuals are embarrassed or frightened by expressions of feeling. "Some are especially uncomfortable when inferiority feelings are exposed. Some become flustered by a simple, genuine show of affection [p. 106]." Many teachers also experience such discomfort. Particularly if an instructor has an unrealistic self-expectation that he must arrive at a "correct answer" in response to a student expression of concern, he is likely to feel subsequent frustration. Too, some displays of feeling on the part of students may be perceived as personally threatening to instructors if they touch on aspects of their own unresolved concerns.

4. A fourth position advanced by critics of confluent education is that it is inappropriate for the teacher, as a disciplinarian and figure of authority, to allow affective expressions in the classroom milieu. This issue was discussed in the 1962 ASCD yearbook, Perceiving, Behaving, Becoming, where

the contention was made that, "We should long since have rejected the shibboleth that 'familiarity breeds contempt.' The teacher who is truly accepting develops a friendly relationship with students and so serves as a friendly representative of society (Combs, 1962, p. 125)."

5. Still another source of misgiving is that negative political and social ramifications may accrue as the result of the inclusion of affective learnings in the school. As Krathwohl et al. (1964) pointed out, a prevalent feeling of many community members is that student beliefs, attitudes, feelings, and concerns are private and should not be dealt with in the classroom. He stated that, "The play of these forces has, in many instances, made teachers and school administrators wary of expressing these (affective) objectives and all too frequently has led school staffs to retreat to the somewhat less dangerous cognitive domain [p. 91]."

6. Inlow (1966) noted that schools of education must be held at least partially responsible for the overemphasis given to cognitive vis a vis affective learnings. Teachers are products of pre-service programs where the cognitive is monistic (p. 69). They are not sensitive to the emotional forces in learning because they have not been helped to develop skills in this area. In addition, although students preparing for elementary teaching are given coursework in child development, there is a notable absence of courses focusing on adolescent development for those preparing to enter the secondary field.

7. A seventh reason for opposition to affective learning has eminated due to the circumstance that affective outcomes are difficult to specify--the process is an integral aspect of the content. In an age where accountability is considered the sine qua non of education (Lessinger, 1970), advocates of "humanistic"--"confluent"--"mental health"--"affective" education find themselves caught in a quandary. As Combs (1973) suggested, this position is a

troublesome one because humanistic goals do not lend themselves to traditional modes of assessment. Also, the confluent education movement is still in a neophyte stage so that sophisticated and valid techniques for assessing outcomes in humanistic terms have not yet been developed. As a consequence, the proponents of affective learnings, in arguing against the formulation of precisely stated behavioral objectives, tend to sound "fuzzy-minded" and against progress. Yet the solutions offered by accountability advocates are overly simplistic--capable of dealing with only the most elementary cognitive components, and perhaps least-important aspects of education.

8. A final viewpoint adhered to by some critics of the mental health approach (there are undoubtedly additional arguments that have been inadvertently omitted from this listing) is that understanding and insight into student feelings and concerns is not of central importance to the learning process. From the conclusions of research previously mentioned in this chapter, this position seems particularly inaccurate. All individuals--all students--have feelings. Understanding another person's feelings and generalizations about the self and others is an unquestionably difficult activity. Yet, to operationally deny their importance and impact in the classroom through either oversight or explicit planning seems educationally indefensible.

The suggestions offered by Arthur Jersild (1952) to teachers In Search of Self appear appropriate in responding to the eight arguments that have been cited above.

> We are not proposing that teachers should try to take on or pretend that they might take on the role of a psychiatrist or highly trained psychological counselor. We do not want teacher to assume a role that is entirely new or different. We are simply saying that the teacher should try to function to the best advantage in the psychological role which he already occupies. As a teacher he already is in a position to have a profound psychological influence on his pupils, for better or worse.

> Every teacher is in his own way a psychologist. Everything he does, says, or teaches has or could have a psychological impact. What he offers helps children to discover their resources and their limitations. He is the central figure in countless situations which can help the learner to realize and accept himself or which may bring humiliation, shame, rejection and self-disparagement.
>
> What we are urging is that if all teachers could gain a clearer conception of what this psychological function is and what it might be, and if we could discover the kind of selection, training, and experience which might bring it to its fullest development, the result would be a happy one for all mankind [p. 125].

Unfortunately, acknowledgment that emotions affect student learning is, in and of itself, a futile semantic activity. It is hardly useful to convince classroom teachers that they need to be able to assess student concerns and incorporate affective objectives into their curricula and instructional strategies. In place of readily-offered advise, educational courses designed to help teachers understand and positively approach affective learnings are needed. The theoretical viewpoints and empirical findings that have been reported to this point suggest pertinent implications for schools of education--the preparation ground of future teachers, and for agencies offering inservice instruction. Teacher skills in the affective domain that are consistent with criteria of successful professional performance need to be identified, and subsequent training programs need to be developed and implemented so that teachers can acquire these skills.

Conclusion

In this review, research substantiating the value of helping teachers perceive student emotions has been reported. Although it may seem appropriate, at this point, to succeed these comments with a description of specific treatments that could be attempted to increase teacher affective sensitivity levels, such a discussion will be postponed until a number of other pertinent variables have been analyzed. One of these foci concerns the nature of emotions. The

next chapter, consequently, contains a summary of literature dealing with the identification of emotions.

CHAPTER 3

THE IDENTIFICATION OF EMOTIONS

Introduction

The ability to assess verbal and nonverbal emotions that students express within the classroom has been described as the essense of teacher affective sensitivity. To structure a review of the literature pertaining to this topic, two basic questions about the nature of emotions seem germane: (a) What is an emotion?; and (b) By what means can one individual (e.g. teacher) identify the emotions of another person (e.g. student)? To answer these queries, theoretical and empirical data relating them are presented in this chapter.

The Definition of Emotion

Silverman (1971) defined "emotion" as ". . . behavior that is primarily influenced by conditioned visceral responses [p. 243]." Within the human organism, viscera (internal organs) are continuously reacting. Silverman noted that the particular visceral reactions associated with emotions can be distinguished because they affect perceptions, learning, thinking--virtually everything the individual does. He stated that, "Although often elusive, emotions are undeniably a major force in affecting behavior."

Attempts to describe emotions, to explain emotional behaviors, and to classify individuals into emotional categories have been "favorite sports" for many, and serious endeavors for a few. The ancient Greeks referred to sanquinary (blood), phlegmatic (phlegm), choleric (yellow bile), and

melancholic (black bile) human dispositions. In 1944, Sheldon drew analogies between individual temperaments and the three anatomical typologies that he entitled "ectomorph" (tall, thin, lonely), "endomorph" (fat, jolly, visceral), and "mesomorph" (muscular, aggressive) (Lang, Rice, & Sternbach, 1972, p. 633). A current conceptualization of an "emotion" contains the following interpretation: "(a) strong, generalized feeling; . . . any of various complex reactions with both psychological and physical manifestations, as love, hate, fear, anger, etc. [Websters New World Dictionary of the American Language]."

While the term "emotion" denotes familiar meanings for the layman, it remains an unmanageable construct for the theoretician, the laboratory empiricist, or the clinician. Psychologists, physiologists, medical specialists, philosophers--members from all of these professions have struggled to synthesize a unitary, yet comprehensive, theory of human emotional behavior. None have succeeded. Instead, numerous theories and multiple definitions have been produced. Developers of each approach have aimed to account for and reconcile the many conflicting findings concerning the psychological feelings, the behavioral manifestations, and the physiological patterns that precede, coincide and follow an emotional experience (Silverman, p. 265).

Three of the basic theories of the nature and function of emotional responses are included in the current review: the James-Lange theory, so named because it was proposed separately, yet simultaneously, by an American psychologist, William James, and by a Danish physiologist, Carl Lange, has been acclaimed as a classical description of emotional behavior. Both James and Lange postulated that reactions in the human body cause emotional perceptions. The recognition of a distinct bodily response is assumed to trigger mental identification of the emotion, which results in correlated bodily changes. Silverman drew the following analogy to elucidate this

position. ". . . if we saw a bear in the forest, we would tremble and then run away; the trembling and running would make us feel fear . . . [p. 265]."

Through his study of the sympathetic nervous system (SNS) in the late 1920's, W. B. Cannon became skeptical of the James-Lange theoretical posture. Along with his associate, Bard, he traced the path of an emotion from initial stimulation to the consummated feeling state. Their conclusion was that perception of emotional experience and bodily responses occur simultaneously (i.e. rather than one preceding the other). Viewing the thalamic-hypothalamic region of the brain as the center of emotions, they hypothesized that as an impulse from a stimulus passes through the thalamus, it is disjoined. Part of the impulse continues the normal neural route to the cerebral cortex; the other part passes through the hypothalamus. The hypothalmus, in turn, sends a segment of the impulse to the cortex where the emotion is perceived by the individual, and simultaneously sends the remaining part of the impulse to the muscles and external organs where the emotional reactions occur.

Based on his experiments, Cannon emphasized the unified and "almost invarying pattern" or emotional responses to stimulation. He claimed that when an individual experiences either fear, anger, or pain, the same basic physiological responses occur. In more recent years, Selye (1956), Duffy (1962) and Malmo (1959) similarly noted a single pattern of biochemical emotional responses. The latter two researchers, in particular, have described the psychological construct "activation" in terms general enough to account for a wide variety of emotional reactions.

Sternbach, in synthesizing scientific studies, noted that a number of findings challenge the accuracy of the unitary activation principle as the basis for emotions. For example, in a clinical-experimental setting, massive sympathetic nervous system (SNS) responses have been produced through

infusions of the drug epinephrine (as reported in 1960 by Wenger) without accompanying verbal responses or nonverbal evidences of emotional behavior (Lang, et al. p. 630). This apparent dissociation between physiological (SNS) and verbal responses, thus, poses analytical difficulties for ". . . those who would equate the two (i.e. Cannon-Bard) or use the physiological changes to define the emotions (i.e. James-Lange) (p. 630).

Unlike either of the hypotheses advanced by James-Lange or Cannon-Bard, Wenger, Jones and Jones (1956) theorized that, while an emotion may involve skeletal and muscular responses (reactions) or mental activities (perceptions) it does not necessarily do so (p. 629). Wenger was concerned with observable behavioral responses, not with the perception of them, as in the James-Lange position. Nor was he concerned with hypothalamic activity, as in the Cannon-Bard stance. Instead, Wenger was interested in the identification of emotional specificity. He believed, as Alexander had reported in 1950, that ". . . every emotional state has its own physiological syndrome" (Lang, et al., 1972, p. 6). Thus, Wenger attempted to prove the existence of a unique pattern of autonomic responses for each emotion, and to discover the differing emotional situations (stimuli) that elicit each of them.

Both subjective and experimental data have been found to support this third theoretical stand. Such terms as "blush with shame," "turn purple with rage," and "tied in knots" all verify at least semantically, that distinctions are believed to exist in human physiological-behavioral responses to different stimuli.

An interesting clinical report concerning the unique qualities of physiological emotional responses was made by Wolf and Wolff (1947) who observed contradistinctive reactions in the stomach of a patient suffering from chronic fistula.

> When the patient was anxious and wished to flee an emotionally charged situation, there was a decrease in his acid output, of his gastic blood flow, and of his gastric motility. When the patient was angry and resentful and wished to strike back, there was a marked increase in these gastric functions; to the point of engorgement and reddening of the mucosa, frequently seen as gastritis. Here was a clear differentiation of responses: an increase in gastric activity was associated with anger, and an inhibition of gastric functions was associated with fear (Lang, et. al., 1972, p. 631).

Although response patterns have been established as "typical" of pain, others for fear, and still others for anger, no simple identification system has been derived from these observations. The problem is much more complex. It appears that numerous additional correlates must be taken into account. For example, unique individual differences seem to effect emotional patterns. Each person appears to have an individualized response hierarchy (p. 634). Furthermore, the novel properties of the particular stimulus associated with the emotional situation, the methods of analyses, the statistical techniques used to detect emotions--all influence the resulting conceptualizations. The complex nature of the study of feelings was noted by Lang, Rice and Sternbach when they described an emotion as an operational construct that must be conjointly defined by verbal, motor, and covert physiological responses. These behavioral systems associated with emotions (verbal, motor and somatic) appear to be interrelated and partially independent. As a consequence, emotional response correlations tend to be low, both within and between subjects (p. 634).

The Assessment of Emotions

The next major question addressed here is, "By what means can one individual identify the emotions of another?" Three approaches to emotional assessment are delineated. In each case, the methodology is described in general terms and its applicability for classroom utilization is evaluated.

Just as a comprehensive definition of the construct "emotion" must account for verbal, covert physiological, overt behavioral responses, three

corresponding assessment techniques have been employed by researchers and helping professionals to identify emotional reactions. These three include (a) self-report; (b) physiological; and (c) behavioral (motor) measures. In the investigation of a human subject's reactions to a fear-arousing stimulus, for example, an examiner can choose to employ an overt assessment of the individual's behaviors (e.g. withdrawal), a self-report instrument that elicits a personal description of the fear situation, or a physiological measurement of the responder's state of arousal.

Self-report Indices

The late Gordon Allport suggested that, when understandings about the feelings, the beliefs, or the ideas of an individual are desired, the first and most appropriate procedure is to directly ask for this data. But researchers have seldom utilized such a direct approach (McMahon, 1969, p. 55). More frequently, various testing instruments have been employed. Devices such as personal problem questionnaires, adjective checklists, open-ended response forms, forced-choice instruments, projective techniques, and various personality inventories that provide indirect feedback about an individual's feelings or concerns have been used in settings as diverse as the military induction center, the school classroom, and the clinical office. McMahon sharply criticized psychologists for obscuring the processes of understanding and diagnosing with "double talk" and even "triple talk." He further admonished his fellow clinicians for interpreting elaborate psychological tests repeatedly in the same way--searching for hidden symbolism and deep meanings. McMahon made the accusation that psychologists have used jargon and adopted redundant, illogical, and defeating habits in an attempt to solidify the profession and gain public recognition.

Arbuckle (1957) recommended that, from amidst the thousands of self-report instruments available, the following tests (see Table 1) seem particularly suitable for application within the school. As with many other techniques of this self-report mode, the data manifested from these indices provide knowledge for an instructor to use in drawing inferences of hypotheses about subject's emotions. The identification of personal feelings, thus, depends not on the responses themselves, but on the instructor's ability to accurately interpret a student's verbal and/or written reactions.

Questions concerning the legitimacy of teacher utilization of formal self-report instruments (or for that matter, questions of their use by anyone), have been raised for several decades. McMahon (1969) referred to psychological testing as "a smoke screen against logic [p. 54]." Lee Cronbach, Gordon Allport, Hans Eysenck, and Carl Rogers each noted that predicting substantive matters about individuals based on the results of psychological assessments is analogous to establishing odds in a game of roulette (McMahon, p. 56).

Various studies testing the validity and reliability of self-report psychological tests have identified additional weaknesses in these devices. For example, McMahon observed that

> . . . in the personality testing field a validity of .25 is often considered pretty good. Lee Cronbach, however, in Essentials of Psychological Testing, says a validity of .25 is poor. Depending on how a validity study is performed, who the test takers are, what their backgrounds and intelligence are, a validity of .25 can mean a personality test has little better than fifty-fifty accuracy. Reliability, which is closely related to validity, tells how consistent a test is in measuring what it is supposed to measure. The Minnesota Multiphasic Personality Inventory, which is considered the king of self-report tests, has reliability coefficients that begin as low as .50 . . . Dr. Ann Anastasi, a prominent psychologist in the testing field, reports one reliability study (to note the extreme) on the MMPI Paranoia scale that was a minus quantity, -.05 [McMahon, p. 56].

TABLE 1

SELF-REPORT INSTRUMENTS FOR CLASSROOM UTILIZATION

Instrument	Publisher	Target Audience	Instrument Utilization
Mooney Problem	The Psychological Corporation	Jr high, high school, college, adult levels	Helps teachers identify problems in the areas of health and physical development, home and family, morals and religion, sex, economic security, school or occupation, social and recreational activities.
Heston Personality Adjustment Inventory	World Book Company	High school seniors, college freshman	Provides comparisons in such areas as analytical thinking, sociability, emotional stability, confidence, personal relations, and home.
California Test of Personality	California Test Bureau	Forms for K-3, 4-8, 7-10, 9-college, adults	Indicates how the student feels and thinks about himself, his self-reliance his estimate of personal worth, his sense of personal freedom, and his feeling of belonging
Detroit Adjustment Inventory	Public School Publishing Company	Forms for junior and senior high school, grades 3-6, ages 5-8	The senior form is designed to interpret the problems of junior and senior high school pupils. The two other forms are concerned with four types of reactions--habits, social, emotional and ethical.
SRA Youth Inventory	Science Research Associates	Grades 7-12	Helps identify problems in such areas as my school, looking ahead, about myself, getting along with others, my home and family, boy meets girl, health, and "things in general."

TABLE 1--Continued

Instrument	Publisher	Target Audience	Instrument Utilization
SRA Junior	Science Research Associates	Grades 4-8	Form A measures 5 areas--my health, getting along with other people, about myself, about me and my school, and about me and my home. Form S measures 6 major areas--things in general, my health, about myself, getting along with other people, about me and my school, and about me and my home.
Gordon Personal Profile	World Book Company	College men and women	Measures ascendance, emotional stability, sociability, responsibility.
Minnesota Multi-Phasic Personality Inventory	The Psychological Corporation	High school, college	Includes scales on hypochondriasis, depression, hysteria, psychopathic deviate, masculinity-feminity, paranoia, psychastenia, schizophrenia, hypomania, and social introversion.
Thurstone Temperament Schedule	Science Research Associates	High school, college, adults	Measures seven basic temperamental traits--active, vigorous, impulsive, dominant, stable, sociable and reflective.
Mental Health Analysis	California Test Bureau	Forms for grades 4-8, 4-10, 9-college and adult	Mental health assets are measured--close personal relationships, interpersonal skills, social participation, satisfying work and recreation, and adequate outlook and goals.

TABLE 1--Continued

Instrument	Publisher	Target Audience	Instrument Utilization
Johnson Temperment Scale	California Test Bureau	High school, college, adults	Measures 9 individual behavior patterns or tendencies. These are composed-nervous, gay-hearted-depressive, quiet-active, cold-cordial, "hard-boiled"-sympathetic, objective-subjective, submissive-aggressive, appreciative-critical, impulsive-self-mastery.

[Adapted from Arbuckle, Guidance and Counseling in the Classroom, 1957, pp. 299-304].

McMahon concluded that, by developing ever more elaborate tests and interpretation methodologies, psychologists have removed themselves further from the "reality of the patient." This same criticism can be logically extended to the classroom milieu in those situations where teachers indiscriminently utilize self-report measures.

A number of other problems are entailed in teacher utilization of formal and informal self-report instruments. Arbuckle (1957) warned that many students are unaware of their personal problems or feelings. For this reason, they may unconsciously identify extraneous concerns. This situation may be particularly likely ". . . in the sexual area, where many people have learned that they should not feel and think what their physiological and psychological body tells them they are feeling and thinking. One way out is to repress this feeling to the point where one consciously accepts as his problem something that may be quite far afield for his real problem [p. 297]."

Then too, students may intentionally or unintentionally distort or evade real problems. They may try to please the teacher or protect themselves against revealing their true feelings. Or they may believe that expressions of only certain types of feelings are permissable. Arbuckle noted that, "We can generally assume that the answer to the question, 'What is troubling you today?' is at best only going to approximate the real truth, since the more disturbed an individual is, the less likely it is that he knows what is bothering him [p. 297]."

Besides pen-and-paper examinations and questionnaires, informal conversations, whether simultaneous or planned experiences, have been used by teachers to gain greater understanding about pupils. Opportunities to ask students for their views, their thoughts and emotions abound in the course of a school day. Small group discussions and teacher-child interviews are two of many procedures that have been used to stimulate self-report data. Almy (1959) has observed frequent teacher use of protocol materials to elicit student feelings. This technique entails the extraction of student verbal reports through the presentation of pictures, films or stories that depict problem situations. Because such an approach may be less threatening than a more direct questioning one, students may exhibit less reticence in revealing their emotions. The child is protected because, ostensibly, his explanations are not about himself but about a character in the picture, the film, or the story [p. 104].

Still another inherent problem of verbal response indices is that language, cultural aptitude, and/or attitudinal differences may effect subject responses. For students who have learned to "intellectualize" their expressions, any activity requiring them to convey emotional feelings may be perceived as difficult, or threatening, or perhaps even impossible.

The interpretation of self-report data poses certain other limitations for the teacher. Information gained from self-reports may provide clues, but seldomly definitive answers. To make accurate analyses, considerable time and instructor expertise are required. In addition, to understand what a child was perceiving or feeling when he selected a particular response, the teacher needs to be able to integrate this material with understandings about the student's background and experiences, his perceptual readiness, and his willingness to answer the items. Finally, the presence of an acceptant relationship between the instructor and learner, one that enables the student to confidently explore the meaning of his experiences with the teacher without feeling humiliated, stupid, bad or socially unacceptable, appears to affect the successful attainment of self-report responses. Almy provided a summary of this last point.

> What the teacher can learn from asking children about themselves depends very much on the kind of relationship he has with them. If the children tend to feel they can trust the teacher, if most of what he does makes sense to them, they are likely to participate freely and cooperatively in reporting what he asks from them. If the teacher's questions continually poke and pry, the children will develop appropriate defenses against him. What they say or write in response to his questions will then have little significance. The sensitive, intuitive teacher does not ask children to reveal to him aspects of themselves which they may feel are inappropriate for him to know. He incorporates self-reporting into the ongoing life of the classroom in such a way that the children regard it as a natural and expected part of the school program. Probably the major part of it goes on quite informally [p. 95].

Physiological Assessments

The growth of experimental techniques designed to study quantifiable aspects of organismic responses has been prodigious in recent years. Mechanisms capable of assessing perspiration, pupil-diameter, skin conductance, cardiac activity, alpha and beta waves, finger pressure and numerous other physiological changes in human subjects have been developed and refined. Often these

new approaches have depended on a confluence of ideas and methodologies from a wide range of systems--electronical, electro-chemical, auditory, psychological, and computer-based, to cite but a few. In prefacing his text, Methods in Psychophysiology, Clinton Brown (1967) referred to the dynamic characteristics of this emerging field.

> The improved procedures and apparatus of modern behavioral science, the speedier methods of data analysis, and the increased emphasis placed upon publication have produced a literature explosion of no mean proportions. The preliminary library research on a planned investigation requires not only the search of half a hundred journals, but the more tedious process of locating critical reports often buried in obscure, foreign language publications. Experts in other fields must be contacted to clear up obscurities or interpret strange technical terms.
>
> The undertaking of contemporary psychophysiological research requires therefore that one must possess more than a mere smattering of information in many adjacent fields, that a small army of technicians, engineers, and scientific consultants must lend their skill and knowledge to their preparation, planning, and execution [p. x].

Data on physiological alterations associated with dreaming, visual stimulation, problem solving, and many analogous conditions have been obtained. But the study of emotions--stress, depression, elation--has been a particularly dominant theme of psychophysiological investigation. Lang, et al. (1971) explained that the goals of this type of research have been to define ". . . relationships between the psychological and physiological domains, or more objectively stated, to study the physiological consequences of stimulus input and to explore possible interdependencies between response events (verbal, overt motor, and physiological) that will help to explain behavior [p. 76]." In many of these research attempts, the investigators have aimed to gather quantifiable information about the distinct physical and introspective dimensions of emotions. That is, the physical-organismic components of an emotional event have been isolated from either the verbal or behavioral manifestations.

In his article, "Rattlesnakes, French Fries, and Pupillometric Oversell," Berkeley Rice critically noted that experimenters have naively

searched for the "sure-fire measure of emotion" in a manner reminiscent of prior quests for the Holy Grail (Rice, 1974, p. 55). Supposedly, whoever identified "the" physiological response that could infallibly assess a person's "true" feelings would win fame and fortune. Madison Avenue would reward the discoverer handsomely, for the technique would provide infinite political and marketing spin-offs. Rice cited the "black magic" years of subliminal perception research as one example of overly-simplistic conceptualizations and unethical applications of physiological research. Vance Packard's expose on the "Hidden Persuaders" was particularly instrumental in checking the use of subliminal practices for manipulative purposes before researchers knew whether or not the techniques would work. Later, as a matter of point, studies assessing the relationships between subliminal activities and consumer variables demonstrated the ineffectiveness of these procedures (p. 59).

But rumors of new attempts to find "the" technique have continued to emerge. To cite another example, Janisse and Peavler (1974) synthesized literature that has claimed that pupillary dilation can reveal an individual's true feelings. Presumably, as St. Jerome theorized many years earlier, "The face is the mirror of the mind, and eyes without speaking (are able to) confess the secrets of the heart [p. 60]." In the 1960's, Ekhart Hess, at the University of Chicago, claimed that pupils (of the eye) inevitably enlarge when a subject experiences positive feelings, and contract when he experiences negative feelings. Hess further reported that the intensities of subject feelings were correlated with degrees of pupil dilation/contraction. Following these findings of Hess, a wide assortment of related studies were conducted by researchers at other institutions. As described by Rice, pupillary response has been used to

> . . . study eye disorders, political and racial attitudes, the effects of drugs, reactions of teachers to pictures of physically handicapped children, and reactions of patients at alcoholic treatment clinics to pictures of whiskey bottles. Bell Laboratories, in New Jersey, has used pupillometrics to measure the effect of varying work loads on telephone operators. Airlines have used it to measure the effect of stress on prospective pilots. Some researchers feel that if the pupillometer can measure stress accurately enough, it might take the place of the polygraph, or lie detector. Rumor has it that the Central Intelligence Agency has already experimented with the technique to test stress under interrogation.
>
> Although researchers in the personnel field have done relatively little with pupillary response, there are some who feel that it could become an integral part of every job interview, just like intelligence testing. Who knows, someday every job applicant may have to sit and watch Playmates of the Month while some personnel assistant watches his pupils [Rice, p. 57].

Although substantive evidence has been accumulated in support of the relationship between a widening pupil and emotional arousal, the absolute identification of specific emotions has not been accomplished. Further, this inability appears to hold true for the entire range of psychophysiological assessment techniques. That is, physical signs that evidence presence or absence, or intensities of internal and external reactions have been discovered, but the measurement of particular emotions--anger, hate, grief, love, joy, reverence--remains an illusive, if not illusionary activity. Individual response idiosyncracies have posed compounding difficulties for assessment endeavors of this type in that physiological forms of expression do not appear to be either stable or universal. As described previously (see "Definition of Emotions"), differential responses to emotional stimuli have been observed both subjectively and objectively, yet attempts to precisely measure these discreet variables have been unsuccessful.

Despite these limitations, physiological techniques have been acclaimed as the most scientific, the most objective and indeed, the "only" accurate approach to emotional assessment. The popularity of this belief was observed by the current investigator while creating the Teacher Affective Sensitivity

Scale. Several experimenters in fields of psychology, sociology and communication advised that only electronical and/or biochemical instruments could positively identify the feelings experienced by the students on the videotape.

Although psychophysiological techniques seem intriguing to this writer and offer immense potential in the area of emotional assessment, these methods were not utilized during scale development procedures. The decision not to employ them was based on observational and inferential grounds. Neither through a review of related research nor through personal experiences has this investigator found a single example of the practical use of physiological techniques within the classroom setting. Psychological approaches may be used in the future, but this future will probably be a distant one. The school is not analogous to the experimental laboratory. Various processes and procedures appropriate for one may be quite inappropriate, unfeasible, or even deleterious for the other. It appears predictable that substantive changes in the devices themselves, in the costs of their application and in teacher-student-public receptivity to them will need to be made prior to extensive incorporation of physiological measurement instruments in the schools.

Overt Behavior Assessments

Direct observation of behavioral phenomena has probably been the approach employed most commonly in the measurement of emotions. The frequency with which assessment practices of this type have been attempted does not attest to their inherent superiority over physiological or self-report instruments. Rather, this popularity appears to be a function of their accessibility. At minimum, paper-and-pencil accouterments, and increasingly, expensive and elaborate technical devices are required for the successful implimentation of self-report or covert physiological indices. But simpler preparation activities and less refined materials are demanded for the application of

observation approaches. The only pronounced requirement for the latter is that one individual pay attention to and carefully note the emotional reactions of another.

Through verbal and nonverbal expressions, individuals are continuously communicating their feelings. Human beings learn early to recognize familiar cues in the emotional reactions of others. They also learn "appropriate" (i.e. socially acceptable) ways to respond to the feeling messages of others. They become accustomed to interpreting sadness from a frown or a tear; anxiety from the biting of nails or the fidgeting of fingers. Overt behavioral assessments, thus, can be accomplished in almost any setting, with minimal contrivances or expense.

Opportunities to note behavioral phenomena are plentiful--especially in the classroom. Yet, capable utilization of this methodology does not occur automatically. It seems particularly important, therefore, for the teacher to recognize the difficulties entailed in effective utilization of observations and be cognizant of a number of other limitations associated with measurement techniques of this type. These issues will now be discussed, along with a more general description of behavioral indices that can aid in the identification of student emotions.

Group assessment strategies.--The activities and verbalizations of students inside of the school offer seemingly unlimited opportunities for assessment. The facial expressions of class members, their gestures, postures, movements around the room and in their seats, their comments and moments of silence--all their responses provide some clues as to what they are thinking and feeling. Even when an entire class is engaged in a single activity, such as reading an assignment silently, writing a composition, or constructing a mechanical drawing, different pupils tend to respond in diverse ways. Even

while students perform supposedly uniform tasks, thus, a multitude of behaviors are exhibited for the teacher to notice.

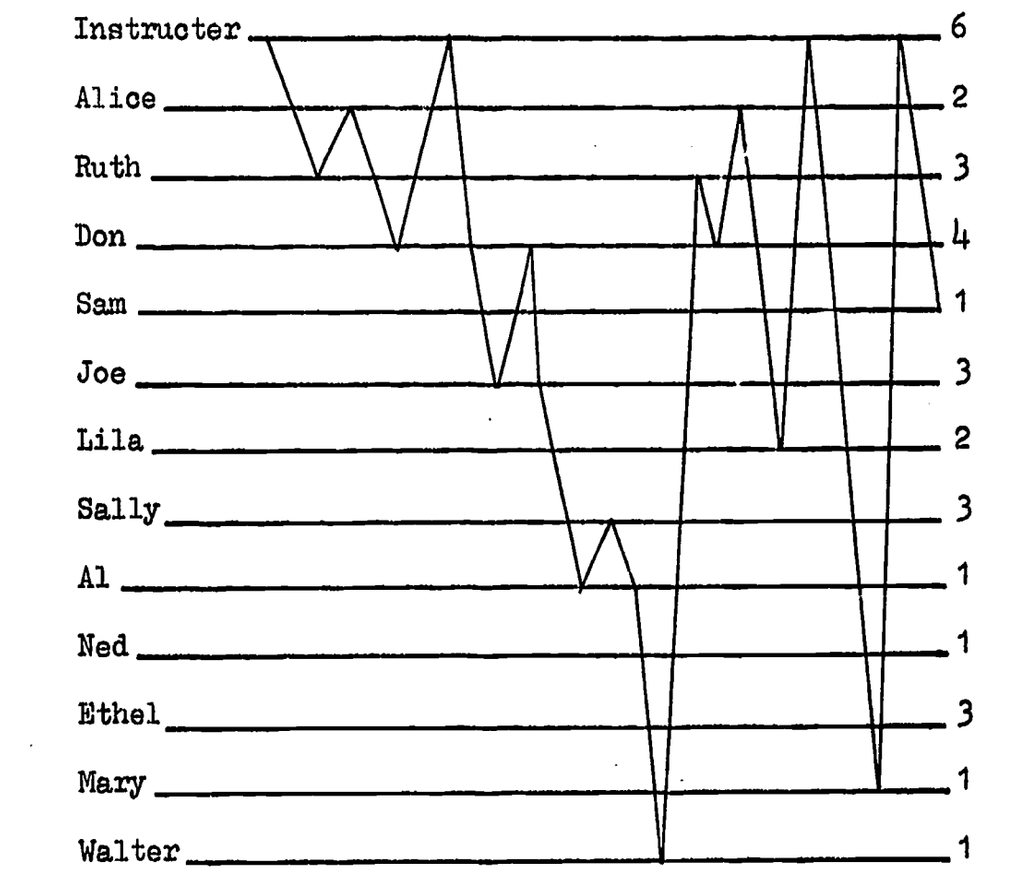
Given these circumstances, how can an instructor responsible for twenty or thirty pupils possibly attend to the behaviors of all? As advanced by Almy (1959), the "teacher is no machine. He cannot take in everything that happens to every child during every moment of the day [p. 26]." Almy suggested a number of guidelines for the teacher who wants to observe individuals, but who experiences frustrations associated with class size and student complexities. She speculated that it may be more feasible for the teacher to focus on selected aspects of a child's development and learning than on various other aspects. Or, at times, the teacher may legitimately observe certain students more carefully than others. The timing of an observation, the types of behaviors noticed, the individual students observed--these variables depend partly on the aims and concerns of the particular teacher. The kind of behavioral evidence attained, in other words, may depend on the specific classroom concerns and problems for which solutions are sought (pp. 25-28).

Earlier the argument was advanced that a teacher who hopes to work effectively with students needs to know more than the amount and types of knowledge they have acquired. Mager (1968), Block (1971), Carroll (1971), Bloom (1971) have studied and reported verifiable differences in the rates and styles with which pupils assimilate cognitive and attitudinal learnings. Student's internalization of content, their opinions, their modes of acquisition, their levels of perseverance, their readiness for new educational experiences, their feelings and concerns--all of these individualistic characteristics warrant appraisal activities in the classroom. In describing observation as the "basic way" of understanding the subtle differences in students, Almy noted that,

> If education consisted of nothing more than the acquisition of facts to be reproduced on demand, and if all children learned in the same ways, the kinds of observation we are describing would be unnecessary. Teachers would present the material to be learned in the same way to all children and would evaluate learning by the simple procedure of checking responses right or wrong. But merely to "know" certain facts is insufficient. When are they relevant and how does one apply them? Even young children are expected to begin to "think for themselves." Further, education is concerned not merely with knowledge but with attitudes as well. These are manifest in what the child says or writes, but more importantly in what he does.
>
> . . . . . .
>
> Differences extend to many areas. One youngster can deal with almost any idea verbally. Another is more motor-minded; he learns little unless he can be active. Some children enter school with an appropriate thirst for knowledge. They lap up whatever new information and new ideas come their way. They seem to learn almost in spite of the teacher. Other children have had early experiences which set up blocks to certain kinds of learning or to learning under certain conditions [pp. 26-27].

Because teachers often work with students in groups, many behavioral assessments have consisted of group observations. Attempts to identify member participation levels, for example, represents a technique of this nature. Sociometric matrices, anecdotal recordings, rating scales, check lists, and informal summaries have provided useful overview material concerning interaction patterns. They have often provided idiosyncratic information about specific participants as well. Figure 2, Group Participation Record, demonstrates how a rather elementary tabulation procedure can aid in the collection of group participation data. As depicted here, the tallied information can be collated by the teacher into chart form for interpretive purposes.

The system of interaction analysis developed by Amidon and Flanders (see "The Case for Student Emotional Expression in the Classroom" for an earlier description of this framework), exemplifies another classroom feedback mechanism. As noted by Amidon and Flanders, at the conclusion of each three-second interval, an observer utilizing the "social-interaction model"



Number participating: 12 Number in class: 32

Fig. 2.--Group Participation Record (Adapted from Almy, Ways of Studying Children: A Manual for Teachers, 1959, p. 30).

selects from 10 categories the one that seems to most accurately represent the communication behavior of that preceding period. Although researchers have frequently utilized this schema to analyze teacher behaviors, the methodology can also be appropriately applied for student behavioral assessment. Categories 8 and 9 specifically refer to the interaction of pupils. These two classifications were defined as:

8. Student talk-response: talk by students in response to teacher. Teacher initiates the contact or solicits student statement.

9. Student talk-initiation: talk by students which they initiate. If "calling on" student is only to indicate who may talk next, observer must decide whether student wanted to talk. If he did, use this category [Amidon and Flanders, 1963, p. 12].

One of the earliest group behavior assessment models was developed by Robert F. Bales at the National Training Laboratory in Group Development at Bethel, Maine in 1946 (Lake, Miles & Earle, 1973, p. 110). Called the "Interaction Process Analysis" the instrument allows an observer to classify the interaction of a small group into twelve "mutually inclusive and jointly exhaustive categories (p. 109)." These divisions are illustrated in Figure 3.

Bales (1950) recommended the following scoring procedure when utilizing his scale: The group should be observed through a one-way window by two scorers; a third person should record the meeting in anecdotal form and also make a tape recording of the interaction. Each speech (clauses in sentences) and all gestures should be scored. The scoring itself can be accomplished by numbering the 12 processes, and assigning numbers to students as they participate.

Individual assessment strategies.--In addition to observing the cognitive and emotional responses of class members as they transact in aggregates, a teacher may also seek clues which provide understandings about the feelings of particular individuals. Many difficulties seem especially

Interaction Categories	Students						
	Alice	Ann	Bob	Carl	Doug	Fay	Heather
1. Shows solidarity--seems friendly							
2. Shows tension release--Dramatizes							
3. Agrees							
4. Gives suggestions							
5. Gives opinion							
6. Gives information							
7. Asks for information							
8. Asks for opinion							
9. Asks for suggestions							
10. Disagrees							
11. Shows tension							
12. Shows antagonism--seems unfriendly							

Fig. 3.--Bale's Interaction Evaluation Instrument. (Adapted from: Robert F. Bales, Interaction Process Analysis, 1950).

pronounced when identifying, isolating and studying the emotional expressions of a single person. One of these obstacles is that a student's outward signs of feeling may not necessarily reveal the emotions felt inwardly. Silverman (1971) reported that some individuals recurrently conceal their emotions; they seem unable to reveal them in an open fashion. Conversely, other individuals seem to continuously "overrespond," others choose to outwardly evince feelings that they do not actually experience at all (p. 244).

Students, like adults, learn that certain forms of emotional behavior are considered socially undesirable. They may suppress many reactions, even while experiencing them mentally and physiologically, so as to conform to societal expectations. At times, the emotions felt may diametrically conflict with the emotions expressed. Further, emotional expression may even become so shielded that the individual is not even personally aware of these feelings. As the following poem portrays, a student may find it much safer to deny "real" feelings than to share them with others, or indeed, even with himself.

PLEASE HEAR WHAT I'M NOT SAYING

Don't be fooled by me.
Don't be fooled by the face I wear.
For I wear a mask, I wear a thousand masks,
  masks that I'm afraid to take off,
  and none of them are me.
Pretending is an art that's second nature with me,
  but don't be fooled, for God's sake don't be fooled.
I give you the impression that I'm secure,
  that all is sunny and unruffled with me,
  within as well as without,
  that confidence is my name and coolness is my game,
  that the water's calm and I'm in command,
  and that I need no one
But don't believe me
Please.
My surface may seem smooth, but my surface is my mask,
  my ever-varying and ever-concealing mask.
Beneath lies no smugness, no complacence.
Beneath dwells the real me in confusion, in fear, in aloneness.
But I hide this.

I don't want anybody to know it.
I panic at the thought of my weakness and fear being exposed.
That's why I frantically create a mask to hide behind,
  a nonchalant, sophisticated facade, to help me pretend,
  to shield me from the glance that knows.
But such a glance is precisely my salvation. My only salvation.
And I know it.
That is if it's followed by acceptance, if it's followed by love.
It's the only thing that can liberate me, from myself,
  from my own self-built prison walls,
  from the barriers that I so painstakingly erect.
It's the only thing that will assure me of what I can't assure myself,
  that I'm really worth something.
But I don't tell you this, I don't dare. I'm afraid to.
I'm afraid your glance will not be followed by acceptance and love.
I'm afraid you'll think less of me, that you'll laugh,
  and your laugh would kill me.
I'm afraid that deep-down I'm nothing, that I'm just no good,
  and that you will see this and reject me.
So I play my game, my desperate pretending game,
  with a facade of assurance without, and a trembling child within.
And so begins the parade of masks,
  the glittering but empty parade of masks.
And my life becomes a front.
I idly chatter to you in the suave tones of surface talk.
I tell you everything that's really nothing,
  and nothing of what's everything, of what's crying within me.
So when I'm going through my routine do not be fooled by what
  I'm saying.
Please listen carefully and try to hear what I'm <u>not</u> saying,
What I'd like to be able to say, what for survival I need to say,
  but what I can't say.
I dislike hiding. Honestly.
I dislike the superficial game I'm playing, the superficial, phoney game.
I'd really like to be genuine and spontaneous, and me,
  but you've got to help me
You alone can break down the wall behind which I tremble,
  you alone can remove my mask,
  you alone can release me from my shadow-world of panic and uncertainty,
  from my lonely prison.
So do not pass me by. Please do not pass me by.
It will not be easy for you.
A long conviction of worthlessness builds strong walls.
The nearer you approach to me, the blinder I may strike back.
It's irrational, but despite what the books say about man, I am irrational.
I fight against the very thing that I cry out for. But I am told that
  love is stronger than strong walls, and in this lies my hope. My only
  hope
Please try to beat down those walls with firm hands, but with gentle
  hands--for a child is very sensitive.
Who am I, you may wonder? I am someone you know very well.
For I am every man you meet and I am every woman you meet.

Anonymous[1]

---

[1]Source: R. Lippitt, Institute of Social Research, University of Michigan, Ann Arbor, Michigan.

Through his analyses of "the thought processes of students in discussion," Bloom (1954) generated scientific data which seem to substantiate the points made in this poem He noted that relevant student behavior may occur at both a covert and overt level and that one form cannot be judged from the other. After explaining that both behaviors (i.e. overt and covert) appear directly related to learner outcomes, he advised psychological researchers to recognize these two independent levels of participation. Bloom stated,

> There can be no true behavioral science which takes into consideration only a single level of individual behavior. As a research problem in learning, we must find ways of determining and describing the variables of learning at both levels of participation, and perhaps the unconscious level of behavior must also be more fully considered. Finally, in setting up learning situations, we cannot confine our attention to overt behavior or participation only [pp. 30-31].

In addition to finding that students participate in learning situations both overtly and covertly, and that student achievement is related to participation levels in class, Bloom derived another significant generalization from his data. This was that, "instructors who are relatively good judges of overt behavior are unable to make judgments about covert behavior [p. 30]." Based on these conclusions, it appears evident that teachers need to approach the analysis of individual emotions with care. But perhaps more importantly, teachers need assistance in developing the skills to accomplish this aim.

A second difficulty associated with assessing student emotional behavior is that many feeling messages are communicated nonverbally. Vast domains of meaning are in the province of nonverbal language. Verbal language tends to deal only with surfaces. Reality seems to begin where verbal language ends.

The interactions between teachers and pupils and between pupils themselves are rich with nonverbal feedback. In his discussion of nonverbal communication, Mark Knapp (1972) reminded readers of the vast array of cues

that can be found in most classrooms. Some of the nonverbal behaviors recorded by Knapp included the frantic wave of the student who is sure that he has the answer, the avoidance behavior of the pupil who doesn't know the answer and thus avoids eye contact with the teacher, the discrepancies between teacher and student clothing and hair styles and the resulting impact on teacher-student interaction, seating and spacial arrangements in the classroom, and the wide range of creative techniques utilized by students to simulate studying or listening while they are actually sleeping.

In tabulating "nonverbal observables," Robert Koch (1971) noted thirty-five types of behaviors that were evidenced by students. These included

1. Gestures
2. Hand movements
3. Foot movements
4. Voice variations
5. Silences
6. Facial expressions
7. Eye-language
8. Head movements
9. Nose movements
10. Lip movements
11. Postures
12. Gaits
13. Body shape and tonus
14. Skin: pallor, flushing, sweating
15. Tics
16. Territoriality shown
17. Proximity used
18. Handwriting
19. Art, drawing, doodling
20. Laughter
21. Breathing
22. Tactility
23. Prearranged signals
24. Clothes, hair, jewelry
25. Occupational stigmata
26. Use of time
27. Lack of essentials
28. Lack of expected reaction
29. Status moves or acknowledgment
30. Room appearance and arrangement
31. Modality for presenting lesson: visual, auditory, kinesthetic
32. Rituals and stereotyped behavior
33. Scratching, self-stroking
34. Toying with objects
35. Hesitations

[p. 289]

The preceding evidence concerning the extent of nonverbal behaviors within the classroom would seem to bear important implications for the teacher attempting to understand student emotions. Unfortunately, as Hahn and Maclean (1955) noticed, teachers frequently "talk too much." They tend to ignore many of the highly significant elements of nonverbal expressions (both their own and their students') which are as basic to communication as words.

A third limitation of behavioral indices of emotion is that an observer's own feelings and emotions affect his perceptions. In discussing the relationship between perception and behavior in the 1962 yearbook of the Association for Supervision and Curriculum Development entitled Perceiving, Behaving, Becoming, Earl Kelley posited that:

> One of the most revealing facts about perception is that it is selective. We do not see everything in our surroundings. There are thousands of coincidences in the situation in which we find ourselves at any point of time. To perceive them all would cause pandemonium. We therefore choose that which the self feeds upon.
>
> The additional element which appears to determine perceptive intake is purpose. There is ample evidence now to show that all living tissue is purposive, and, of course, in man this purpose is partly, but only partly, on the conscious level. In perception it operates automatically most of the time. And so, just as we do not eat everything, our psychological selves are particular as to what they feed on. What they take in has to suit their purposes, and fit onto their past experiences [Combs, 1962, p. 65].

It seems valuable, thus, for teachers to appraise their own observations--to pay attention to what and how they observe and to actually record their own observation styles. In addition to gaining awareness of their particular observation practices, it may also be useful for educators to identify their own feelings and emotions as they react to student expressions. Almy (1959) noted that teachers often tend to ignore these integral aspects of observation. "Perhaps we have been told that observation should be 'objective" and so we rule out what we know to be subjective. In point of fact, however, our emotional responses color what we see and hear, and we cannot really eliminate their effect [p. 47]."

It is similarly important for teachers to become sensitive to the types of inferences that they deduce from their observations. Teachers may find it difficult to make a cognitive distinction between student behaviors and the emotional responses and inferences that they make from them. Often, when the teacher works with a pupil, the behaviors manifested by that student

and the teacher's attempts to attach interpretations of meaning to them seem as simultaneous occurences. But in attempting to note specific student emotional reactions the instructor needs to discriminate the actual behaviors from the subsequent affective and intellectual elements which jointly formulate his resulting interpretations. The point is not that inferences are inferior to observational activities. The two, rather, are separate processes. Indeed, it would be impossible to identify the emotional experiences of another without drawing inferences from exhibited behaviors

Because perceptions cannot be gleaned directly but must be inferred from behaviors observed, Soper and Combs (1957) argued that teachers and educational researchers need to learn more than how to conduct supposedly objective observations of students. The mere categorizing of behavior (objective approach) may be insufficient, particularly when attempting to uncover affective aspects of learner behavior. As they wrote:

> There is no substitute for the trained, sensitive, experienced observer and interpreter of the behavior, if we are to get back of the act itself and see the meanings it may have to the individual. Nor do we need to apologize for this "subjective" element in the evaluation. Science and knowledge have progressed mainly by the process of applying inferences drawn from observed phenomena to data which were not susceptible to direct observation [p. 315].

CHAPTER 4

EMPATHY AND AFFECTIVE SENSITIVITY: DERIVATIONS, MEANINGS, ASSESSMENT METHODOLOGIES, AND TRAINING STRATEGIES

Definition of Empathy

The Ambiguous Nature of the Concept

Attempts to define and operationalize the term "empathy" have been vast in number and varied in scope Lesh (1972) stated that the maze of approaches that have been used to explain empathy testify that "it is an important concept in human interaction, and as such, has been the subject of extensive research; and . . . rather than being a simple single component, accurate empathy is a complex process of interaction between human beings [p. 42]."

The construct "empathy" has been studied and analyzed in numerous fields. Gompertz (1960) noted that Plato, Aristotle, St. John, Plotinus, St. Augustine, and St. Thomas Aquinas gave references to psychological abstractions that seem related to homologous to empathy. Strunk's (1957) review revealed that interest in the theory and research of this term has permeated into psychology, sociology, industry, education, and counseling. Empathy has been used as an explanatory concept in theories of art appreciation, schizophrenia, leadership and salesmanship styles, clinical and counseling relationships, and social interaction--including teacher-learner communication systems. In describing schizophrenia, Hoskins (1946) speculated that inadequate empathy may be the primary defect in schizophrenia--"a defect from

which the remainder of the symptomotology stems. . . ." Speaking of the nature of perceptivity, Watson (1938) proposed that to have "correct insight" an individual must be able ". . . to share the feeling of him you are observing, to attach the significance appropriate to his part in events." Kerr and Speroff (1954) spoke of empathy as a "unique talent, conspicuous among natural leaders, successful sales managers and outstanding counselors [p. 269]." Cottrell (1942) in his sociological analysis of situational fields, held that empathy is one of the most integral mechanisms of all social interaction. Much of the literature in the disciplines of psychology and education to date has indicated that the effectiveness of the clinician, the counselor, the teacher--indeed, any helping professional--is directly related to empathic ability (Stollack, 1966; Rogers, 1958-69; Van Buren, 1963; Truax, 1961, 1966a & b; Truax & Carkhuff, 1967; Kagan, et al., 1967; Combs, 1969; and Milam, 1972). In an interactive helping relationship, the helpee seeks to be understood. A primary way of furnishing this understanding is through the helper's facilitative use of empathy.

Despite the proliferation of interest and investigation surrounding empathy, there does not yet exist any one commonly accepted definition of the term. To complicate further this situation, many closely related terms have been operationally defined so as to seem synonymous with it Gage and Cronbach (1955) suggested that "social sensitivity," "accuracy of social perception," "insight," and "diagnostic competence," have been used in studies of interpersonal perception The term "sympathy" could also be added to this list--although clearer distinctions appear to have been wrought between these two concepts. For instance, in their comprehensive dictionary, English and English (1958) distinguished empathy and sympathy as seperate personality characteristics. They defined empathy as:

> Apprehension of the state of mind of another person without feeling (as in sympathy) what the other feels. While the empathic process is primarily intellectual, emotion is not precluded, but it is not the same emotion as that of the person with whom one empathizes. The parent may empathize with the child's puny rage, feeling pity or amusement, whereas in sympathy he would feel rage along with the child. The attitude in empathy is one of acceptance and understanding of an implicity "I see how you feel."

Kagan noted that Allport's 1937 statement that "The theory of empathy is a peculiar blend, and must in fact be regarded both as a theory of inference and as a theory of intuition, depending somewhat on the coloring given it by different authors" applied equally well in 1967. It appears that empathy remains in a similarly ambiguous condition yet today--a conglomeration of interpretations and shades of meaning (Kagan, et al., 1967, p. 463).

A Chronology of the Definition of Empathy

Utilizing a historical perspective, Buchheimer (1963) traced the origins of "empathy" to the German word "Einfuhlung" which had been coined by Lipps in the early part of the twentieth century. In 1903, Lipps defined empathy as an individual's ability "to feel himself into the object which he is contemplating." Buchheimer translated the single term "Einfuhlung" into the English equivalent "feeling together with;" Katz (1962) rendered the parallel version--"feeling of oneness."

In a 1934 edition of The Dictionary of Psychology, Warren included two definitions of empathy. The first was analogous to Lipp's "Einfuhlung." In the second, empathy was depicted as "a mental state in which one identifies or feels himself in the state of mind as another person or group" [emphasis by this researcher]. This alternative definition incorporated a specific reference to human beings in place of inanimate objects, a modification that reflected the influence of psychoanalytic thinking. Kerr and Speroff (1954) criticized the initial and modified definitions, however, for implying that

"empathic behavior is almost a reverie or preoccupation of the object of empathy [p. 269]." Buchheimer concurred with Kerr and Speroff by noting that both the Lipps formulation and the theoretical-operational position of the Canadian psychoanalyst, David Steward (who viewed empathy as "mutual transference") shared a common emphasis on the "abstraction of the other or the referent by the empathic person [Buchheimer, p. 63]."

Dymond, Hughes and Raabe (1952) expanded these earlier conceptualization schemes. They found through their studies of empathic responses in subjects that empathy can be possessed differentially by different people. Dymond (1948) utilized aspects of "role theory" in delineating empathy as the "imaginative transposing of oneself in the thinking, feeling and acting of another and so structuring the world as he does." Allport (1954) reported that the emphasis on "role playing," the activity of putting yourself in the other's place, was featured in the definitions proposed by Warren in 1934, Woodson in 1954, and Johnson in 1957.

Speroff (1953) argued, conversely, that concepts based on role playing ability had tested only diagnostic understanding, rather than empathy. He embellished these previous definitions to include the component of "role reversal." Speroff viewed empathy, thus, as a "convergent" interactive process (Buchheimer, p. 64). Likewise, Murray (1938) had previously envisioned empathy as a type of interactive procedure which he had termed "recipathy."

The ability to predict the future responses of another has also been described as the basic constituent of empathy. Wolf and Murray (1937) found that individuals predict most accurately about people similar to themselves. This lead subsequent investigators to study the relationships between "predictor" and "predictee" similarities. Bender and Hastorf (1950), proposed that a "refined empathy score" provided a better measure of a subject's empathic

ability. They explained that this index could be attained by subtracting a subject's projection score--obtained by correlating the relationship between his self-ratings and the ratings he attributed (projected) to others--from the subject's total predictive accuracy. In a similar vein, Halpern (1955) posed two prime questions, ". . . which is the truer measure of empathy? Is it the ability to feel [i.e. predict] most extensively into the largest number of people or the ability to feel into those characteristics of others that differ from one's own?" By studying the ability of nurses to predict each others' future responses, Halpern found that "the phenomenological experiences of the good empathizer [i.e. accurate predictor] could not be drastically deviant from those of his reference group . . . Secondly, the wider his [the predictor's] phenomenological experience, in terms of its breadth, fullness and richness, the more people [he] will be able to encompass through similarity, in his empathic scope [p. 452]."

Quirk (1972) observed that many investigators have envisioned empathy as a multi-dimensional construct. According to Buchheimer (1963), these dimensions can be thought of as partly affective and partly cognitive. Lesh (1972) identified six separate components of empathy. These were:

1. The perception of two levels of feeling in the client, those that are stated but are present--preconscious;
2. the identification of the feelings of the client;
3. the differentiation between the client's feelings and the counselor's feelings;
4. the objectividation or separation of the client's feelings;
5. the interpretation of the client's feelings;
6. the articulation of the client's feelings, both stated and preconscious [p. 42].

Carkhuff (1971a) offered the following definition in which two integral features of empathy were illuminated.

> Understanding or empathy is the ability to see the world through the other person's eyes. In helping it is as if the helper "crawls" inside of the helpee's skin and feels the things the helpee feels and

> experiences the world the way the helpee experiences it. The helper not only sees things the way the helpee sees things, but lets the helpee know what he sees, that is, communicates to the helpee what he sees [p. 20].

Descriptions that have been proferred by Rogers (1964, 1967) and Truax (1967) appear to coincide with the Carkhuff definition. Rogers defined empathy as a two-fold process consisting of (a) the counselor's capacity to sense or feel the client's feelings, and (b) the counselor's ability to communicate this sensitivity to the client at a level that is attuned to the client's current emotional state (Lesh, 1972, p. 20).

The Meaning of Affective Sensitivity

As the preceding chronology has demonstrated, the term empathy does not denote a single, or even a number of, universally accepted meanings. However, a set of universals seem to appear either implicitly or explicitly in almost all definitions. In particular, almost all of them suggest that one of the generic aspects of empathy consists of an individual's ability to identify the affective state of another. This somewhat narrower category within the more inclusive construct of empathy has been termed "affective sensitivity" (Kagan, et al., 1967, p. 463). More specifically, Kagan, Krathwohl, and Farquar (1965) defined affective sensitivity as "the ability to detect and describe the immediate affective state of another or in terms of communication theory, the ability to receive and decode affective communication." The current study focuses on the measurement of "affective sensitivity," a trait that appears to be a principal ingredient of empathy.

The Measurement of Empathy and Affective Sensitivity

In 1954 Kerr and Speroff expressed discernment that, despite the profusion of mental measurement activities conducted by psychologists during the first half of the twentieth century, the appraisal of empathic ability

had been almost totally ignored. Nearly a decade later, Buchheimer (1963) observed that the number of attempts to measure empathy had still not been substantial. Empathy, it appears, has been a prevalent subject of discussion and debate in many fields of endeavor, but quantification efforts and assessments of this skill have remained meager.

Nevertheless, though sparse in contrast to the extensive instrumentations and analyses devoted to such other psychological variables as intelligence, at least a few reported studies have been conducted to develop empathy and/or affective sensitivity measurement indices. For purposes of discussion, these devices are classified in the following review of literature as (a) role-taking; (b) inter-personal prediction; or (c) situational techniques.

Role-Taking Techniques

As described in the preceding section, one of the more common definitions of empathy has accentuated the role-playing capabilities of the empathizer. An early attempt to assess an individual's ability to transpose himself into the thinking, feeling, and acting of another was conducted by Spencer in 1939. In Fulcra of Conflict, he reported divergencies between subject estimations of their own ideals and their estimates of the ideals of their nearest associates, and the personal adjustment patterns that individuals tended to adopt in reaction to these differences (Kerr & Speroff, 1954, p. 272).

Dymond (1949) created a standardized test that also approached the measurement of empathy from a role-theory conceptualization. According to Buchheimer (1963), Dymond's scale beoame a prototype for further studies of

this mode. The test consisted of four sections, each containing an identical list of six personality traits. These were:

1. self-confidence
2. superior--inferior
3. selfish--unselfish
4. friendly--unfriendly
5. leader--follower
6. sense of humor [Dymond, p. 128]

Dymond asked each respondent to examine each of these six characteristics and then to rate himself (via a five-point scale); rate another individual; rate the other individual as he perceived the other person would rate himself; and rate himself as he perceived the other would rate him. The basic format of this procedure entailed

A rating A
B rating B
A rating B
B rating A
A rating B as he thought B would rate himself
B rating A as he thought A would rate himself
A rating A as he thought B would have rated him
B rating B as he thought A would have rated him

Both subjects A and B, therefore, were tested in terms of their empathic understanding of the other.

Buchheimer (1963) criticized the Dymond role-theory methodology for not satisfying the conditions of "mutual interaction" that he claimed were pertinent to the study of empathy. Buchheimer further observed that the role-theory model appeared to focus on the phenomenon of sympathy rather than empathy, and that the possibility existed that the test measured other psychological variables such as projection or attritution rather than empathy. Lindgren and Robinson (1953) also evaluated the Dymond technique and questioned both the reliability and validity of the scale.

Speroff (1953) constructed an instrument that incorporated a role-reversal definition of empathic behavior. Figure 4 demonstrates the Speroff

model in which X elicited a response from Y by expressing Y's point of view. Y consented or expressed satisfaction with the point of view expressed by X. Y in turn expressed X's point of view as he perceived it. X expressed consent or satisfaction with the point of view stated.

X - (Expression of Y's point of view) Y - (Expression of Consent) X

Y - (Expression of X's point of view) X - (Expression of Consent) Y

Fig. 4.--The Speroff Role-Taking Model of Empathy

In evaluating the Speroff instrument, Buchheimer noted that although this role-reversal operation appeared to include the criteria of "mutuality, interaction and abstraction" (conditions that had not been satisfied by the Dymond scale), it still offered only a static picture of empathy--"because interactional events and roles are seen in isolation rather than as a fluid chain of events [p. 65]."

Interpersonal Prediction Techniques

A number of predictive tests of empathy have been created. Actually, each of the role-playing conceptualizations described above could be classified in this second category, as well, because any attempt to "play" or identify the future responses of another individual requires activities of a predictive-prognosticating nature.

Although the term "empathy" was not specifically defined in their investigations, Milton and Remmers operationally employed the concept while studying "industrial empathy." They requested leaders representing both management and labor to predict the reactions of each other, and subsequently compared these estimates with actual occurrences (Kerr & Speroff, 1954, p. 270).

Another attempt to examine the empathic levels of industrial employees, especially those of applicants for positions within industry, was attempted by Kerr and Speroff in 1954. The Empathy Test, a group paper-and-pencil device, contained three parts. An individual who administered the scale was asked to rank, as he believed the "average person" would have ranked (a) various musical pieces recorded from phonographs; (b) different magazines; and (c) levels of annoyance when confronted with examples of interpersonal situations (e g. seeing a person's nose run)

Hall severely criticized the Kerr and Speroff assessment model in the Sixth Mental Measurements Yearbook. He explicated deficiencies in the normative data, manual, format, references, and scoring keys, and concluded that:

> In view of these negative features and the implication that the test is more a measure of general information and prediction of opinions than of interpersonal empathy, there appears little to recommend this test for the purposes stated by its authors [Buros, 1965, p. 215].

After reviewing numerous measuring approaches of the predictive and role-theory modes, Cronbach (1955) commented on the validity of these indices. Among the shortcomings noted in his evaluation was that social perception research had been dominated by "simple, operationally defined measures"--measures that may have combined and concealed other relevant variables. Cronbach suggested that to uncover the "genuinely relevant" from the irrelevant components, investigators need to develop more explicit theories concerning the construct of empathy.

Situational Techniques

In light of the criticisms advanced by Cronbach and others, it appears that the isolation of specific components of the empathic process and the production of operational definitions consistent with integral theoretical

concepts are tasks that may be germane to the development of a reliable and valid assessment of empathy. According to Kagan, situational tests may hold the most promise for the accomplishment of these activities.

In one of the initial indices of empathic capability, Gorden (1934) utilized a situational approach. Gorden asked subjects to view eight pictures depicting a figure with one arm raised. They were to indicate whether the left or right arm was up in each picture. While subjects participated in the experiment, they were observed to detect whether they made any overt mimicking responses in reaction to the photographs. The resulting observable physical responses were interpreted as a demonstration that the subjects attempted to feel (empathize) with the pictured images. Through these procedures, however, Gorden may have assessed the ability of subjects to imitate the behaviors of others, rather than their ability to empathize with them.

Arbuckle and Wicas (1957) constructed a situational test of empathic understanding by using typescripts of counselor-client interviews and then developing an accompanying free-response instrument. The researchers employed a jury of expert counselors to appraise the taped episodes. They suggested that counselor trainees could compare their own perceptions with those generated by the group of experts. Although "correct" or "incorrect" respondent phrases were not established through this procedure, Arbuckle and Wicas suggested that this comparative data could be used in counselor training programs. Protocol materials of this type may at least alert the counselor-in-training to the importance empathy has in the counseling relationship.

Astin (1967), Stefflere (1962), and O'Hern and Arbuckle (1964) experimented with similar audiotape and typescript approaches to the assessment of empathy. In summarizing and evaluating these various devices, Kagan et al. stated:

> The results of research to develop situational tests which use typescripts and/or audio recordings as stimuli has been interesting and sometimes encouraging, but the research has not produced a usable test of empathy. The procedures advocated by Astin (1967) and Arbuckle and Wicas (1957) present obvious problems in that they require the use of judges in their scoring procedures. Such procedures take large amounts of time, are not easily standardized, and do not readily produce normative data. The approaches used by Stefflere (1962) and O'Hern and Arbuckle (1964) take these problems into account; however, none of these procedures has produced an instrument for measuring empathy with acceptable reliability and predictive or concurrent validity. Some of these measurement procedures made use of actors rather than actual counselors and clients to obtain the necessary stimuli. This practice is of unknown value and may be one of the factors causing the poor results [p. 469].

Approaching the measurement of empathic behavior somewhat differently, Carkhuff (1969a) collected sixteen stimulus statements that seemed representative of utterances commonly made by individuals seeking aid from helping professionals. From these stimuli, he created an instrument to evaluate a subject's ability to judge the effectiveness of various helper responses to the helpee statements. For each episode, an individual taking the scale was asked to read a "helpee statement" which was followed by four different "helper responses." An example of one of these statement-response sets follows:

Helpee:

> I love my children and my husband and I like doing most household things. They get boring at times but on the whole I think it can be a very rewarding thing at times. I don't miss working, going to the office everyday. Most women complain of being just a housewife and just a mother. But, then, again, I wonder if there is more for me. Others say there has to be. I don't really know.

Helper Responses:

1. Hmm. . . Who are these other people?
2. So you find yourself raising a lot of questions about yourself--educationally, vocationally.
3. Why are you dominated by what others see for you? If you are comfortable and enjoy being a housewife, then continue in this job. The role of mother, homemaker can be a full-time, self-satisfying job.
4. While others raise these questions, these questions are real for you. You don't know if there is more out there

> for you. You don't know if you can find more fulfillment than you have.

A subject taking the Carkhuff test was requested to rate each response on a five-point scale.

1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
None of these conditions are communicated to any noticeable degree in the person.		Some of the conditions are communicated and some are not.		All conditions are communicated at a minimally facilitative level.		All of the conditions are communicated, and some are communicated fully.		All are communicated fully simultaneously and continually.

[p. 115-116]

To obtain a score of the subject's empathic ability, the ratings he selected in each case were compared to standardized ratings made by experts.

One of the most widely applied ratings scales for the determination of empathic behavior was developed by Truax (1961). Truax preferred the use of the term "accurate empathy" to "empathy" because the former contained elements of the psychoanalytic view of moment-to-moment diagnostic accuracy which he felt were central components of the construct. As defined by Truax,

> Accurate empathy involves more than just the ability of the therapist to sense the client or patient's "private world" as if it were his own. It also involves more than just his ability to know what the patient means. Accurate empathy involves both the therapist's sensitivity to current feelings and his verbal facility to communicate this understanding in a language attuned to the client's current feelings [p. 46].

The Accurate Empathy Scale developed by Truax is composed of nine stages. The tasks for individuals taking the instrument entail evaluating taped segments of helper-helpee interactions. After the respondents listen to the stimulus materials (i.e., client-clinician interviews) they are instructed to rate the responses of the recorded therapists via the nine stages of the Accurate Empathy Scale.

Truax described Stage 1 (identified as the lowest level of accurate empathy) in the following manner.

Stage 1

> Therapist seems completely unaware of even the most conspicuous of the client's feelings; his responses are not appropriate to the mood and content of the client's statements. There is no determinable quality of empathy, and hence no accuracy whatsoever. The therapist may be bored and disinterested or actively offering advice, but he is not communicating an awareness of the client's current feelings [p 47].

Stages 2 to 9 reflect increasingly higher levels of accurate empathy. In the higher levels, for instance, the helper appears to communicate the message "I am with you" to the helpee and his remarks seem to correspond to the helper's mood and content. "His responses not only indicate his sensitive understanding of the obvious feelings, but also serve to clarify and expand the client's awareness of his own feelings and experiences [p. 46]."

Chinsky and Rappaport (1970) raised certain doubts about the reliability of the Accurate Empathy Scale. They questioned the methodology employed to insure the "non-independence of judgments." Judges rating the counselor responses have typically received an initial orientation to the scale to insure their understanding of the rating categories and procedures. Proof of adequate scale familiarity has been defined as the attainment of inter- and intra-rater agreement scores of .50 or better on these practice sets. Chinsky and Rappaport concluded that this situation of non-independence between judge ratings has inflated the reliability coefficients compiled by various researchers using the Accurate Empathy Scale. They further contended that, in at least one Truax study (1966), raters responded to some quality other than that which was identified as accurate empathy in the scale.

Most of the situational assessments of empathic behavior described thus far have relied on transcripts or audiotaped transmissions of social

interactions. (The rating scales of the Accurate Empathy Scale are not limited to these forms of usage, but investigators have frequently employed them for the evaluation of audiotaped interviews). A major restriction of such approaches is that verbal text and audio recordings do not present fundamental visual elements to the individual being tested. Kagan, et al. conjectured that non-visual simulations ". . . are not capable of providing a subject with all the cues and clues needed for empathic understanding [p. 469]." (See the discussion of "Overt-Behavioral Assessments in Chapter 3 for a more complete description of the impact of visual, verbal, and nonverbal expressions during communication).

A number of studies during the past decade have incorporated materials from laboratory settings (actual or role-played sessions), or from filmed/videotaped counseling interviews as stimuli to measure empathic understanding. Hartman (1971) utilized in-session clinical transactions to investigate the ability of counselors to assess immediate client feelings. The clients identified their own emotions during the interactions by recording them on a hooded console (i.e. buttons labelled "No Identifiable Feelings," "Anxiety-Negativeness," "Warm-Positiveness" and "Anger-Hostility," were provided for their use). Subjects (counselors) simultaneously attempted to identify the feelings of these clients.

Cohen (1971) developed a filmed instrument, the Test for Recognition of Emotional Meaning (TREM) composed of staged scenes. To create these episodes, actors were employed to simulate the specific emotional states that had been derived from Plutchik's 1962 model of emotions. Nine of these feeling expressions were included on the edited version of the situational device: affection, anger, attentive, disgust, joy, sad, surprise, and neutral. As they viewed the film, subjects were asked to identify these

various emotions. Buchheimer, Goodman and Sircus (1965) constructed another situational film examination of empathy. Their test was composed of three sections.

1. Part I, Silent Set contained filmed, but silent, segments of counselor-client interviews. Subjects were requested to write their own impressions of what had transpired during the scene. Judges then scored these answers.
2. Part II, Free Response, contained both audio and visual presentations of clinical sessions. The counselor himself was not depicted on the screen, however. Subjects responded as if they were the counselor. Again, judges rated the taped responses.
3. Part III, Structured Response, presented audio and visual material to the examinees. It was accompanied by a multiple-choice test. Subjects were asked to select the most appropriate empathic responses from each multiple-choice item.

After analyzing the Buchheimer, Goodman and Sircus tests of empathy, Kagan, et al. (1967) noted special problems associated with the "Silent Set" and "Free Response" sections. Among the most serious limitations of Parts I and II were their time-consuming and "cumbersome" characteristics. They also posed standardization difficulties because for each administration, trained judges were required in order to obtain subject scores.

In evaluating Part III, Kagan noted that the "Structured Response" subtest did not require subjects to identify the feelings of the client, per se, but rather, asked them to distinguish between effective and ineffective counselor responses to client expressions of feeling. He concluded that the Buchheimer format provided a type of predictive assessment of future counselor success, but not a valid measurement of counselor empathy itself.

This last point concerning the evaluation of empathic skill relates to the definition of empathy proposed by Kagan and his colleagues. After an extensive review of theoretical and operational studies, the researchers concluded that empathy is a complex process composed of the ability to perceive the feelings of others, the interpretation to oneself of the other's feelings, and the communication of this personal interpretation back to the other person.

Kagan and associates proposed that attempts to measure all of the subcomponents of empathy through a single instrument may produce invalid results. They further suggested that a measurement approach aimed at assessing a more concrete and circumscribed aspect of empathy might be more meaningful. Kagan, et al., thus, formulated the Affective Sensitivity Scale to assess a subject's "ability to detect and describe the immediate affective state of another [p. 463]." Affective sensitivity, as discussed in the previous section of this thesis, relates to the first stage rather than to all phases of the empathic process.

The Kagan scale is composed of videotaped sequences from actual counseling interviews. The revised form of 1969 utilizes an accompanying multiple-choice exam. (Each scene was followed by four to seven descriptive adjectives on earlier scale forms). The items describe the various affective states which the client may have felt while interacting with the counselor. Three procedures were utilized to obtain the "correct" answers for this instrument: (a) Four "qualified" judges indicated the client's feelings; (b) three "informed" judges who had been given substantial clinical data on each of the clients created probable responses; and (c) the clients themselves viewed the scenes and subsequently recalled their feelings.

This writer's study represents an attempt to construct a situational device to measure affective sensitivity that is similar to the Kagan approach. Specific differences between the two scales are described elsewhere (see Chapters 1 and 2). Perhaps the most pertinent distinction between the current endeavor and the previous one of Kagan et al. is not so much a product of the methodologies employed, but of the purposes for which they were formulated. The Kagan Affective Sensitivity Scale, like nearly all previous assessments of empathic behavior, was designed for psychologists, counselors, and other helping professionals who typically interact with helpees in clinical settings. In reviewing the literature, the present investigator found no indices of empathy or affective sensitivity that had been specifically intended for classroom teachers, despite the abundance of evidence that empathic awareness is an important correlate of teacher effectiveness. The investigator assumes that this attempt to develop and validate a Teacher Affective Sensitivity Scale will provide a stimulus for further experimentation and research in this area.

Strategies for the Development of Teacher Affective Sensitivity

Teacher Preparation Programs

Various empirical findings reported throughout this study have demonstrated that teacher competencies in the affective domain significantly affect classroom outcomes. Yet, as noted by Halamandaris and Loughton (1972) in their review of pre-service teaching activities in Canada, education faculty members have largely ignored research evidence of this type. Instead, teacher educators have operated under the erroneous principle that the academic achievement of undergraduate candidates can be used as a valid

predictor of their future competencies in the classroom. In contrast to this emphasis given to cognitive skill competence, Halamandaris and Loughton suggested that

> . . . The ideal teacher must be first and foremost the possessor of empathy-competence. Empathy-competence may be defined as the ability of a teacher to genuinely consider, as a first priority, the rights, feelings, and achievements of the individual student, in all teaching activities. The implication for teacher-education programs seems clear. There must be included in the design of such programs ways of initiating, supporting, and evaluating the potential empathy-competence of student teachers [p. 21].

According to Halamandaris and Loughton, few teacher preparation programs have ascertained whether or not their candidates even "like" children; ewer still have specifically evaluated future teachers in terms of their potentials for interacting with students and facilitating personal-social-intellectual growth in the school. The authors warned that a candidate's ability ". . . to pass prescribed courses and survive the relatively short term of superficial anxiety that we call 'student teaching' [p. 21]" cannot provide adequate information about "empathy-competence." To effectuate assessments of affective correlates of ability, they recommended a period of internship in which the pre-service teacher would work closely with students, supervisors and peers for an extended time. They also suggested that self-evaluation instruments could be juxtaposed with advisor-made appraisals to evaluate candidate "empathy-competence."

Although specifically addressed to Canadian audiences, the analyses offered by Halamandaris and Loughton appear cogent for teacher education faculties within the United States. Inclusion of learning experiences in the affective domain tend to be meager here, as well; sometimes, they are nonexistent. In view of this discrepent emphasis between cognitive and interpersonal skill development, it may be particularly crucial for teacher

educators to systematically determine how they can attract and train more sensitive teachers, and how they can assist those instructors already within the classroom to acquire additional affective competencies.

Training Models for Affective Outcomes

As noted earlier in this study, many problems seem inevitably associated with the identification and measurement of personality traits as they apply to teacher education. The task of developing effective programs for the training and retraining of facilitative teachers may be even more difficult. But some pre- and in-service models aiming for affective teacher outcomes have been designed and implemented. A few of these programs, ones that seem capable of stimulating further endeavors in this area, are described in this concluding portion of the literature review.

Gazda (1971) claimed that teachers can be trained to demonstrate high levels of understanding (empathy) and respect for their students. He speculated that the placing of teacher-models (individuals who have received training in these conditions) could be tantamount to a "peaceful revolution" within the schools of this nation.

Truax, Carkhuff and Douds (1964), Truax and Carkhuff (1967), and Truax and Lister (1971) demonstrated that it is possible to significantly increase the levels of empathy and warmth of candidates through an experiential-didactic training approach. Three basic elements have been incorporated into the systematic framework developed by these researchers. Their programs consist of (a) a training atmosphere in which a supervisor-instructor communicates high levels of empathy, warmth and genuineness to trainees; (b) a didactic approach in which material is presented, lists of readings are recommended (e.g. Heim Ginott's Between Teacher and Child) and

use is made of measurement scales to assess trainee degrees of empathy, warmth and genuineness; and (c) a "quasi-group-therapy experience" to assist the trainees to achieve an integration of the didactic training with their personal values, goals, and life-styles (Truax and Lister, 1971, p. 121).

Based on an extensive series of experimental and quasi-experimental investigations, Carkhuff (1971) concluded that "comprehensive" training is the most effective mode of education for helpers--whether these helpers be nurses, counselors, ministers, teachers, or psychologists. The core of this mode of intensive learning entails methodical exposure to and building of responses that the helper (teacher) can utilize while interacting with helpees (students). Carkhuff defined a "comprehensive" program as one composed of training in the (a) interpersonal skills necessary to function effectively; (b) methods of discerning and developing effective courses of action; and (c) means and modalities necessary to implement resultant programs.

In critiquing the basic format of the models with which he has been associated, Carkhuff spared no superlatives. He claimed that,

> Individually, training programs in each of these areas [the three training operations outlined above] have demonstrated a clear superiority to any and all other control programs. Collectively, in an integrated training program, they constitute the most comprehensive and effective form of education known to man. Training is truly the preferred modality of education [p. 12].

The statement that an integrated systematic training approach ". . . constitutes the most effective form of education known to man" as purported by Carkhuff, appears to be a contestable statement. But the multitudinous and multifaceted programs that Truax and Carkhuff and their colleagues have instituted, along with the successes they have verified, attest to the breadth of applicability and apparent effectiveness of their technology.

Gregg (1971) designed an educational experience that included a short-term controlled experience that was readily incorporated into a regular teacher preparation curriculum. The controlled activities consisted of sensitivity training laboratories in which trained instructor-facilitators helped pre-service students to focus on the development of empathic understanding and related interpersonal variables. Gregg employed several instruments to test the hypothesis that more "open" participants would demonstrate greater gains in empathic understanding, level of regard, unconditionality, and congruence. Results of the investigation, however, failed to support this hypothesis.

Bishop (1973) analyzed human relations training programs that have been included as components of teacher preparation curricula. She noted that human relations training has been successfully used to increase interpersonal sensitivity, particularly when it has been administered in close proximity to student teaching experiences. After synthesizing and evaluating a wide range of prototypic models, Bishop suggested that the characteristics of trainer-leaders may be particularly crucial to the effectiveness/ineffectiveness of group training programs.

In contrast to T-group techniques, Dinkmeyer proposed a C-group approach to a pre- and in-service teacher education. He described the C-group as an amalgamation of experiential and didactic learnings that foster effective functioning in the classroom. Dinkmeyer drew distinctions between his design and those of other sensitivity groups by noting that a C-group ". . . goes beyond consideration of the process and self to examination of the transaction between teacher and student and the application of specific procedures [p. 618]." The C-group was so named because the adjectives descriptive of its basic components beginning with the letter "c": collaboration,

consultation, clarification, confidential, confrontation, communication, concern, commitment.

Joyce, Dirr and Hunt (1969) evaluated a training program specifically created to increase teacher sensitivity. In contrast to the definition of affective sensitivity given in the present study, these researchers viewed sensitivity as a more extensive concept. They operationalized the term to mean the teacher's ability to hear a student's communications and to modify one's own behavior so as to adapt to the characteristics of the student. As Peck and Joyce (1972) elaborated, ". . . it means taking up clues about the character of the learner, putting them together into an integrated picture of the learner and then adapting one's behavior so that one can contact with the learner and can teach him effectively [p. 69]."

The central activity of the Joyce, Dirr and Hunt training program entails a "communication task." The method contains a series of activities

> . . . in each of which the teacher is presented with the problem of teaching a concept to a learner. After having been given time to prepare a lesson dealing with the concept, he is given a fifteen-minute period in which to teach the concept. The learner is a role player trained to give to the teacher, during the course of the lesson, responses that indicate a frame of reference counter to the one implied by the concept. In other words, a situation of conflict is created in which the concept that is the object of the lesson is mildly but firmly rejected by the learner.
>
> . . . . . .
>
> As the role player provides each verbal cue to the teacher, observers rate the teacher as he, in turn, responds. They look for his recognition of the frame of reference of the learner in order to build a conceptual bridge between the learner's concept and the one he is trying to teach. Hence, sensitivity is defined as the recognition of the learner's frame of reference and a subsequent adjustment of teacher's behavior in an attempt to accommodate the learner's stance [pp. 75-76]

Based on the results of this investigation, Joyce, Dirr and Hunt concluded that the "communication task" training format did not achieve its primary objective of increasing teacher sensitivity. The subjects did not

demonstrate greater ability to either understand the learner or to modulate the learner's frame of reference. But the program did appear to positively effect "rapport building"--a skill that the researchers postulated may represent a precurser of sensitivity.

Kagan and his associates developed the Interpersonal Process Recall method as a technique to "accelerate growth in therapy" (Kagan and Schauble, 1969, p. 309). Interpersonal Process Recall uses videotape playback of counseling interviews to stimulate recall of the underlying dynamics of interpersonal interaction Kagan et al. (1967) reported significant relationships between the use of IPR and counselor empathy. Thus, although not specifically developed for teachers, IPR techniques may offer insights into empathy as an aspect of the teacher-learner relationship which may serve as stimuli for future educational training programs.

The description of training designs presented here represents a sampling of various approaches that have been attempted to facilitate the learning of interpersonal skills. Although different in terms of structure and application, a number of commonalities seem to emerge through their examination. Perhaps their most basic similarity concerns the theoretical posture on which they have been supported. The respective developers of each program have viewed a teacher's ability to empathize with students as a core dimension of the teaching process. Another fundamental commonality entails the integration of experiential and didactic learnings within these programs. Teacher candidates have actively participated in short- or long-term micro-laboratory activities, role-playing and role-reversal exercises, they have interacted with K-12 pupils and with their peers in education, and they have transacted with simulated materials. A third key component of these training designs involves the use of structured feedback. Truax (1970) observed that,

even though feedback has been an integral phenomenon of the learning process, teachers (and other helping professionals) have been furnished with only limited information about the effects they have on students. The training processes in the programs described above, however, have allowed for the giving of specific and systematic feedback to teacher candidates about their performances in relating to other human beings.

CHAPTER 5

SCALE DEVELOPMENT, REFINEMENT, AND VALIDATION PROCEDURES

Introduction

The research design of the study is described in detail in this chapter. The writer describes the procedures and criteria employed in collecting videotape vignettes, and the construction of a multiple-choice examination to accompany the media segments. The null hypotheses (formulated to gain partial assessment of scale validity) are presented with a brief description of each of the subject groups. Finally, procedures for gathering and analyzing the resulting data are presented.

Collection of Media Episodes

Excerpt Selection Procedures and Criteria

Previously recorded media (films and videotapes) depicting classroom interactions were viewed and analyzed by the recorder to obtain examples (50) of various learner affective expressions. All of these recordings had been purchased by the Audio-Visual Center at Washington State University. (See Appendix C for a listing of the films and corresponding production firms).

The following criteria were employed to guide the selection of the needed excerpts.

Selection Criterion 1: The videotape excerpts are representative of a diverse array of human emotions. The classification of eight primary emotions described by Robert Plutchik was used to guide the investigator in a

systematic collection of excerpts. Criterion 1 was utilized for two purposes. Firstly, because a teacher may be sensitive to some forms of emotional expression but insensitive to others, a scale measuring affective sensitivity should be able to assess teacher awareness of all basic types of human emotions.

Secondly, it was assumed that utilization of a conceptualization scheme of emotions that had been developed and tested through previous research would add objectivity to the investigator's search and selection of videotaped and filmed episodes. Rather than seeking examples of teacher-student interactions in some haphazard fashion (such a procedure might have introduced unintended bias since the researcher may have unwittingly included some forms of emotional expression and excluded others), an attempt was made to select illustrations of each basic emotional form.

A modified version of Plutchik's model of emotions was used in this study. Although a single comprehensive theory of affective behavior strong enough and broad enough to explain all aspects of emotions did not exist at the time of the investigation, (Silverman, 1971, p. 264), Plutchik's paradigm had been subjected to numerous empirical tests that demonstrated at least one measure of its validity, that is, utility. As Nicolas Rashevsky wrote, "Nowadays we do not ask whether a given theory or concept is true or false. We ask: Is it convenient or inconvenient; is it useful or not?" (cited by Plutchik, 1962, p. 108).

Stated as bipolar opposites, the eight basic emotions representative of all emotional dimensions (according to Plutchik, all other emotions can be synthesized from combinations of these prototypes) and recognizable in terms of overall organismic behavior are identified as:

destruction——————protection

incorporation——————rejection

reproduction——————deprivation

orientation——————exploration [pp. 41-63].

Because Plutchik utilized these eight concepts to study emotions at all evolutionary levels--not only the human one, they were defined as general biological functions rather than as readily observable and identifiable human affective communications (Plutchik, pp. 54-64). For purposes of the current study, therefore, the structural model of emotions that was developed as an extension of Plutchik's basic theory was used, in modified form, to guide the investigator's collection of media excerpts (see Figure 5). The structural model consists of observable human affective expressions that are synonyms of the eight primary emotions.

Although this paradigm of emotions was used to stimulate selection of excerpts, the model was not used to determine the correct and incorrect answers for the multiple-choice examination later developed to accompany the videotape. As will be described in the next section of this chapter, expert judges were employed to identify, in sentence form, the affective states expressed by a student during each episode. To prevent bias, these judges were not given a copy of the modified structural model of emotions used in the collection process.

Selection Criterion 2: For each basic emotion, a series of excerpts are included which represent increasing intensities of the emotion. Because emotions have been found to exist in varying strength levels, an attempt was made to incorporate excerpts representative of this progressive dimension. The results of Plutchik's experiment to determine the mean judged intensity of synonyms for each of the eight primary emotions provided useful examples of

such affective continua. More specifically, episodes depicting twenty-four affective states, three for each primary emotion, served as stimuli while the investigator selected videotape excerpts (see Figure 5). The affective states are defined in the Operational Definitions.

General Definition	Observable Affective Expressions*
8 Prototypic Emotions	High Intensity ---------- Low Intensity
Destruction	Rage - - - - - - -Anger- - - - - Annoyance
Reproduction	Ectasy - - - - - -Joy- - - - - - Pleasure
Incorporation	Admission- - - - -Acceptance - - Incorporation
Orientation	Astonishment - - -Amazement- - - Surprise
Protection	Terror - - - - - -Fear - - - - - Timidity
Deprivation	Grief- - - - - - -Dejection- - - Gloominess
Rejection	Loathing - - - - -Disgust- - - - Boredom
Exploration	Anticipation - - -Expectancy - - Attentiveness

Fig. 5.--Classification of Observable Affective Expressions

*As discussed above, the "Observable, Affective Expressions" rather than the "Prototypic Emotions" from which they were derived were utilized to guide the collection process of media excerpts.

Selection Criterion 3: A variety of student grade levels ranging from K-12 are depicted on the videotape. The inclusion of episodes showing diverse student age levels seemed pertinent because, although younger children frequestly place few restrictions on their emotional reactions, older pupils seem more reluctant to display these responses (Silverman, 1971, pp. 244-247; Moustakas, 1966, p. 156). Classroom episodes used to measure teacher affective

sensitivity were selected to reflect these differences between older and younger children.

Selection Criterion 4: Both male and female students are represented on the videotaped excerpts. Male and female emotional conveyance styles may differ. A teacher may be skilled in identifying the affective expressions of members of one sex, but less effective in noting these emotions in the other. Since most classrooms contain coeducational populations, it would seem appropriate to assess an instructor's level of affective sensitivity to both male and female students

Selection Criterion 5: Students from different racial and ethnic backgrounds are depicted on the videotape. The rationale for utilization of Criterion 5 closely parallels those of Criteria 3 and 4. Just as emotional expressions may differ because of age and/or sex variables, cultural factors may also play a significant part in affective behavior. Racial/ethnic differences consequently, were included on the videotape.

Technical Editing Procedures and Criteria

Once videotape selections were made, an additional set of standards, editing criteria, were used to evaluate the media episodes. Each excerpt was analyzed by the investigator and a media specialist to insure that it met the following editing specifications.

Editing Criterion 1: The sound quality of each episode is such that the recorded learner-teacher interactions are clearly audible to subjects listening to the videotape. Because perception of student verbal cues may be an integral aspect of teacher affective sensitivity, sound excellence was considered an imperative feature of the videotaped portion of the measurement device.

Editing Criterion 2: The sound track of each episode is synchronized with the physical picture on the videotape. The quality of correspondence between sound and picture, synchronization, was evaluated to insure that the situational device would be as analoguous to a real-life setting as possible. Because lip synchronization, the correct joining of words with the lip movements that produced them, needs to be particularly accurate (Pincus, 1969, pp. 140-141), each excerpt was carefully analyzed for this feature.

Editing Criterion 3: The physical image (picture) portion of each episode is clearly visible to subjects viewing the videotape. Image sharpness appeared to be a crucial objective because subjects responding to the videotaped episodes needed to consider nonverbal, as well as verbal, student cues in arriving at an answer. Psychologist Albert Mehrabian asserted that, of the total impact of one individual's message on another, ninety-three percent of this effect is transmitted nonverbally, while the remaining seven percent is transmitted via words (Body Talk: A Psychology Today Game, "Instruction Manual," p 1). Brannigan (1969), a British anthropologist, listed 135 gestures, Birdwhistell (1970, claimed that over 20,000 facial expressions are somatically possible, and Koch (1971), recorded 27 readily observable nonverbal behaviors in the classroom. Further analysis of the relationship between nonverbal conduct and emotional expression is reported in Chapter 2.

Based on these research findings, it seemed essential that as much visual detail as possible needed to be rendered to the viewer to create a scale that would provide a valid assessment of affective sensitivity. "Cloudy," scratched, or otherwise marred excerpts were eliminated. Unfortunately, an unavoidable obstacle in satisfying Editing Criterion 3 was the circumstance that reproduced media excerpts are seldom as sharp as originals

(Pincus, 1969, p. 81). Film processing was conducted to yield as sharp an optical image as possible.

Editing Criterion 4: The timing and duration of each episode insures that essential aspects of the learner's behavior are included on the videotape. Inclusion of "essential aspects of the learner's behavior" meant that each excerpt depicted key elements of the affective state generated by the pupil during the classroom interaction. Conversely, awkward repetitions and phrases that seemed to obstruct the flow of the scene and did not add information about the student's affective state were eliminated.

Editing Criterion 5: The videotape is free of splicing defects. All scenes on the transferred videotape (i.e., the composite of the individual excerpts), as well as all of the original scenes needed to be free of faulty splicing because such mistakes could have affected both sound and picture quality.

Fifty scenes that satisfied the five Selection Criteria and the five Editing Criteria were used for the initial synthesized form of the simulation device. The duration of each excerpt ranged between 10 seconds and 3 minutes. Total viewing time for the preliminary simulation device alone, therefore, approached two hours. Copyright privileges for these excerpts were secured later, following several scale revisions.

Synthesis of Videotaped Episodes

The media excerpts that met all of the collecting and editing criteria were randomly arranged onto two videotapes, with half of the episodes on each tape. A list of the 16 mm films that were used to provide these vignettes is included in Appendix D. The next step in the scale development entailed the construction of multiple-choice responses for each teacher-learner interaction sequence.

Construction of the Multiple-Choice Instrument

Participation of Judges

Once the videotape excerpts had been compiled, a multiple-choice examination was developed to assess teacher affective sensitivity. It was determined that each videotaped scene would be accompanied by two sets of corresponding multiple-choice items. One set of choices (one item) would deal with the student's feelings about himself/herself or the subject with whom there had been conversation or interaction, the other set was to focus on the student's feelings about the person with whom he/she had been interacting (i.e., teacher or another student).

A number of methods could have been utilized to generate these multiple-choice responses. One technique would have entailed requesting students depicted in the scenes to evince how they had actually felt during the particular episodes. However, since segments from previously filmed classroom interactions were used in the development of the Teacher Affective Sensitivity Scale (TASS), it was not possible to acquire this information. Recall data were simply unavailable. Further, simulated classroom settings and employed actors, rather than natural school transactions, had been utilized for the production of some of the original 16mm films.

In analyzing this first item formulation technique, it would seem pertinent to note that, while constructing the Affective Sensitivity Scale for counselors, Kagan et al. had requested clients to recount the feelings they had experienced during the videotaped sessions (live counseling interviews, rather than previously recorded media, were utilized in this earlier scale). However, Kagan and his associates had not found this feedback information

significantly more helpful in creating multiple-choice items than either of two other methodologies.

Although in terms of logic, it would seem that simply asking videotaped subjects to identify their own affective states would have provided the most valid method of generating "correct" and "incorrect" responses, data from the Kagan study revealed inadequacies in this procedure. A possible explanation for this discrepancy between theoretical and factual conditions might be that many individuals, lacking specific training in emotional-sensitivity, are not able to effectively identify feeling states--even their own. For example, a student might be able to indicate that he/she "feels lousy," but less able to spontaneously express a more complete description of the same emotional state, such as, "I don't like myself very well. I never seem to do the right thing."

Another approach to producing multiple-choice responses would have been to use a list of paired adjectives (such as Osgood's) which delineates major dimensions of affect expressed in our language, and then to couple these listed categories with the individual film sequences. If this type of adjective matching approach had been actually used, the directions on the completed scale would have requested the subject to select, for each episode, the one adjective (e.g., hate, fear, excitement) most descriptive of the emotion felt by the student.

Because Kagan et al. found that the above noted adjective matching format did not distinguish between persons judged high and those judged low in affective sensitivity, the investigator decided that the final form of the current scale would request the subject to select an appropriate phrase from a multiple-choice item, rather than a single adjective descriptive of the emotional state viewed. The use of these phrases was intended to lend more

consistency to subject interpretations of item meaning (Kagan et al., 1967, p. 142).

Correct responses and the distractors (two incorrect multiple-choice responses per episode) were established through the following procedures. Practicing psychologists and graduate students (n=24) who had demonstrated counseling and clinical competencies (had taken at least one semester of practicum and had been recommended by their supervisors and faculty members) were employed to create the sentence multiple-choice responses. Due to the length of the videotapes (two media viewing hours were required to watch this initial scale draft, and an additional two hours were needed for the creation of the open-ended phrases, half (12) of these qualified judges (Judge Group I), were randomly selected to view the first tape; the other 12 judges (Judge Group II) viewed the second.

Twenty-six (26) judges were initially employed for this activity; 13 were randomly placed in each judge group. However, one of the individuals in Judge Group I revealed that he would not be able to participate in further research procedures (i.e., he would not be able to take the opposite half of the TASS during the following month). Thus, although this judge did view Videotape I and did create open-ended questions to accompany it, the phrases he generated were not incorporated in the subsequent composition of multiple-choice items. To maintain equality of judge group size, all of the responses invented by a randomly selected representative of Judge Group II to correspond with Videotape II were also deleted from the data pool prior to calculation of percentage-agreement scores.

After watching and listening to each videotaped excerpt, the judges were asked to individually answer two questions using language that they believed the student himself would have used, assuming that the student was

able to respond to these queries openly and honestly. Figure 6 depicts the response format given to each judge.

RESPONSE CATEGORIES FOR EACH SCENE ON THE TEACHER AFFECTIVE SENSITIVITY VIDEOTAPE

Scene # _____. Answer as a student:	Answer as a judge:
1) At the end of this scene, what feelings were you experiencing concerning yourself or the subject you were talking about? _____ _____	Identifying the student's feelings was: 1) ___ ___ ___ ___ ___ 1 very easy; 2 easy; 3 neither easy nor difficult; 4 difficult; 5 very difficult
2) What feelings were you experiencing toward the teacher and/or the student(s) with whom you were interacting? _____ _____	2) ___ ___ ___ ___ ___ 1 2 3 4 5

Fig. 6.--Sample Judge Response Sheet

After the judges had viewed each media excerpt and answered the two questions, they were requested to indicate the degree of difficulty they had experienced in determining the feelings of the student in the episode. A scale from 1 to 5 (very easy to very difficult) was provided to the right of the sentence responses so that the judges could make these notations.

Compilation of Multiple-Choice Items

A researcher experienced in classifying analogous statements into categories (but an individual who had not participated in the judging procedures) was employed to assist the investigator to complete the next tasks. Percentage measures of agreement for each item were then calculated. A response category receiving a percentage-agreement index between .50 and 1.00 was designated as a "correct" multiple-choice answer.

The classification of open-ended judge statements represented a particularly sensitive aspect of the scale development. Judge numbers, rather than judge names, were used on the response forms to facilitate an unbiased analysis of data. Nevertheless, total objectivity was not possible. For example, even when it seemed evident to the two collators that 50 percent or more of the statements created for a particular scene were analogous, the decision of how to accurately juxtapose these responses into a single phrase entailed subjective determinations. Where there was apparent judge agreement (i.e. percentage-agreement .50) an effort was made to incorporate a maximum amount of original judge terminology in the composite expression. Appendix E, Collated Judge-Response Categories, depicts this collation procedure.

Subsequent pilot test and item analysis procedures (discussed later in Chapter 5) enabled further refinement of the multiple-choice items. Feedback concerning the adequacy of response categories, and grammatical/logical clarity, was elicited and utilized to enhance scale quality.

The two distractors per episode were formulated from statement categories that received percentage-agreement scores between .00 and .49. These distractors needed to be plausible choices so that the instrument would discriminate between "high" and "low" scorers on the Teacher Affective Sensitivity Scale. In addition, the distractors needed to be substantively

discrepant choices, rather than synonymous forms of the correct answers, so that subjects taking the scale would be able to distinguish between them. The statistical appraisal methods used to test the discriminating power of distractors and answers will be described later in this chapter; research findings will be presented in Chapter 6.

Scale Refinement Procedures

Inter-Expert Agreement

An index of inter-expert agreement for each multiple-choice item was next made to measure scale consistency, an important criterion of test reliability. This assessment was made by asking the judges to answer the items on the reverse half of the instrument, the part that they had not helped to formulate. Thus, Judge Group I was administered Videotape/Multiple-Choice Half II; Judge Group II was administered Videotape/Multiple-Choice Half I. Open-ended and reverse-half judge responses were then analyzed by contrasting the percentage-agreement scores calculated for each category.

Originally, the investigator had proposed to utilize the indices of inter-expert agreement for two purposes. It had been suggested that the indices could be used to validate judge "expertise" (i.e., show that the judges themselves were affectively sensitive and competent to create the multiple-choice portion of the scale). Supposedly, if respondent-judges selected the "correct" answers produced by writer-judges, then inter-judge agreement, and hence judge expertise, would have been established.

It was then proposed that the judge percentage-agreement scores for each response category could be correlated. Items receiving negative correlations (i.e. where judges in the two groups had selected different answers) could then be eliminated from the TASS.

Further consideration of the rationale for these procedures revealed several specific weaknesses. Judge scores on the alternate-half forms of the TASS appeared inadequate to provide a valid assessment of judge expertise. Even if the correlation coefficients resulting from writer- and respondent-judge answers were positive and statistically significant, these calculations could not have served as definite affirmation of judge expertise. It seemed hypothetically possible, for instance, that a comparison between the open-ended phrases created by writer-judges and the subsequent responses selected by another group of subjects known to be low in affective sensitivity, could have also generated positive correlations. It would have been one type of activity, therefore, to make a statement about judge agreement; it would have been a distinctly different activity to say that, by virtue of this agreement, the judges were more affectively sensitive than other individuals. Comparative data between the responses of judge groups and non-judge groups would have been needed to legitimize this type of evaluation. (Such a comparison of judge and non-judge scores was, in fact, made later in the study. See Chapter 6).

The calculation of these additional correlations between judge and non-judge groups appeared insufficient to render evidence about judge-group expertise levels. Logical analysis, as well as quantitative assessments of the data resulting from the administration of the alternate-half forms, suggested that not all of the psychologists/counselors were equally effective in analyzing affective expressions. Some writer-judges, for example, provided more of the open-ended phrases that were eventually synthesized into "agreed" answers than other judges; some respondent-judges scored higher (selected more "agreed" responses on the reverse scale half) than other respondent judges. In summary, it appeared that the judges varied in their affective

sensitivity levels, making it more appropriate to refer to the relative expertise or non-expertise of a particular judge, than to the expertise of all of the judges considered together.

Perhaps most significantly, a comparison between individual judge scores and item percentage-agreement scores suggested the possibility of error in defining an "agreed" response (category receiving a percentage-agreement index = .50) as a "correct" answer. It appeared preferable to first endeavor to identify "discriminating" items, questions where "expert judges" had selected one particular response as correct, but "non-expert" judges had chosen a different answer. Instead of signifying the "agreed" response as "correct" for such "discriminating" multiple-choice items, the answers selected by "expert-judges," but rejected by "non-expert" judges, could then be used. To pick these questions, the null hypothesis of no difference between "expert" and "non-expert" responses could be tested for each item. Scoring of the TASS could be weighted to reflect the more sensitive nature of these difficult items.

Computer Determination of Discriminating Items

A mathematical consultant from the Academic Services Unit at Washington State University aided the investigator to define the computational and statistical problems related to the determination of these "discriminating" items on the TASS. Notations and concepts thought to be most influential in the quantitative measurement of affective sensitivity were first enumerated, and then a method of data analysis was specified in order to provide the basic design for a computer program written to identify the "discriminating" scale items. A "discriminating" question was defined as one in which the correlation between "expert" and "non-expert" judge answers was negative.

Appendix H contains copies of the computer specifications and the resulting computer program developed for the determination of "discriminating" items on the Teacher Affective Sensitivity Scale. Six (6) questions were identified through this procedure.

The decision of how to define "expert" and "non-expert" judges posed one of the initial problems of this endeavor. One method considered, but later rejected, involved ranking the judges in terms of their reverse-half scale scores. Utilization of such a criterion of expertise would have "contaminated" the data. That is, subsequent attempts to test the null hypothesis of no difference between "experts" and "non-experts" would have been meaningless because "experts," by definition, would have scored higher than the other judges.

To identify these "expert" and "non-expert" judges, three individuals were asked to rank the judges in both groups from high to low (1 to 12) on the dimension of affective sensitivity. The three raters, noted as Colleague-Supervisors A, B, and C, were selected because they had worked with each of the judges as either an instructor or as a colleague, and had had opportunities to assess the relative levels of judge expertise. The three supervisor ratings of both Judge Group I and Judge Group II members were pooled to produce ranking averages. The ranking order so derived was used to select subsets of "experts" and "non-experts" for the computer program designed to mathematically identify "highly discriminating" multiple-choice items.

One problem related to the formulation of the pooled colleague-supervisor ratings should be mentioned. Each rater had previously participated as a member of either Judge Group I or Judge Group II. Consequently, the instructions given to these supervisors requested that they eliminate their own names when ranking the constituents of their respective judge groups.

However, so that these supervisors (Judges #8, #10, and #22) would also have three supervisor rankings that could be averaged when the composite ratings were calculated, each was given an additional rank. These positions were made by averaging the ranks that each supervisor judge received from the two other supervisor judges. A delineation of this procedure is presented in Chapter 6.

Several tests were made to examine the reliability and validity of the supervisor rankings. Firstly, Spearman Rho Rank Correlation Coefficients were calculated to measure inter-rater reliability. These data are presented graphically in Chapter 6. Secondly, an alternative method of replenishing the missing self-ranks of the colleague-supervisors (omitted by virtue of instructing the raters not to include themselves in the rankings) was attempted. This was done by assigning each supervisor-judge the highest self-rating possible. Supervisor A, for example, who was also Judge #10, was given a hypothetical self-rank of "1" (the highest value" in relation to the remaining judges in his group. Pooled judge rankings that included these hypothetical figures were subsequently computed. The resulting ranking averages were correlated with the pooled rankings derived through the previously described averaging procedure.

To analyze further the supervisor delineations of "experts" and "non-experts," comparisons were derived between: (a) judge ranking-order averages and writer-judge scores (determined by the number of "agree" responses a writer-judge had helped to create); and (b) judge ranking-order averages and respondent-judge scores which were determined by the number of "agreed" responses that a respondent-judge had selected on the reverse half of the scale.

Pilot Test Procedures

Thirty-four subjects (undergraduate education students at Washington State University) were administered the second revised form of the Teacher Affective Sensitivity Scale to pilot test the instrument. These subjects were requested to indicate language (clearness of expression) and/or logic (clearness of meaning) errors that had been inadvertently included in the scale. Items that seemed grammatically or logically unclear were reworded or eliminated from the multiple-choice form.

Item Analysis Procedures

The thrice-revised instrument was administered to a sample group of teachers composed of (a) educators from the Pullman School District, Pullman, Washington; (b) education students at Washington State University (individuals who had not helped in previous scale development activities and would not participate as members of any of the experimental groups yet to be administered the TASS); and (c) teachers taking courses at the Joint Center for Graduate Studies, Richland, Washington. In the initial design of this research, the investigator had specified that fifty ($n = 50$) subjects would be given the TASS at this point. However, since the simulation portion of the scale was divided onto two separate tapes, both of which required 35 to 40 viewing minutes, rather than requesting one sample group to view both parts, additional subjects were obtained. A total of 97 respondents, 48 randomly selected for one half and 49 for the other, participated in this phase of scale refinement.

After accumulating the scores, item analysis procedures were applied so that two features of each simulation episode could be evaluated. Firstly, an examination was conducted to determine which vignettes and corresponding

multiple-choice responses significantly distinguished between individuals administered the scale. Edwards (1957) described difficult problems as ones that differentiate between subjects scoring high and those scoring low. (Note: Item difficulty should not be confused with the notation of "discriminating" scale questions as previously identified via the computer program). This was accomplished by comparing the multiple-choice answers chosen by "upper-third" versus "lower-third" examinees. The percentage of high ("upper-third") scorers selecting the "correct" answer in each multiple-choice set was expected to be greater than the percentage of low scorers selecting this response. Had any items failed to meet this expectation, they would have been eliminated from the scale.

Secondly, to insure that both of the distractors per item ("incorrect" responses) offered plausible choices to individuals taking the TASS, an analysis was made of the percentages of subjects who had selected each multiple-choice category. A figure of 10% was set as the lower limit of category acceptability. Discriminators that had been chosen by 10% or less of the subjects were either reworded, or the entire multiple-choice sequence (i.e., two items per videotaped scene) was eliminated from the scale. Utilization of this criterion was especially important since each multiple-choice set on the Teacher Affective Sensitivity Scale contained only three responses. If even one of these distractors, thus, could be viewed as an obviously "incorrect" option by subjects, then the probability of their guessing the "correct" answer from the remaining two responses, would be 50%--a figure too high for valid test results. The "correct" answers, themselves, of course, could not be altered at this stage of scale refinement, since they had already been developed by judges. However, the distractors could be modified. In conducting these changes, the investigator attempted to revise them so that

they would be more consistent with "correct" responses. Where slang terms or words bearing apparent authoritative connotations had been incorporated into the "correct" choices, parallel terminology or phraseology was added to the distractor(s).

Synthesis of the Final Videotape

Two basic factors were taken into consideration in determining which of the remaining videotape excerpts and corresponding multiple-choice items would be retained as components of the final product (final in terms of the research procedures reported in the current study). It was assumed that the scale would contain (a) the "best" videotape scenes as assessed by the selection and editing specifications; and (b) a range of items with respect to their difficulty, some having a high level of difficulty and others being relatively easy.

Decisions concerning actual inclusions/exclusions were made by judging the adequacy of each scene in achieving a balance between the two criteria. To facilitate the first of these two evaluations, the film episodes were ranked by the investigator on a scale containing four categories--low, moderately low, moderately high, and high. The resulting rankings of videotape technical quality are presented in Appendix I, Ratings of Videotape Excerpt Quality. Data provided by the computer program was utilized to analyze the second set of specifications.

Twenty-two simulation excerpts were re-taped into a final videotape product. Verbal and visual instructions and explanation sequences were interspersed between the episodes to facilitate test administration procedures. A scoring key was created. Since twenty-two videotaped scenes were incorporated on the TASS, a total of forty-four multiple-choice items were included

on the written portion of the scale. A copy of the multiple-choice portion of the Teacher Affective Sensitivity Scale is found in Appendix L. "Correct" subject answers for 38 of the items were assigned +1 point values. For the six "discriminating" items that had been identified through computational analyses on a computer program, weighted scores were assigned so that "correct" subject responses for each would count a +2 point value. A total of 50 points (38 + 12), thus, could be attained by an individual obtaining a "perfect score" on the Teacher Affective Sensitivity Scale.

Written permission to use the videotape excerpts was requested from the film companies who had originally produced these scenes. A copy of the request format utilized, along with the responses of the various firms, are included in Appendix B.

Establishment of Scale Reliability

The split-half statistical procedure was employed to gain information about the internal consistency of the scale. Using the odd/even separation technique (for the exception of the six "discriminating" items which were first matched according to their chi-square values), items were divided into two test halves and then scored separately. This division yielded two scores per subject. These scores were then correlated.

Also, a check of scale stability was made. The TASS was given twice to the same group of subjects (n = 25) with a two-week time interval between administrations. The length of this interim between pre- and post-testing periods was intended to be short enough to limit the intrusion of uncontrolled variables on subject responses, yet long enough to diminish the effects of subject practice.

Validation Procedures

Construct Validity

Two procedures were used to ascertain an index of the scale's construct validity. Pre- and post-administrations of the Teacher Affective Sensitivity Scale were given to undergraduate Education 300 students (Experimental Group I, $n_1 = 164$, $n_2 = 89$) and to Biological Science 102 students (Control Group I, $n_1 = 178$, $n_2 = 155$) at Washington State University. Three null hypotheses were tested to determine if there was a positive relationship between the content of the course taken by Experimental Group I and the constructs measured by the Teacher Affective Sensitivity Scale.

Null Hypothesis 1: There is no significant difference between the pre- and post-test scores of Experimental Group I on the Teacher Affective Sensitivity Scale.

Null Hypothesis 2: There is no significant difference between the pre- and post-test scores of Control Group I on the Teacher Affective Sensitivity Scale.

Null Hypothesis 3: There is no significant difference in gain scores of Experimental Group I and Control Group I on the post-test of the Teacher Affective Sensitivity Scale.

One of the objectives of Education 300, Human Development and Education, is the practical application of psychological concepts related to human development, learning, motivation, individual differences, and the teaching-learning process to the actual classroom setting. It was hypothesized that if the particular changes in Experimental Group I scores between the pre- and post-test administrations parallelled the types of changes expected as the result of this teacher-training course, then some measure of the scale's construct validity would be demonstrated. Control Group I was used to determine if changes in experimental Group I scores were associated with the teacher education course (Education 300) or with other intervening variables.

A crucial point concerning the purpose of the present study needs to be advanced to clarify the testing procedures described here. The investigator attempted to develop a scale to measure teacher affective sensitivity. No attempt was made to develop a training program to improve teacher affective sensitivity. Consequently, to obtain partial assessments of the construct validity of the TASS, the investigator utilized education courses that were assumed to have an impact on the affective sensitivity of the student participants. It is possible that the courses taken by Experimental Group I and Experimental Group II subjects did not actually influence this interpersonal dimension. Hence, any conclusions concerning the validity of the TASS (i.e., Null Hypotheses 1 to 11) based on the scores of these subjects, must be considered tentative. As described in the Implications for Further Research, the investigator believes that it is imperative to develop a training program specifically designed to effect participant levels of affective sensitivity, and to use subject scores changes to ascertain an accurate appraisal of the validity of the TASS.

As a second measure of the scale's construct validity, pre- and post-administrations of the Teacher Affective Sensitivity Scale were given to graduate students in a non-education class, Anthropology 509, Cultural Ecology (Control Group II). Education 562 is designed for counselors, rather than teachers per se, and hence cannot be considered as part of the target population for which this scale was designed. However, practicum students were used in an attempt to test the scale's construct validity because like Education 300 (Experimental Group I), Education 562 (Experimental Group II) was assumed to have some impact on each participants level of affective sensitivity. (Note: one of the students enrolled in Education 562 had been employed as a judge during the construction phase of the multiple-choice items.

This situation occurred because students frequently enroll for several semesters of practicum. This student, consequently, was not included in the experimental sample).

Experimental Group II and Control Group II were used to test if there was a positive relationship between the content of the course taken by Experimental Group II and the constructs measured by the Teacher Affective Sensitivity Scale. The following null hypotheses were tested.

Null Hypothesis 4: There is no significant difference in the pre- and post-test scores of Experimental Group II on the Teacher Affective Sensitivity Scale.

Null Hypothesis 5: There is no significant difference in the pre- and post-test scores of Control Group II on the Teacher Affective Sensitivity Scale.

Null Hypothesis 6: There is no significant difference in gain scores of Experimental Group II and Control Group II on the post-test of the Teacher Affective Sensitivity Scale.

Concurrent Validity

The post scores of Experimental Group II were also used to attain an index of the scale's concurrent validity. Supervisor, instructor, and peer ratings of each practicum student's affective sensitivity were correlated with the post scores of Experimental Group II. The following null hypotheses were formulated to determine if a positive relationship existed between supervisor, instructor, and peer ratings and subject scores on the Teacher Affective Sensitivity Scale.

Null Hypothesis 7: There is no significant correlation between Experimental Group II scores on the Teacher Affective Sensitivity Scale and supervisor ratings of the subjects.

Null Hypothesis 8: There is no significant correlation between Experimental Group II scores on the Teacher Affective Sensitivity Scale and pooled instructor rankings of the subjects.

Null Hypothesis 9: There is no significant correlation between subject scores on the Teacher Affective Sensitivity Scale and pooled peer ratings of the subjects.

The analysis of variance technique (Ebel, 1951) was used to test for reliability among instructor and peer ratings. The following null hypothesis was also tested.

Null Hypothesis 10: The pooled instructor and peer rankings are not significantly correlated with subject scores on the Teacher Affective Sensitivity Scale.

Predictive Validity

A comparison between the pre-test scores of Experimental Group II and the post-peer and instructor pooled-ratings of Experimental Group II was made to obtain a measure of the scale's predictive validity. The following hypothesis was stated in null form to test this relationship.

Null Hypothesis 11: There is no significant correlation between the pre-test scores of Experimental Group II on the Teacher Affective Sensitivity Scale and the post-ratings (pooled peer--instructor rankings) of the subjects.

Content Validity

The process of selecting the items themselves, the item analyses, as well as the other procedural steps, should provide some notion of the scale's content validity. In addition, the checks of reliability and validity already described should furnish some evidence of the ability of this type of videotaped scale to enable a transfer from a theoretical to an operational definition of affective sensitivity.

Statistical Analysis of the Data

Several statistical examinations were made to evaluate the data. First, reliability coefficients were computed by using the split-half procedure (Spearman-Brown "Prophecy Formula"), and the test-retest method.

Second, t ratios were computed to assess the significance of the differences between means. For pre- and post-tests of the same treatment groups, t tests for correlated samples were used. For those comparing Experimental and Control groups, t tests for non-correlated samples were employed. Third, analysis of variance was utilized to determine whether score changes of the Experimental and Control groups could be distinguished. Fourth, non-parametric (chi-square) tests were used to compare the numbers of Experimental and Control Group members who experienced/did not experience score gains. Fifth, the analysis of variance technique was utilized to test for reliability among instructor and peer ratings of Experimental Group II participants. Finally, a number of correlation coefficients were generated and examined.

CHAPTER 6

RESULTS

Analysis of the Audiovisual Instrument

To evaluate the degree to which the final media episodes of the TASS satisfied the "Selection Criteria" specified during the initial phase of the investigation, a number of analyses were made. These selection specifications and the assessments that relate to them are presented in this first section of Chapter 6.

Selection Criterion 1

> The videotape excerpts are representative of a diverse array of human emotions.

To test Criterion 1, ten subjects viewed the video portion of the TASS and simultaneously identified the emotional states of the students depicted on the monitor. For each scene, the respondents listed a specific adverb or adverbial phrase that they believed most accurately described the feeling of the student. A complete presentation of these responses is given in Appendix K. To summarize these findings, the 10 viewers identified 88 different adverbial descriptors. These data suggest that the videotape excerpts of the TASS do portray diverse human affective expressions.

Because the Plutchik model of emotions was used to collect the original media episodes, a comparison was made between the 88 adverb/adverbial phrases and the 24 affective dimensions encompassed in Plutchik's conceptual framework. Table 2 outlines the Plutchik categories and delineates the

adverbial descriptors (and respective frequencies) that seem most closely associated with them.

Selection Criterion 2

For each basic emotion, a series of excerpts are included which represent increasing intensities of the emotion.

Information displayed in Table 2 shows that the majority of excerpts focused on students who experienced "medium" or "low intensity" emotions. Of the total number of distinct adverbial descriptors identified by the 10 respondents, 5 (5.7%) fell in the "high intensity" range, 39 (44.3%) appeared to be of "medium intensity," and 38 (43.1%) fell in the "low intensity" range. Six adverbial descriptors (6.8%) did not seem to fit any of the categories of the Plutchik scheme.

The investigator speculates that two conditions may, at least partially, account for the preponderance of "medium intensity" and "low intensity" emotions on the TASS. Firstly, it may be that human beings reveal "high intensity" emotions (such as loathing and rage) less frequently than medium-to-low intensity expressions (such as anger, gloominess and boredom). Secondly, although examples of "high intensity" affective states were incorporated in the initial videotape recordings, many of these scenes were eliminated during subsequent scale revisions because they seemed artificial or contribed. As a result, although the scenes on the final scale are diverse, they are not equally representative of the intensity levels described by Plutchik.

Selection Criterion 3

A variety of student grade levels ranging from K-12 are depicted on videotape.

The data in the left hand columns of Table 3, Grade Level, Sex, and Racial Identity of Students Depicted on the TASS Videotape," indicate that

TABLE 2

THE CLASSIFICATION AND FREQUENCIES OF ADVERBIAL DESCRIPTORS OF STUDENT FEELINGS INTO THE CATEGORIES OF PLUTCHIK'S MODEL OF EMOTIONS

High Intensity	Medium Intensity	Low Intensity
Rage	Anger	Annoyance
furious (1)	angry (1) burnt (1) defensive (13) defiant (1) mad (5) rebellious (1) truculent (1) why don't you shut up (1)	annoyed (1) disappointed (7) frustrated (17) picked on (1) pressured (1) stretched (1)
Ecstacy	Joy	Pleasure
thrilled (1)	excited (1) happy (2) joyful (1)	comfortable (1) clever (1) funny (1) not upset (1) pleased (3) relieved (1)
Admission	Acceptance	Incorporation
love (1)	accepted (3) self-assured (1) self-confident (1)	
Astonishment	Amazement	Surprise
	incredulous (1) uncomprehending (1)	confused (6) disoriented (1) uncertain (1)

TABLE 2 --Continued

High Intensity	Medium Intensity	Low Intensity
Terror	Fear	Timidity
	fearful (3) frightened (1) nervous (2) scared (2)	apprehensive (2) looking for support (1) self-conscious (1) shy (8) timid (2) unsure (2)
Grief	Dejection	Gloominess
	alone (2) dejected (2) desirous of personal attention (1) helpless (2) hurt (2) ignored (1) left-out (2) lonely (8) pained (1) rejected (2) resigned (1) unable to integrate (1)	anti-climaxed (1) concerned (1) depressed (1) discomforted (1) embarrassed (20) incompetent (2) shitty (2) uncomfortable (1) unhappy (1)
Loathing	Disgust	Boredom
vengeful (1)	disgusted (1) resentful (4) treated unfairly (1)	bored (6) indifference (1) oblivious (1) uninterested (1)
Anticipation	Expectancy	Attentiveness
eager (2)	curious (1) desirous of sharing (1) expectation (1) impatient (1)	contemplative (1) disinterested (1) focused on self (1) interested (7)

Non-classifiable descriptors: confident (1); extroverted (1); proud (10); smug (1); superior (1); swell-headed (1). Note: The numbers in parentheses within the table represent frequencies of respondent selections.

TABLE 3

GRADE LEVEL, SEX, AND RACIAL IDENTITY OF THE STUDENTS DEPICTED ON THE TASS VIDEOTAPE

Scene #	Student Grade Level				Sex		Racial Identity		
	K-3	4-6	7-9	10-12	Male	Female	Black	Chicano	White
1			X		X				X
2		X			X				X
3	X				X				X
4		X			X			X	
5		X			X				X
6			X		X				X
7		X			X				X
8				X	X				X
9				X	X				X
10		X				X	X		
11			X		X				X
12	X				X		X		
13	X					X	X		
14				X	X		X		
15				X	X		X		
16			X		X		X		
17	X					X	X		
18				X	X				X
19				X		X	X		
20		X			X				X
21			X		X				X
22		X			X				X
Totals	4	7	5	6	18	4	8	1	13

students of assorted age/grade levels are included on the instrument. Four (4) Kindergarten-3rd grade; seven 4th-6th grade; five 7th-9th grade, and six 10th-12th grade pupils are presented on the tape.

Selection Criterion 4

Both male and female students are represented on the videotape excerpts. The center columns of Table 3 show that focus scenes of 18 male and 4 female students are used on the TASS.

Selection Criterion 5

Students from different racial and ethnic backgrounds are depicted on the videotape.

The three right hand columns of Table 3 indicate that eight Blacks, one Chicano, and 13 White students are pictured on the pause segments of the TASS. Respondents focused on these particular pupils when responding to the scale items.

Analysis of the Multiple-Choice Instrument

Assessments of the Open-Ended Phrases

After the 24 judges (12 in Judge Group I and 12 in Judge Group II) had created statements descriptive of student affective expressions, percentage measures of agreement were calculated for each phrase. Simulation episodes that did not contain one statement category with a .50 or higher percentage agreement score were eliminated from the videotape. This measure of consistency of response provided the scale's first check of reliability. Presentations of the collated judge response categories, percentage agreement indices, and notations of the "correct" multiple-choice answers generated through this procedure are displayed in Appendix E. Appendix E also identifies the

videotape excerpts that were eliminated from the first preliminary form of the TASS.

The mean judge reported degree-of-difficulty in creating each locution of student feeling was analyzed. The intent of these data collection and examination was to insure that the scale would contain a continuum of items from easy to hard. However, as shown in Appendix F, judge reports of rating ease/difficulty were widely dispersed for each item; no patterns could be derived. Although mean averages were computed, this information was not useful in compiling the multiple-choice portion of the scale. This finding may suggest possible avenues for future empirical inquiry concerning the TASS. Firstly, if individuals are more adept or successful at identifying particular types of affectivity, it may be pertinent to correlate a subject's reported "degree of difficulty" in answering particular items and the subject's overall measure of affective sensitivity. Secondly, it may be useful to correlate a subject's "degree of difficulty" in responding to specific items with various personality traits.

Assessments of Item Discrimination

To mathematically identify "highly discriminating" scale items, subsets of "experts" and "non-experts" were chosen from Judge Group I and Judge Group II. Chi-square values and correlation coefficients were computed to test the hypothesis of no difference between the responses given by the "experts" and "non-experts" for each multiple-choice item. Six questions on the scale were identified as "highly discriminating" in that resultant correlations were negative or low. These were items which the "experts" answered correctly but the "non-experts" answered incorrectly.

Table 4 presents the chi-square ratios and correlation coefficients of the "highly discriminating" items; a complete display of the computations for the entire scale is provided in Appendix H.

TABLE 4

CHI-SQUARE AND CORRELATION COEFFICIENTS OF THE SIX HIGHLY DISCRIMINATING MULTIPLE-CHOICE ITEMS

Multiple-Choice Question No.	χ^2	r
3	5.599	-0.081
10	7.999	-0.317
19	7.999	-0.376
62	11.999	-0.454
65	5.599	-0.098
81	5.599	-0.174

The subsets of "experts" and "non-experts" whose answers were used to assess item discrimination were selected by three colleague-supervisors. The colleague-supervisors rank-ordered the judges in terms of their levels of affective sensitivity. Colleague-supervisor rankings for Judge Group I and Judge Group II participants are reported in Table 5.

A scrutiny of the data included in Table 5 shows the presence of three blank spaces (two on Chart 1 and one on Chart 2). These voids resulted because each colleague-supervisor (A, B, and C) had participated as a member of one of the judge groups prior to ranking the individuals within these assemblages. To prevent bias, therefore, the colleague-supervisors were instructed to omit their own names when compiling their ranking lists. As described in Chapter 5, two alternative procedures were utilized to compensate for the "missing" evaluative data. One of these methods entailed assigning each rater-judge a hypothetical mean-rank. This conjectured position was

TABLE 5

RANK ORDERING OF JUDGE GROUP I AND JUDGE GROUP II MEMBERS BY COLLEAGUE-SUPERVISORS

Judge #	Ranking Orders			Ranking Averages	Composite Ranking Order
	Colleague-Supervisor A (Judge #10)	Colleague-Supervisor B	Colleague-Supervisor C (Judge #8)		
Judge Group I					
1	8	9	8	8.3	9
2	10	10	10	10.0	11
3	9	7	9	8.3	9
4	4	8	5	5.7	6
5	7	11	7	8.3	9
6	6	6	6	6.0	7
7	2	1	3	2.0	2.5
8	1	2	( )	1.5	1
9	5	4	4	4.3	5
10	( )	3	1	2.0	2.5
11	3	5	2	3.3	4
12	11	12	11	11.3	12
Judge Group II					
15	12	4	8	8.0	9
16	9	5	12	8.7	11
17	2	1	10	4.3	3
18	10	10	11	10 3	12
19	4	9	5	6.0	5
20	1	3	1	1.7	1
21	5	11	4	6.7	7
22	3	( )	2	2.5	2
23	7	8	6	7.0	8
24	8	2	9	6.3	6
25	11	7	7	8.3	10
26	6	6	3	5.0	4

derived by averaging the ranks that the other two colleague-supervisors had given the rater. Table 6 contains (in parentheses) the mean-rank figures computed for the three colleague-supervisors.

Another methodology was employed to compensate for the missing rater-judge rankings. This second approach consisted of assigning each colleague-supervisor a hypothetical "first-place" self-ranking. The procedure relied on the assumption that if the colleague-supervisors had actually rated themselves they each would have chosen the top rank of "1". Table 7 depicts the data generated by this alternative method.

In addition to rank-orderings of Judge Group I and II members, Tables 5, 6, and 7 contain ranking-averages and composite-ranking orders. To assess differences/similarities in these computationally derived data, the three composite-ranking-orders for both judge groups were contrasted. Table 8 presents these comparisons. The figures rather dramatically demonstrate the amount of congruence between the various composite-rank orderings. The investigator interprets this parallel condition as an indication that the colleague-supervisors were not significantly biased by their previous judging activities when they rank-ordered the remaining members of the judge groups.

TABLE 6

RANK-ORDERING OF JUDGE GROUP I AND JUDGE GROUP II MEMBERS INCLUDING MEAN-RANKS FOR THE COLLEAGUE-SUPERVISORS

Judge #	Ranking Orders			Ranking Averages	Composite Ranking Order
	Colleague-Supervisor A (Judge #10)	Colleague-Supervisor B	Colleague-Supervisor C (Judge #8)		
Judge Group I					
1	9	9	9	9.0	9
2	11	10	11	10.7	11
3	10	7	10	9.0	9
4	5	8	6	6.3	6
5	8	11	8	9.0	9
6	7	6	7	6.7	7
7	3	1	4	2.7	3
8	1	2	(1.5)	1.5	1
9	6	4	5	5.0	5
10	(2)	3	1	2.0	2
11	4	5	3	4.0	4
12	12	12	12	12.0	12
Judge Group II					
15	12	5	8	8.3	9
16	9	6	12	9.0	11
17	2	1	10	4.3	3
18	10	11	11	10.7	12
19	4	10	5	6.3	5
20	1	4	1	2.0	1
21	5	12	4	7.0	7
22	3	(2.5)	2	2.5	2
23	7	9	6	7.3	8
24	8	2	9	6.3	6
25	11	8	7	8.7	10
26	6	7	3	5.3	4

TABLE 7

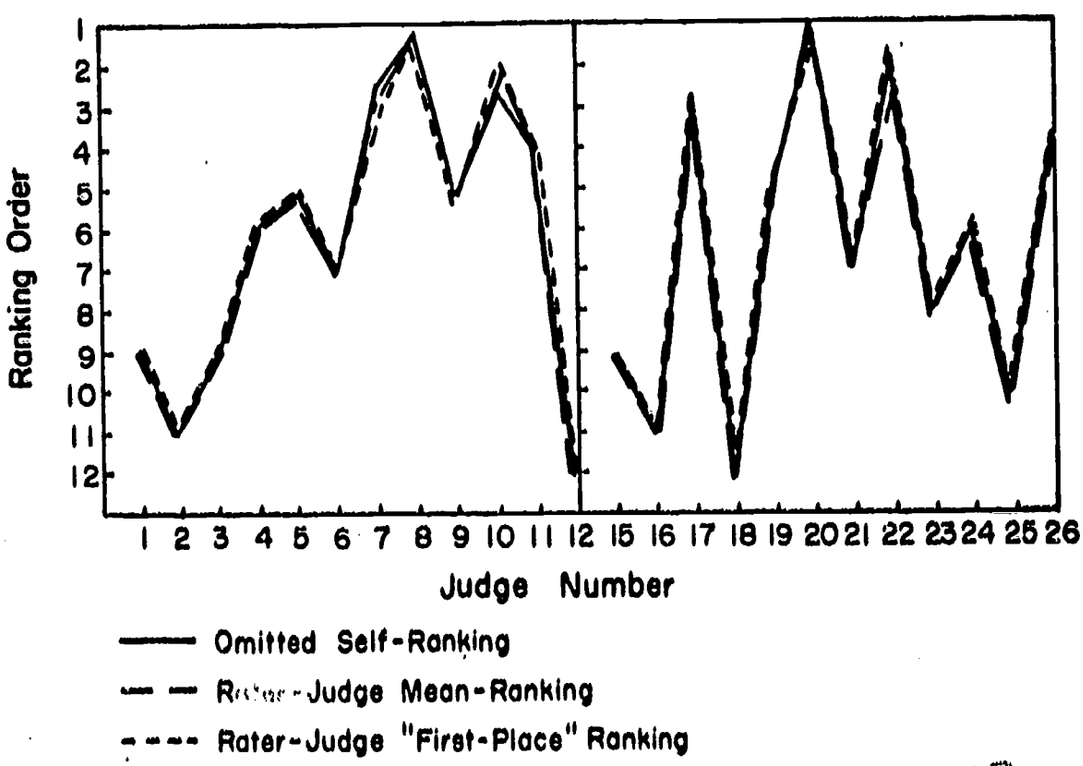
RANK ORDERING OF JUDGE GROUP I AND JUDGE GROUP II MEMBERS INCLUDING FIRST-PLACE RANKINGS FOR THE COLLEAGUE-SUPERVISORS

Judge #	Ranking Orders			Ranking Averages	Composite Ranking Order
	Colleague-Supervisor A (Judge #10)	Colleague-Supervisor B	Colleague-Supervisor C (Judge #8)		
			Judge Group I		
1	9	9	9	9.0	9
2	11	10	11	10.7	11
3	10	7	10	9.0	9
4	5	8	6	6.3	6
5	8	11	8	9.0	9
6	7	6	7	6.7	7
7	3	1	4	2.7	3
8	2	2	(1)	1.7	1
9	6	4	5	5.0	5
10	(1)	3	2	2.0	2
11	4	5	3	4.0	4
12	12	12	12	12.0	12
			Judge Group II		
15	12	5	8	8.333	9
16	9	6	12	9.000	11
17	2	2	10	4.667	3
18	10	11	11	10.667	12
19	4	10	5	6.333	5
20	1	4	1	2.000	1.5
21	5	12	4	7.000	7
22	3	(1)	2	2.000	1.5
23	7	9	6	7.333	8
24	8	3	9	6.667	6
25	11	8	7	8.667	10
26	6	7	3	5.333	4

TABLE 8

COMPARISONS OF COMPOSITE-RANKING-ORDERS

Judge Group I				Judge Group II			
Judge No.	Omission of Rater-Judge Self-Rankings	Inclusion of Rater-Judge Mean Rankings	Inclusion of Rater-Judge "First-Place" Rankings	Judge No.	Omission of Rater-Judge Self-Rankings	Inclusion of Rater-Judge Mean Rankings	Inclusion of Rater-Judge "First-Place" Rankings
1	9	9	9	15	9	9	9
2	11	11	11	16	11	11	11
3	9	9	9	17	3	3	3
4	6	6	6	18	12	12	12
5	9	9	9	19	5	5	5
6	7	7	7	20	1	1	1.5
7	2.5	3	3	21	7	7	7
8	1	1	1	22	2	2	1.5
9	5	5	5	23	8	8	8
10	2.5	2	2	24	6	6	6
11	4	4	4	25	10	10	10
12	12	12	12	26	4	4	4



The Kendall coefficient of concordance--W was used to test the degree of association between the ratings made by the colleague-supervisors (rater-judges). Siegel noted that the coefficient of concordance tends to be particularly useful in measuring inter-rater reliability when more than two raters are employed (Siegel, 1956, p. 229). Because the number of participants in the two judge groups exceeded the allowed in the statistic, the W ratios were converted to chi-square computations. Table 9 presents the assessments of inter-rater reliability calculated for colleague-supervisors A, B, and C.

TABLE 9

DEGREE OF ASSOCIATION BETWEEN THE COLLEAGUE-SUPERVISOR RANKINGS OF JUDGES

Variable	W	DF	X^2	Level of Significance
Colleague-Supervisor Rankings of Judge Group I Participants	.93162	11	30.74	$p < .01$
Colleague-Supervisor Rankings of Judge Group II Participants	.51510	11	17.00	$p < .20$ (not significant)

To evaluate further the expertise of the "expert" judges comparisons were made between the judge ranking-order positions and the scores of the judges on the multiple-choice (alternative half) form of the TASS. Figure 7 graphically contrasts these sets of data.

As a final assessment of the expertise of the "experts," comparisons were made between the scores of writer-judges (i.e., participants on the open-ended response scale half) and respondent-judges (i.e., participants on the multiple-choice scale half). Figure 8 displays these comparisons.

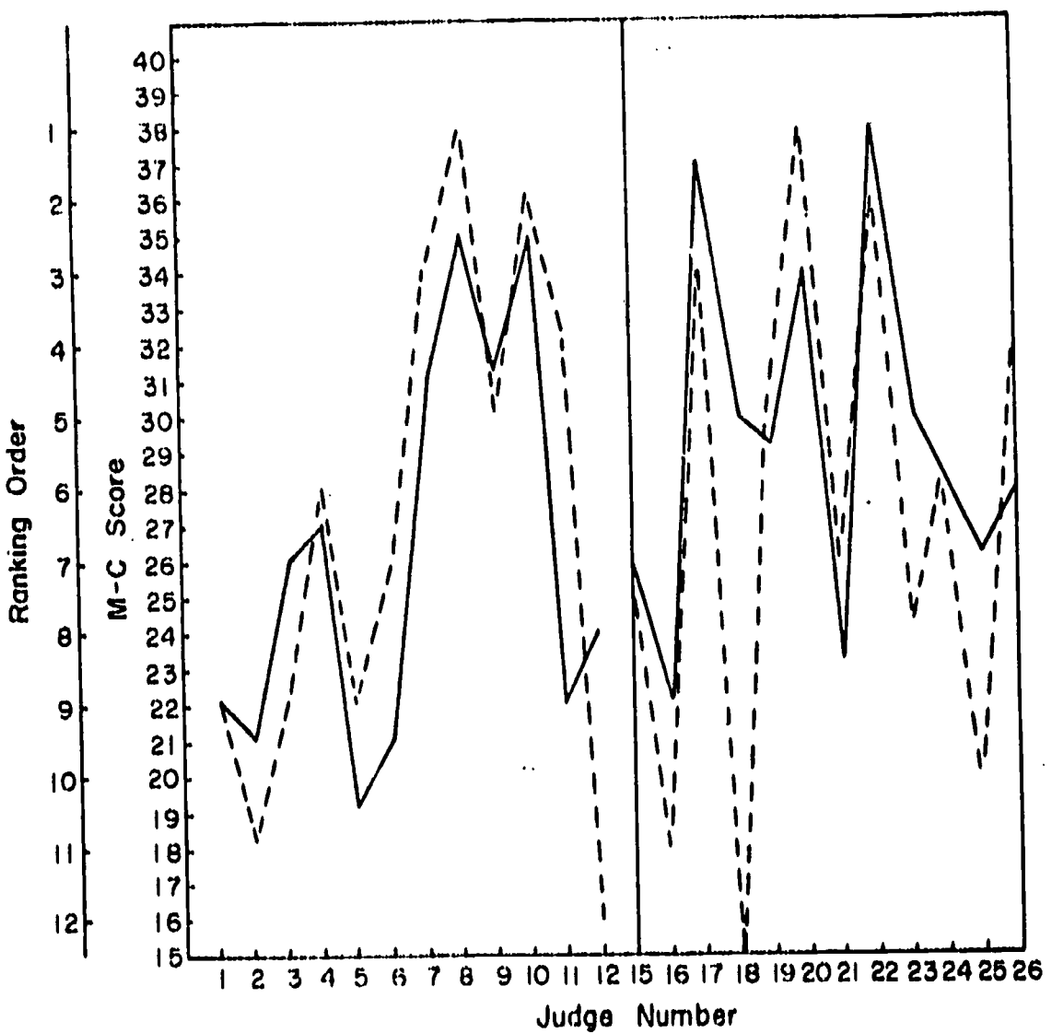


Fig. 7.--Comparison of Writer-Judge Scores and Judge Rank-Order Positions.

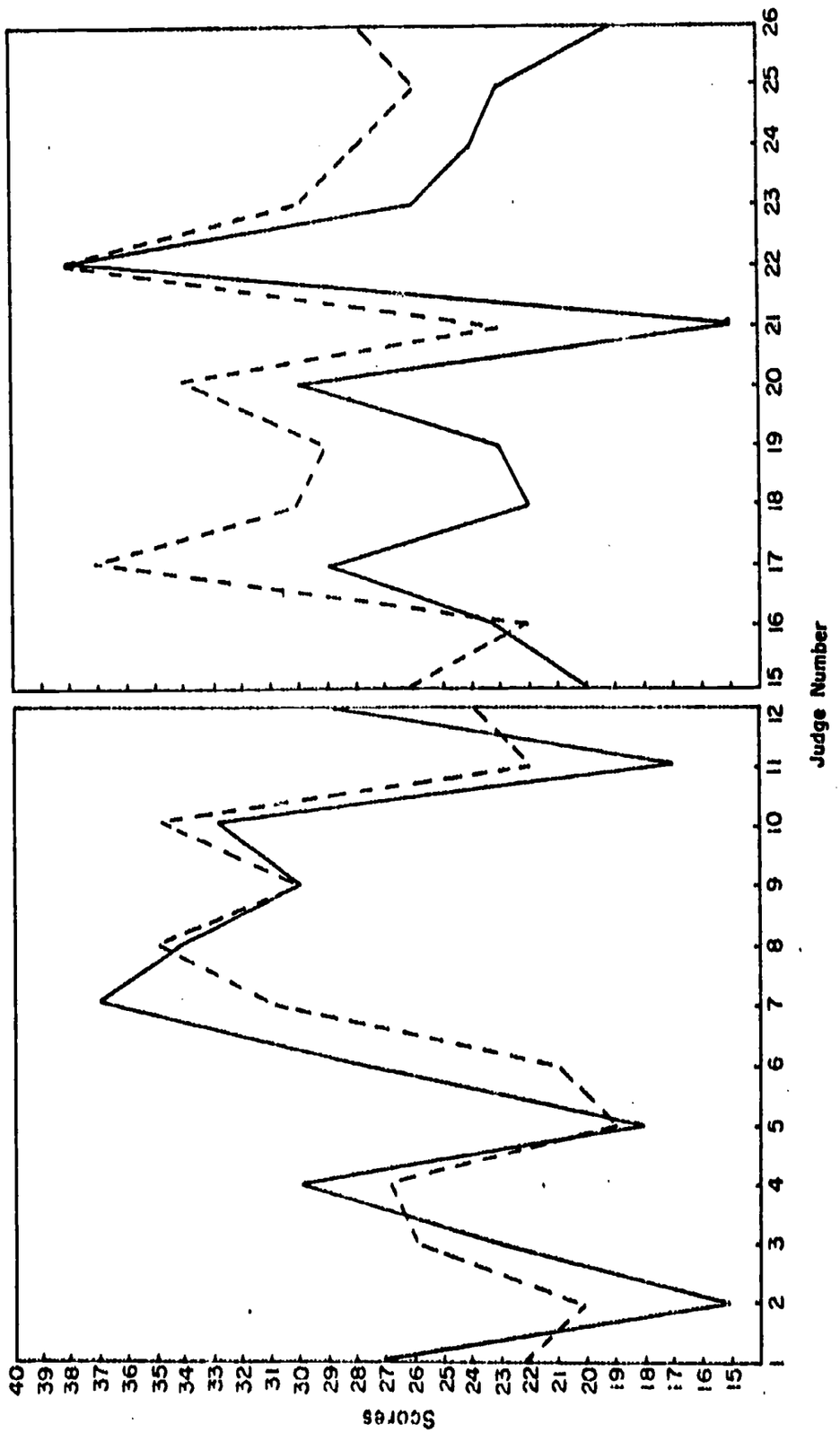


Fig. 8.--Comparison of Judge Scores on Open-Ended and Multiple-Choice Scale Halves.

Assessments of Scale Reliability

The Kuder-Richardson Formula 20 with the "stepped up" Spearman-Brown Prophecy was utilized to evaluate the internal consistency of the TASS. The split-half statistical method, applied to the answers of 164 respondents, yielded the reliability coefficient of .456 shown in Table 10.

TABLE 10

ESTIMATION OF SCALE RELIABILITY--THE INTERNAL-CONSISTENCY METHOD

Number of Subjects	Number of Multiple-Choice Items		$\bar{X}$		Kuder-Richardson 20 with Spearman-Brown Prophecy
	Odd	Even	Odd	Even	
164	22	22	12.80	12.30	.456

The test-retest method was computed as an additional assessment of scale reliability. The Coefficient of Stability and related data are presented in Table 11.

TABLE 11

ESTIMATION OF SCALE RELIABILITY--THE TEST-RETEST METHOD

Number of Subjects		Number of Multiple-Choice Items		$\bar{X}$		r
Pre	Post	Pretest	Posttest	Pretest	Posttest	
30	30	27.20	27.63	4.37	4.40	.673

Based on the results of these two assessments, the TASS appears to be sufficiently reliable for research purposes. However, it cannot be concluded that the instrument has adequate reliability for individual subject evaluations.

Assessments of Scale Validity

In this section, the eleven null hypotheses formulated to assess scale construct concurrent, and predictive validity are presented. Each null hypothesis is followed by a delineation of the results of the particular mathematical tests associated with the experimental conditions. The .05 and .01 levels of confidence are employed to evaluate statistical significance.

Before presenting the null hypotheses, it may be helpful to reiterate the major intent of the study. The central task entailed the development of a scale to measure teacher affective sensitivity. The purpose was not to train teachers to become more affectively sensitive. The null hypotheses and subsequent tests described below, thus, were used to gather preliminary assessments of the construct, concurrent, and predictive validity of the TASS--information that can be used for further scale refinement.

Null Hypothesis 1: There is no significant difference between the pre- and post-test scores of Experimental Group I subjects on the Teacher Affective Sensitivity Scale.

The t-test analysis for correlated samples was used to determine whether Experimental Group I subjects scored differently on the pre- and post-administrations of the TASS. Table 12 shows that no significant difference was evidenced. Indeed the pre- and post-performances of the group members were markedly similar. Based on these results, Null Hypothesis 1 was not rejected.

TABLE 12

T-VALUE BETWEEN PRE- AND POST-TASS MEAN-SCORES OF EXPERIMENTAL GROUP I PARTICIPANTS

Subject Group	Pre-test			Post-test			T-Ratio
	N_1	$\bar{X}_1$	S.D.$_1$	N_2	$\bar{X}_2$	S.D.$_2$	
Experimental Group I	89	26.46	4.65	89	27.11	5.48	1.2729 n.s.

The affective sensitivity of Experimental Group I participants did not appear to increase during the semester. To explain this finding, two general postulates can be advanced. It may be that the experiences in Education 300 were not effective in terms of increasing participant levels of affective sensitivity (a plausible possibility, particularly since the development of such sensitivity was not a specific aim of the course). Alternatively, it may be that the subjects did experience an increase in their levels of affective sensitivity during the experimental period, but the TASS was not able to measure these changes.

If this second explanation is accurate, then the validity of the TASS must be seriously questioned. Because of this possibility, additional information was gathered by the investigator to clarify the point. At the end of the experimental period (one semester of enrollment in Education 300) the subjects in Experimental Group I were requested to report their personal perceptions of whether they had experienced an "increase"--"decrease"--"no change" in their own levels of affective sensitivity during the semester. These self-assessments are recorded in Table 13. The fact that over 55 percent of the respondents did not believe that they had increased in their ability to identify student feelings, would seem to support the first explanation of

the results (i.e., the experimental setting did not positively effect subject levels of affective sensitivity). Thus, although the scores of Experimental Group I participants did not change significantly, this finding should not be interpreted to mean that the TASS is therefore invalid.

TABLE 13

EXPERIMENTAL GROUP I SELF-REPORTED CHANGES IN AFFECTIVE SENSITIVITY

Number of Subjects	Number Indicating Increase In Affective Sensitivity (+)	Number Indicating No Change In Affective Sensitivity (0)	Number Indicating Decrease In Affective Sensitivity (-)
112	49 (43.7%)	62 (55.4%)	1 (.9%)

Null Hypothesis 2: There is no significant difference between the pre- and post-test scores of Control Group I subjects on the Teacher Affective Sensitivity Scale.

The data displayed in Table 14 disclose that, as in the case of Experimental Group I, no significant difference was found between the pre- and post-test scores of the first control group (students enrolled in Biological Science 104). The null hypothesis that no differences would be found was not rejected. It appears notable, however, that even though the control group was not exposed to affective sensitivity training, the direction of the score gains was positive--although only slightly so ($\bar{X}_1$--26.20; $\bar{X}_2$--27.09).

TABLE 14

T-VALUE BETWEEN PRE- AND POST-TASS MEAN-SCORES FOR CONTROL GROUP I MEMBERS

Subject Group	Pre-test			Post-test			T-Ratio
	N_1	$\bar{X}_1$	S.D.$_1$	N_2	$\bar{X}_2$	S.D.$_2$	
Control Group I	165	26.20	4.69	165	27.09	4.32	2.325 n.s.

Null Hypothesis 3: There is no significant difference in gain scores of Experimental Group I and Control Group I on the post-test of the Teacher Affective Sensitivity Scale.

Analysis of variance of the TASS mean-scores of Experimental Group I and Control Group I revealed that score changes from pre-to-post administrations for the two samples did not differ significantly. Experimental Group I participants did not have higher gains than Control Group I subjects. The data exhibited in Table 15, therefore, do not refute the null hypothesis of no difference in the gain scores.

TABLE 15

ANALYSIS OF VARIANCE BETWEEN TASS SCORE GAINS OF EXPERIMENTAL GROUP I AND CONTROL GROUP I SUBJECTS

Variance	DF	Sum Squares	Mean Square	F-Ratio
Between Groups	1	0.0938	.938	
Within Groups	238	5248.1563	22.0511	.0043 n.s.
Total	239	5248.2500		

A t-test for non-correlated data was also computed. Table 16 shows that the mean score gains for Experimental Group I and Control Group I participants were not significantly different. Null Hypothesis 3, therefore, was not rejected.

TABLE 16

T-VALUE FOR SCORE GAINS OF EXPERIMENTAL GROUP I AND CONTROL GROUP I PARTICIPANTS

Subject Group	N	Mean Gain	S.D.	T-Ratio
Experimental Group I	89	.900	4.63	.065 n.s.
Control Group I	155	.860	4.74	

In addition to the similarity between the mean gain performances of the two groups shown in Table 16, a frequency comparison of subjects evidenced more parallelism. About an equal proportion of Experimental and Control members experienced an increase in affective sensitivity. As displayed in Table 17, 56 percent of the former group scored higher on the post-test administration compared with 59 percent of the Control section.

Further evidence that the differences between Experimental I and Control I score changes were not significant was demonstrated by the statistically insignificant chi-square ratio that appears in Table 18.

TABLE 17

FREQUENCY COMPARISON OF EXPERIMENTAL GROUP I AND CONTROL GROUP I SCORE CHANGES

Score Changes	Experimental Group I			Control Group I		
	Frequencies	Proportion		Frequencies	Proportion	
		Absolute	Cumulative		Absolute	Cumulative
13						
12				1	.006	.006
11				2	.013	.019
10	1	.011	.011	3	.019	.031
9	1	.011	.022	1	.006	.045
8	3	.034	.056	1	.006	.052
7	5	.056	.112	6	.039	.090
6	4	.045	.157	5	.032	.123
5	7	.079	.236	12	.077	.200
4	8	.090	.325	13	.084	.283
3	7	.079	.403	14	.090	.374
2	9	.101	.504	23	.148	.523
1	5	.056	.561	10	.065	.587
0	7	.079	.639	17	.110	.697
-1	7	.079	.718	8	.052	.748
-2	9	.101	.819	8	.052	
-3	1	.011	.830	3	.019	.819
-4	4	.045	.875	8	.052	.871
-5	2	.022	.898	8	.052	.922
-6	2	.022	.920	3	.019	.942
-7	2	.022	.942	1	.006	.948
-8	1	.011	.953	2	.013	.961
-9	2	.022	.976	3	.019	.981
-10	1	.011	.988			
-11	1	.011	1.000	2	.013	.994
-12						
-13						
-14						
-15						
-16						
-17				1	.006	1.000
	n=89			n=155		

TABLE 18

CHI-SQUARE RATIO COMPARING NUMBERS OF EXPERIMENTAL GROUP I AND CONTROL GROUP I PARTICIPANTS WHO EXPERIENCED SCORE GAINS

Variable	Experimental Group I	Control Group I	X^2
	N=89	N=155	
Subjects who scored higher	50 (56%)	91 (59%)	1.53 n.s.
Subjects who scored lower	32 (36%)	47 (30%)	
Subjects without score changes	7 (8%)	17 (11%)	

An important point concerning the testing of Null Hypothesis 4 and all of the succeeding null hypotheses (numbers 5-11) needs to be expressed, prior to the presentation of the remaining findings. The numbers of participants in Experimental Group II (pre-test n_1=10, post-test n_2=9) and Control Group II (pre-test n_1=10, post-test n_2=10) were small. Because existent graduate classes (Practicum and Cultural Anthropology) were utilized to conduct these scale examinations, it was not possible to specify the number of subjects included in each group. Thus, only trends, rather than conclusions, can be drawn from the collected data. The information is displayed, nevertheless, to demonstrate the procedures that were utilized, and to suggest possible approaches for future scale validity assessments.

Null Hypothesis 4: There is no significant difference in the pre- and post-scores of Experimental Group II subjects on the Teacher Affective Sensitivity Scale.

The t-value in Table 19 between the pre- and post-mean scores of Experimental Group II shows that the practicum students did not experience significant changes in scores. Although an increase in the mean occurred, the change was too small to reject Null Hypothesis 4. A difference in the number of subjects from pre- to post-administrations (n_1=10, n_2=9) resulted because one of the experimental subjects (H) did not participate in the second testing period. To calculate the t-test, an adjusted pre-test mean ($\bar{X}_{1a}$) was computed by eliminating the pre-test score of subject H.

TABLE 19

T-VALUE BETWEEN PRE- AND POST- TASS MEAN SCORES OF EXPERIMENTAL GROUP II SUBJECTS

Subject Group	Pre-test			Pre-test (Adjusted)			Post-test			T-Ratio
	N_1	$\bar{X}_1$	S.D.$_1$	N_{1a}	$\bar{X}_{1a}$	S.D.$_{1a}$	N_2	$\bar{X}_2$	S.D.$_2$	
Experimental Group II	10	25.4	3.88	9	25.67	4.00	9	26.22	3.29	-.5653 n.s.

An explanation concerning the negative statistic recorded in Table 19 (and in some of the tables that follow) may be pertinent. Because Experimental Group II and Control Group II contained small samples (n=10), even slight fluctuations in scores may have caused these negative t-ratios. The negative results, in other words, are probably more a reflection of sample size than the actual relationship between the variables.

Experimental Group II members were also requested to report personal perceptions of whether they had experienced an "increase," a "decrease," or

"no change" in their own affective sensitivity during the semester. These self-assessments are presented in Table 20. Over half of the participants in Experimental Group II postulated that they had not experienced an increase in their levels of affective sensitivity during the Practicum. Thus, although the investigator had assumed that the subjects taking this counselor-education course would be exposed to activities that would facilitate their growth in affective sensitivity, a majority of the students themselves believed that they had not grown in this dimension. The small mean changes between pre- and post-scores of Experimental Group II members (see Table 19) appears to be consistent with the self-assessment data provided by the subjects.

TABLE 20

EXPERIMENTAL GROUP II SELF-REPORTED CHANGES IN AFFECTIVE SENSITIVITY

Number of Sub-jects	Number Indicating Increase In Affective Sensitivity (+)	Number Indicating No Change In Affective Sensitivity (0)	Number Indicating Decrease In Affective Sensitivity (-)
9	3 (33%)	5 (56%)	1 (11%)

Null Hypothesis 5: There is no significant difference in the pre- and post-test scores of Control Group II subjects on the Teacher Affective Sensitivity Scale.

Analysis of data in Table 21 shows that the mean-scores of Control Group II were not significantly different between pre- and post-scale administrations. Null hypothesis 5 was therefore not rejected.

TABLE 21

T-VALUE BETWEEN PRE- AND POST- TASS MEAN-SCORES OF CONTROL GROUP II SUBJECTS

Subject Group	Pre-test			Post-test			T-Ratio
	N	$\bar{X}_1$	S.D.$_1$	N	$\bar{X}_2$	S.D.$_2$	
Control Group II	10	26.10	4.44	10	27.90	4.95	-1.193 n.s.

Null Hypothesis 6: There is no significant difference in gain scores of Experimental Group II and Control Group II on the post-test of the Teacher Affective Sensitivity Scale.

As indicated in Table 22, analysis of variance of the TASS mean-scores of Experimental Group II and Control Group II revealed that score changes from pre-to-post administrations for the two samples did not differ significantly. The pre- and post-test mean-scores were similar. Both groups demonstrated slightly higher scores on the second testing. But Experimental Group II participants did not have higher gains than Control Group II subjects. The null hypothesis of no significant difference in the gain scores of the two samples was, therefore, not rejected.

TABLE 22

ANALYSIS OF VARIANCE BETWEEN TASS GAIN SCORES OF EXPERIMENTAL GROUP II AND CONTROL GROUP II SUBJECTS

Variance	DF	Sum Squares	Mean Square	F-Ratio
Between Groups	1	7.3357	7.3357	
Within Groups	17	149.8222	8.8131	.8324 n.s.
Total	18	157.1580		

A frequency comparison of Experimental Group II and Control Group II subjects further delineated the similarity between the gain scores of these two samples. Slightly more Control members experienced an increase in affective sensitivity than Experimental respondents. As illustrated in Table 23, 56 percent of the Experimental Group, compared with 60 percent of the Control Group scored higher on the past-test administration. This difference represents a reversal from what the investigator had assumed would occur (i.e., experimental subject gain scores would exceed those of the control group). However, the finding is not significant due to the small sample sizes, and the fact that a specific treatment to increase affective sensitivity was not presented to the experimental participants.

TABLE 23

FREQUENCY COMPARISON OF EXPERIMENTAL GROUP II AND CONTROL GROUP I SCORE CHANGES

Score Changes	Experimental Group II			Control Group II		
	Frequencies	Proportion		Frequencies	Proportion	
		Absolute	Cumulative		Absolute	Cumulative
6				1	.100	.100
5				2	.200	.300
4	2	.222				
3						
2	2	.222	.444	3	.300	.600
1	1	.111	.556			
0	2	.222	.778	1	.100	.700
-1				2	.200	.900
-2	1	.111	.889	1	.100	1.000
-3						
-4						
-5						
-6	1	.111	1.000			

The number of Experimental Group II and Control Group II participants who experienced score changes was further evaluated through a t-test comparison of mean gains. The resultant t-ratio of .912 displayed in Table 24 indicates the similarity between the subject mean gains. Based on this finding, Null Hypothesis 6 cannot be rejected.

TABLE 24

T-VALUE FOR SCORE GAINS OF EXPERIMENTAL GROUP II AND CONTROL GROUP II PARTICIPANTS

Subject Group	N	Mean Gain	S.D.	T-Ratio
Experimental Group II	9	.556	3.127	.912 n.s.
Control Group II	10	1.800	2.821	

Null Hypothesis 7: There is no significant correlation between Experimental Group II post-scores on the Teacher Affective Sensitivity Scale and supervisor ratings of the subjects.

As mentioned in Chapter 5, the supervisor of each practicum student was requested, late in the semester, to assess the supervisee's affective sensitivity. This information was intended to provide the first assessment of the concurrent validity of the TASS. However, due to a lack of variance in the collected supervisor ratings, (as shown in Table 25, 9 of 10 ratings fell in the "moderate" category) no attempt was made to statistically evaluate the relationship between these ratings and subject post-scores on the TASS.

TABLE 25

SUPERVISOR RATINGS OF SUPERVISEES (EXPERIMENTAL GROUP II SUBJECTS)

Supervisee	Supervisor Ratings				
	Very High A.S.	High A.S.	Moderate A.S.	Low A.S.	Very Low A.S.
A			X		
B		X			
C			X		
D			X		
E			X		
F			X		
G			X		
H			X		
I			X		
J			X		

Null Hypothesis 8: There is no significant correlation between subject post-scores on the Teacher Affective Sensitivity Scale and pooled-instructor rankings of the subjects.

To obtain a second measurement of concurrent validity, the three instructors of Education 562, Practicum in School Counseling, were requested to rank the 10 Experimental Group II participants in terms of their perceived levels of affective sensitivity. Table 26 presents the correlation coefficient computed between the post-scores of the group members and the pooled-instructor rankings. Because Subject H of Experimental Group II did not

participate in the post-test administration, the correlation coefficient included a sample size of 9, rather than 10, subjects.

TABLE 26

CORRELATION COEFFICIENT BETWEEN EXPERIMENTAL GROUP II POST- TASS SCORES AND POOLED INSTRUCTOR RANKINGS OF SUBJECT AFFECTIVE SENSITIVITY

Subject Group	Subject	TASS Post-Scores	Score Order	$\bar{X}_1$	S.D.$_1$	Pooled Instructor Rankings	$\bar{X}_2$	S.D.$_2$	r
Experimental Group II n=9	A	25	6			8			
	B	22	8.5			9			
	C	27	4.5			4			
	D	22	8.5			6			
	E	29	2.5			7			
	F	32	1	26.22	3.242	1	5.00	2.58	.380 n.s.
	G	27	4.5			3			
	H	( )	( )			( )			
	I	29	2.5			5			
	J	23	7			2			

Although the correlation between subject scores and instructor rankings was not statistically significant (see Table 26) a visual presentation was constructed to graphically compare these two assessments of Experimental Group II members. The display of data in Figure 9 shows that some agreement exists between the subject ranking positions and subject TASS scores.

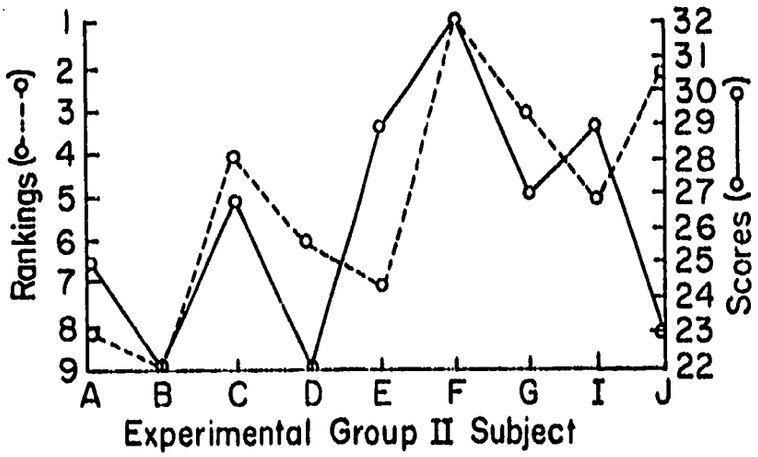


Fig. 9.--Comparison of Experimental Group II Post-Scores and Pooled Instructor Rankings.

The analysis of variance technique was employed to assess the inter-rater reliability of the three instructor ranking orders. The raw data are presented in Appendix J the results of the analysis of variance computations are displayed in Table 27. Because the mean values for all of the instructor rankings were identical (5.50), there was no interaction between the rankings that could be assessed. Consequently, the resultant F-ratio was 0.0.

TABLE 27

ANALYSIS OF VARIANCE--INSTRUCTOR RANKING ORDERS

Variance	DF	Sum Squares	Mean Square	F-Ratio
Between Groups	2	0.0	0.0	
Within Groups	27	247.50	9.1667	0.0 n.s.
Total	29	247.50		

Null Hypothesis 9: There is no significant correlation between subject scores on the Teacher Affective Sensitivity Scale and pooled peer-rankings of the subjects.

At the end of the semester of practicum experience, Experimental Group II subjects were asked to rank order each other in terms of levels of affective sensitivity. Table 28 contains the correlation coefficient computed between the post-scores of the subjects and the pooled peer-ranking-orders. Null Hypothesis 9 was not rejected in that the correlation coefficient was not statistically significant.

TABLE 28

CORRELATION COEFFICIENT BETWEEN EXPERIMENTAL GROUP II POST- TASS SCORES AND POOLED PEER RANKINGS OF SUBJECT AFFECTIVE SENSITIVITY

Subject Group	Subject	TASS Post-Scores	Score Order	$\bar{X}_1$	S.D.$_1$	Pooled Instructor Rankings	$\bar{X}_2$	S.D.$_2$	r
Experimental Group II n=9	A	25	6			2			
	B	22	8.5			9			
	C	27	4.5			7			
	D	22	8.5			6			
	E	29	2.5	26.22	3.292	8	5.00	2.58	.317 n.s.
	F	32	1			5			
	G	27	4.5			3			
	H	( )	( )			( )			
	I	29	2.5			1			
	J	23	7			4			

To assess the inter-rater reliability of the practicum students who ranked each other, the analysis of variance statistic was again computed. The resultant F-ratio is shown in Table 29; the raw data from which the proportions were calculated are included in Appendix J.

TABLE 29

ANALYSIS OF VARIANCE--PEER RANKING ORDERS

Variance	DF	Sum Squares	Mean Square	F-Ratio
Between Groups	10	0.0	0.0	
Within Groups	99	907.5000	9.1667	0.0 n.s.
Total	109	907.5000		

As was the case when the analysis of variance statistic was employed to measure the inter-rater reliability of instructor-raters, the mean rankings calculated for the peer-raters were identical (5.50). This lack of interaction, therefore, again resulted in an F-ratio of 0.0.

Null Hypothesis 10: The pooled rankings of instructors and peers are not significantly correlated with subject scores on the TASS.

The rankings of Experimental Group II participants that were created by instructors and peers were combined to obtain another assessment of scale content validity. The composite ranking order derived from this procedure is contained in Appendix J. Table 30 indicates that the pooled rankings of instructors and peers were not significantly correlated with subject scores on the TASS. Null Hypothesis 10 could not be rejected.

TABLE 30

CORRELATION COEFFICIENT BETWEEN EXPERIMENTAL GROUP II POST-TASS SCORES AND COMPOSITE PEER-INSTRUCTOR RANKING ORDERS

Subject Group	Subject	TASS Post-Scores	Score Order	$\bar{X}_1$	S.D.$_1$	Instructor Peer Pooled Rankings	$\bar{X}_2$	S.D.$_2$	r
Experimental Group II	A	25	6			5			
	B	22	8.5			9			
	C	27	4.5			7			
	D	22	8.5			6			
	E	29	2.5			8			
	F	32	1	26.222	3.292	2	5.00	2.54	-.372 n.s.
	G	27	4.5			4			
	H	( )	( )			( )			
	I	29	2.5			2			
	J	23	7			2			

Although a comparison between the raw data (TASS post-scores and the peer-instructor rankings) indicates some correspondence between these indices, the correlation coefficient indicates that the relationship may have occurred due to chance factors alone.

Null Hypothesis 11: There is no significant correlation between the pre-rest scores of Experimental Group II on the TASS and post instructor-peer-rankings of the subjects.

Null Hypothesis 11 was formulated to assess the predictive validity of the TASS. As shown in Table 31, the correlation coefficient calculated for Experimental Group II pre-test scores and post-instructor-peer rankings was significant at the .01 level. Null Hypothesis 11 was rejected. Further discussion of the implications of this finding are discussed in Chapter 7.

TABLE 31

CORRELATION COEFFICIENT BETWEEN EXPERIMENTAL GROUP II PRE-TEST SCORES AND POST-POOLED RANKINGS

Subject Group	Subject	TASS Post-Scores	Score Order	$\bar{X}_1$	S.D.$_1$	Instructor Peer Pooled Rankings	$\bar{X}_2$	S.D.$_2$	r
Experimental Group II	A	31	2			5			
	B	24	6			9			
	C	23	7.5			7			
	D	22	9	25.67	4.00	6			
	E	27	4			8	5.00	2.54	.797
	F	32	1			2			
	G	25	5			4			
	H	( )	( )			( )			p < .01
	I	28	3			2			
	J	19	10			2			

To further contrast test scores and peer rankings of Experimental Group II subjects, a presentation is provided in Figure 10.

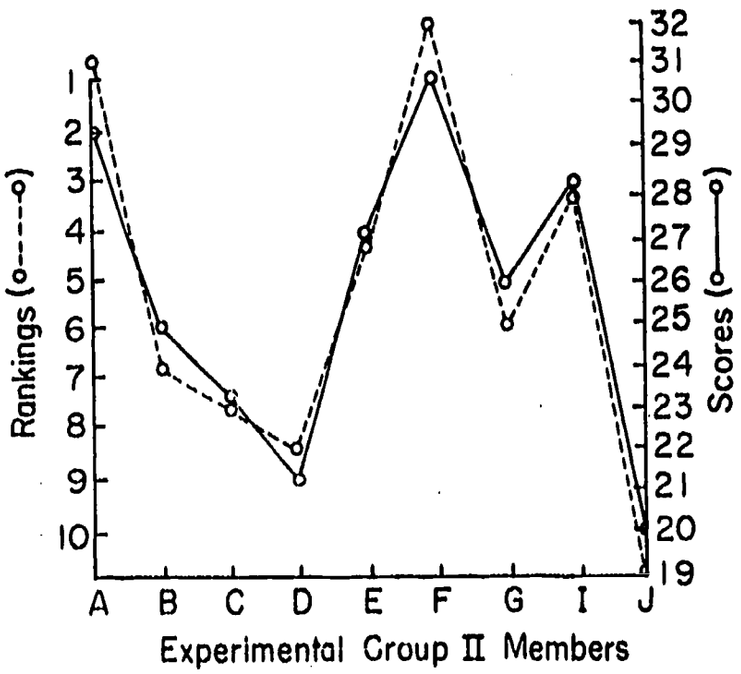


Fig. 10.--Comparison of Experimental Group II Pre-test Scores and Post Instructor-Peer Rankings.

CHAPTER 7

SUMMARY AND CONCLUSIONS

Summary of the Investigative Procedures

The major aim of this investigation was to develop and validate a simulation device to measure a teacher's ability to identify verbal and non-verbal emotions expressed by students. Results of related research endeavors have suggested that teachers need to be sensitive to the affective expressions of the pupils with whom they interact. Feelings experienced by students effect the learnings that ultimately occur within the school milieu.

The audiovisual instrument described in the study, the Teacher Affective Sensitivity Scale (TASS), contains excerpts of teacher-learner interactions in classroom settings. A multiple-choice instrument accompanies the media portion of the TASS. During the conduct of the investigation, individuals were administered the scale and requested to identify the emotions experienced by the student depicted on each episode. The subjects (teachers, teacher candidates, and students from non-teaching disciplines) selected the multiple-choice answer that they believed most accurately described the affective state of the pupil viewed in the scene.

Limitations of the Study

A number of limitations of this study require enumeration. First, psychologists and graduate students in clinical psychology and counseling and guidance were employed to determine the correct and incorrect responses for each item. Utilization of this method was supported by Kagan, who found that

such a procedure produces valid results (Kagan, et al., 1967, pp. 161-62). However, a basic assumption on which this methodology rests is that these experts are themselves affectively sensitive. As described previously, numerous assessments were made to validate judge "expertise" (i.e., show that they were affectively sensitive and competent to create the multiple-choice responses).

Second, the subjects in the statistical analyses of this study consisted of several sample groups (teachers from the Pullman School District, Pullman, Washington; undergraduate and graduate students at Washington State University) who participated in the pilot and revised-form scale administrations. Results of the reliability and validity measurements relate only to these sample groups. A broad statement about the scale's applicability to different populations can not be generalized based on this evidence.

Summary of the Analysis of Data

Media Assessments

The media episodes (22) on the TASS were analyzed to insure that they met the criteria specified at the start of the project. This evaluation revealed that the videotape excerpts adequately represented (a) diverse human emotions; (b) increasing intensities of emotional expression; (c) students from various grade levels; (d) male and female pupils; and (e) Black, Chicano, and White students.

Multiple-Choice Item Assessments

Numerous assessments were made of the procedures used to create the multiple-choice portion of the TASS. The actual multiple-choice responses that were generated and incorporated on the resultant product were also analyzed.

From the group of open-ended phrases created by judges for each teacher-learner interaction sequence, only those items that obtained .50 or higher percentage agreement between judge answers were included on the scale. This test of consistency of response provided an initial check of instrument content validity.

Six (6) multiple-choice questions were found to be "highly discriminating." Statistically significant negative chi-square ratios and correlation coefficients were calculated for these questions.

Analyses were made of the methodology employed to identify the six "highly discriminating" scale items. The answers of subsets of "experts" and "non-experts" from two judge groups were contrasted to select the "highly discriminating" responses. The subsets of "experts" were selected by colleague-supervisors who rank-ordered participants in both judge groups in terms of their levels of affective sensitivity. Tests of colleague-supervisor inter-rater reliability evidenced statistically significant agreement between their rankings for Judge Group I participants ($\chi^2=30.74$, $p < .01$). But, an insignificant chi-square ratio was computed for their rankings of Judge Group II members ($\chi^2=17.00$, $p < .20$). Thus, although the same three colleague-supervisors rated the "experts" and "non-experts" in both groups, high inter-rater reliability (i.e., high association of rankings) was found in one case, but not in the other.

Two additional tests were conducted to evaluate the expertise of the "experts" whose responses were used to identify "highly discriminating" scale items. Through graphic comparisons, close similarity was noticed for the experts (a) between their scores as writer-judges and their rank-ordered positions; and (b) between their scores as writer-judges and their scores on the multiple-choice half of the scale.

To obtain an indication of scale internal consistency, the split-half statistical method was utilized. The Kuder-Richardson 20 with the Spearman-Brown Prophecy formula yielded a correlation of .456

Test-retest reliability was assessed to measure the stability of the TASS. The calculated r was .673. Based on these two tests, it can not be concluded that the Teacher Affective Sensitivity Scale is sufficiently reliable for individual assessments, although it may provide assessments of adequate reliability for research purposes.

A number of studies were conducted to evaluate the validity of the TASS. In the tests of construct validity, two sets of subjects, Experimental Group I--Control Group I, and Experimental Group II--Control Group II, were given pre- and post-administrations of the instrument. T-tests and analysis of variance computations failed to evidence any significant results. More specifically, the mean-changes in scores from pre- to post-administrations for each experimental and control group were not statistically significant. Comparisons of score gains between Experimental Group I and Control Group I and between Experimental Group II and Control Group II were, similarly, not significant.

Although a number of the studies of scale construct validity produced statistically insignificant results, the investigator does not interpret the data as definite evidence that the scale is invalid. The two experimental settings (Education 300 and Practicum 567), used to assess the construct, were not specifically designed to increase participant levels of affective sensitivity. Because the experimental groups were not exposed to a program developed specifically to increase participant levels of affective sensitivity, the resultant data (subject score changes from pre- to post-administrations of the TASS) can only be used to make tentative interpretations about the

scale. The experimental procedures, in other words, were appropriate to assess scale construct and predictive validity, but the experimental groups used to implement the procedures were not adequate. Consequently, no definite conclusions about the TASS either positive or negative, can be made from these results. The creation of techniques and programs designed to effectuate changes in teacher affective sensitivity and subsequent assessments of the TASS, remain fertile areas for future investigation.

It was postulated that the students who participated in these two education programs would grow in the dimension of sensitivity to the emotional expression of others and that the TASS would indicate these gains. There is no evidence that such change actually occurred. In Experimental Group I, 56.3% of the students (55.4%--"no change"; and .9%--negative change) self-reported that they had not become more affectively sensitive during the experimental period and in Experimental Group II, 67% (56%--"no change"; 11%--negative change) self reported that they had not become more affectively sensitive during the experimental period. Additional research is needed to ascertain whether or not subject changes in affective sensitivity levels are actually reflected in TASS score changes.

Several assessments were made of the concurrent validity of the instrument. First, a correlation coefficient of .380, (not significant), was computed between pooled-instructor rankings of Experimental Group II participants and their scores on the TASS. Second, a correlation coefficient of .317 (not significant) was calculated between pooled-peer-rankings of the Experimental Group II subjects and their TASS scores. Finally, the pooled-rankings of instructors and peers provided a correlation coefficient of -.372 (not significant). Because of the small sample sizes employed in the preceding tests the statistical appraisals can not provide definite data about the concurrent validity of the TASS.

To demonstrate scale predictive validity, Experimental Group II subjects pre-test scores were compared with post instructor-peer rankings. The correlation coefficient of .797, $p < .01$ gives evidence of the predictive validity of the scale. However, it seems important at this juncture to draw a distinction between predictive validity and predictive utility. Further studies are needed to evaluate the predictive utility of the TASS. The scale may be of value for teacher education programs as both a research and selection instrument--but substantive evidence of such usefulness awaits further investigation.

According to Arthur Coladarci (1974), the desperate researcher who concludes an investigation with a preponderance of insignificant results is faced with one of two alternatives. On the one hand, Meyer's Law may be applied: "If the data fail to support the hypotheses, destroy the data!" Or, the researcher can apply Coladarci's adaptation of Meyer's Law: "If the data fail to support the hypotheses, get new data!" Though partly "tongue-in-cheek," Coladarci's revised theorem may have some merit in the present case. Based on some of the statistical tests described above, certain questions concerning the validity of the TASS must be raised. The investigator believes that, even more importantly, further validation procedures are mandated. In particular, it seems pertinent to develop training programs specifically designed to effect the construct, affective sensitivity, and then to ascertain whether or not the TASS measures any alterations that accrue.

In conclusion, the current study represents one model by which to assess teacher affective sensitivity. The positive responses offered by many individuals who have observed or participated in the study have provided encouragement for the investigator to continue exploration in this area. It seems appropriate to conceptualize a scale of this type as a continuously

emerging, rather than as a finished product. Further scale refinement and seemingly unlimited research investigations are yet needed. The current report, thus, is offered as only a beginning.

CHAPTER 8

IMPLICATIONS FOR FURTHER RESEARCH

Improvement of the Teacher Affective Sensitivity Scale: Further Development and Revision

Throughout this study, reference has been made to the "final scale form" of the TASS. The terminal quality connoted by this phrase, however, may have been misleading; the expression "final," related to the current study only. In actuality, any measurement technique designed to assess personality/attitudinal variables requires continuous revision. Consistent with this hypothesis and based on the results of the research reported in this report, it is suggested that a number of alterations be made to both the videotape and multiple-choice portions of the TASS.

Improvement of the Videotape

In correspondence with this researcher, Norman Kagan, developer of the Michigan State Affective Sensitivity Scale, offered the following suggestion:

> Please . . . keep careful track of the film clips--if the scale works, it will be far more useful and durable on film than on videotape which, alas, deteriorates over time at a far more rapid rate than does film (See Appendix A).

After utilizing a videotape format for the present study and broadcasting the collected scenes on 50 to 60 different occasions, Kagan's advice seems emphatically appropriate. The adage, "hindsight has 20-20 vision" may be attacked as a cliche or as an example of personification, but the meaning appears cogently relevant in the present instance. The average longevity of

videotape is shorter than that of a 16mm film. Unfortunately, the researcher was unfamiliar with this circumstance at the beginning of the project. After gaining this information, during the developmental scale procedures, an attempt was made to prevent damage to the "final" product by making duplicate copies of the entire recording. The editing criteria formulated during the construction phases of the scale were employed to insure that each replicated videotape met the technical standards originally specified.

Despite these precautions (i.e., the making of duplicate versions) certain limitations and negative features inherent to videotape as a medium affected the quality of the completed product. First, it was difficult to edit tape segments with the equipment available for the project. Although technological advances in telecommunication systems virtually guarantee high quality outputs for commercial enterprises (e.g., television broadcasting firms), refined equipment of this type tends to be "prohibitively" expensive--and hence, scarce for research endeavors.

Second, considerable care is required in handling and playing back videotape recordings. Accidents which result in tape damage often are not only unavoidable, but irreversible.

Kagan's recommendation that the TASS be transposed into a 16mm film in the future engenders a number of implications. A technological procedure of this type would be notably costly--at least, in comparison to the approach already attempted. Each of the commercial films from which an excerpt has been derived would need to be purchased so that splices could be obtained and collated. Further, a specialist with expertise in the artistry and technical requisites of film processing would need to be employed. Despite these monetary considerations, this investigator concurs with Kagan's suggestion. With adequate financing, such a transition from a videotape to film could be

effectuated. The usability of the TASS would probably increase significantly as a result of this alteration.

One rather unique obstacle effected the formulation of the current form of the TASS. This involved the obtainment of permission forms from the companies that had created the original films. As noted in Appendix B, three of the contacted corporations initially denied permission for excerpt usage. Follow-up procedures were conducted in an attempt to ameliorate this problem. One of these three subsequently granted the requested authorization. Further correspondence from the main three companies has not been received as of this writing. The investigator hopes that these refusals will yet be reversed.

Although consent for film usage was granted by the majority of the contacted enterprises, it appears that additional legal considerations prevent dispersement of the TASS to other educators--even on a non-profit basis. Definitive court rulings on the matter of copyright laws are yet pending. In the meantime, a number of media specialists have indicated that present legislation prohibits dissemination of the TASS for wider research and application activities.

It may be that one of two solutions will need to be tried to satisfy these legal regulations. First, an attempt to purchase copyright privileges from the respective film corporations may need to be made. Due to cost considerations, the investigator did not obtain this form of official authorization while conducting the present study. Second, if the companies refuse to either grant or sell copyright entitlements, new videotape scenes may need to be procured. These subsequent excerpts could be collected by recording live or staged classroom interactions. This second alternative would necessitate the development of an entirely new multiple-choice exam to accompany the audiovisual instrument. Numerous difficulties would be associated with

this type of reformulation: the process of filming live classroom settings would be time-consuming and expensive; and an operation of this sort might be perceived as highly threatening to the teachers and students involved. These problems, in turn, might affect the intended outcomes of the new approach. Yet, if coached-students and coached-teachers were employed, additional questions about the authenticity of the resulting episodes would need to be raised.

Despite the considerable dilemmas associated with future filming activities, the investigator acknowledges (with trepidation) that such a "start from scratch" effort may be mandated by the legal matters described previously. Although intricate, arduous, and costly, a new procedure of this nature does seem to be within the realm of feasibility. Further, as discussed later in this chapter, the researcher assumes that the need and pertinence of a teacher affective sensitivity scale would more than compensate for expenses of time and money that would be required for further revisions of the TASS or for the development of a similar instrument.

Improvement of the Multiple-Choice Instrument

The preceding two chapters containing anlyses of data and summary-conclusions of the investigation have revealed weaknesses and inadequacies in the multiple-choice portion of the TASS. As a result of these findings, it appears that some scale items require further revision. Some of the distractors seem to be <u>too</u> distracting in that their contents are not sufficiently distinguishable from correct answers. Some of the "correct" responses also need improvement through rephrasing, alteration, or augmentation.

The investigator intends to consummate these scale changes in the future. To accomplish this task, a select number of "experts" will again be

employed to discern the emotional expressions manifested by students on the videotaped episodes. Two or three of the judges that have been previously identified as most affectively sensitive (see Chapter 5) will be requested to participate in this refinement activity. Additional judges, an individual from a discipline other than psychology and a junior/senior high school student, will be asked to cooperate in this venture. The team would be allowed to view each videotaped scene repeatedly to facilitate their awareness and understanding of the depicted interactions. During these viewings, the judges will analyze and evaluate both the "correct" responses and the distractors on the written portion of the scale. Based on these individual ratings, they will generate suggestions for item improvements.

Panel members will subsequently share their personal reactions and collectively formulate what they believe to be the best possible set of multiple-choice responses. The non-clinicians (student and representative from a non-psychologically oriented field of study) will not only participate by analyzing correct and incorrect responses, but will critique the resulting phrases to insure that they do not include psychological jargon or archaic terminology.

Once multiple-choice revisions have been made, the tests of validity and reliability described in the present study will need to be replicated. Also, further checks of validity could be attained by comparing subject scores on the TASS with additional external assessments of subject affective sensitivity.

Future Experimental and Correlational Studies with the TASS

An extensive number of studies involving the TASS seem possible. The following list, though certainly not exhaustive, includes some of the areas

of investigation that this researcher considers particularly viable for future exploration.

1. What individuals or groups of people are most affectively sensitive? What is the relationship between such variables as respondent age, sex, IQ, and occupation (e.g., teaching, counseling, non-educationally oriented employment) and scores on the TASS?
2. What is the relationship between subject personality variables or personal attitudes such as friendliness--unfriendliness, affection--hostility, emotional stability--instability, flexibility--rigidity, openness--dogmatism, self-acceptance--self-rejection, feelings of security--insecurity, feelings of belonging--separateness, optimism--pessimism, spontaneity--compulsiveness, and scores on the TASS?
3. How do professional experiences effect respondent scores on the TASS? The separate findings of Klehr (1949) and Taft (1951) appear relevant to this query. Klehr reported that experienced clinicians fared better than graduate students in predictive accuracy (empathy). Taft, conversely, noted that physical scientists and other non-psychologists were more capable of judging others accurately than either psychology students or clinicians.
4. What is the relationship between teaching effectiveness and scores on the TASS? How important is teacher affective sensitivity in facilitating the goals of education? What are the relationships between a teacher's level of affective sensitivity and indices of student growth and learning? The answers obtained from investigations of this order will depend, in part, on the manner in which variables such as "teaching competence" and "goals of education" are defined. (Elaboration of this last point has been presented in Chapter 1).

5. Theoretically and operationally, how is affective sensitivity alike and how is it distinct from constructs such as "projection," "attribution," "predictive accuracy," "empathy," "accurate empathy," "rapport," "sensory and imitative response," "discriminative ability," and "perception?"

6. What subcomponents of affective sensitivity can be isolated and described? Is affective sensitivity essentially an intellectual process? a feeling state? is it both an intellectual and emotional type of experience? Is affective sensitivity a listening skill? an observational skill?

7. Do particular subjects demonstrate unique patterns of response? Do some answer only certain types of scale questions accurately? What is the effect of a respondent's perception of similarity between himself and the student depicted on the videotape? Wolf and Murray (1937) reported that subjects were most accurate in predicting about people with backgrounds relatively analogous to their own. This finding raises the question of whether it is possible for a subject (teacher) to accurately identify student feelings that that person has not phenomenologically experienced. A related problem entails the determination of which is a "truer" measurement of affective sensitivity: Is it the ability to feel most extensively into the largest number of people (i.e., select the most "correct" answers on the TASS)? Or is teacher affective sensitivity the ability to feel into the characteristics of others that are different from oneself (i.e., identify the feeling expressions of dissimilar students on the TASS)?

8. Do some subjects overestimate student expressions of feeling and others underestimate them? What is the effect of specific episode

content (e.g., verbalizations concerning interpersonal relationships, illness, religion, or sex) on respondent answers.

9. What is the relationship between the "Pygmalion effect" and teacher affective sensitivity? Is a teacher's ability to identify student feelings in the classroom heightened or decreased by the availability of additional student data obtained from teachers, case histories, psychological tests, or report cards?

In 1968 when Robert Rosenthal and his associate researcher, Lenore Jacobsen, disseminated their report about the effects of teacher expectancy on pupil performance, their findings received nationwide attention. Their publication, Pygmalion in the Classroom, was hailed by reviewers in the New York Review of Books, New Yorker, Saturday Review, and Scientific American; the authors were interviewed by the national television networks. Since that time, more than 200 studies have been generated to test the hypothesis that teacher expectations can affect student outcomes.

The results of many replication and follow-up endeavors have generally failed to support the findings of the original Pygmalion report. In addition, the techniques which Rosenthal and Jacobsen described in their monograph have been criticized for their "artificiality." Pre-tests, post-tests, overt classroom observation techniques, the entrance and departure of groups of psychologists, teacher and student awareness of the experimental conditions--such "unnatural" variables may have influenced the validity of the Pygmalion studies. Elashoff and Snow critiqued the Rosenthal-Jacobsen investigation, its design, analysis and reporting, and concluded that it was "inadequate and frequently misleading."

Despite the controversial nature of the first and subsequent reports, a number of studies have verified that the Pygmalion effect does exist. To

cite one example, Seaver (1973) studied what he termed "naturally induced teacher expectancies," (e.g., an older sibling had been previously taught by the teacher and, as a consequence of this contact, the teacher had developed high or low expectations for the younger child now in the classroom). In analyzing the results of this "real-life" research, Seaver found support for the teacher expectancy hypothesis.

The Pygmalion issue, though far from resolved, may be related to teacher affective sensitivity. The topic is raised within this concluding chapter because the researcher believes that future studies of the inter-relationships between the Pygmalion effect and teacher affective sensitivity are merited. If the Pygmalion effect is "alive and working," as claimed by Horn (1974), then it may be pertinent to inspect the impact that teacher expectancies have on teacher ability to identify student expressions of emotion (affective sensitivity). Do mental pre-sets inhibit affective perceptual accuracy? Conversely, can a teacher's development of affective sensitivity influence the possible adverse effects of teacher expectancy?

10. Can individual levels of teacher affective sensitivity be increased? Can a teacher learn to be more affectively sensitive to students? What types of training programs are most effective in producing these changes?

This last set of questions suggests pertinent implications for teacher education programs--the preparation institutions for the present and future instructors of this country. The importance of developing teacher affective sensitivity and possible applications of the Teacher Affective Sensitivity Scale within pre-service and in-service programs appears to be a particularly fertile area for future inquiry.

Uses of the TASS in Teacher Education

In conclusion, it is appropriate to articulate possible applications of the Teacher Affective Sensitivity Scale, revised form, for educational purposes. It is proposed that the revised TASS could be utilized for the following:

1. The assessment of the effects of educational training programs that attempt to increase teacher levels of empathy and affective sensitivity. As described in the preceding discussions, numerous training techniques aimed at developing interpersonal skills have been implemented for teacher preparation and in-service programs during the past few years (Carkhuff, 1969 a, b, 1971; Berenson, 1971; Blakeman and Emener, 1971; Gazda, 1971). To analyze whether or not these techniques are able to meet their specified program objectives (e.g., to help teachers to be more understanding and sensitive to feelings of others) a measurement device is needed. The Teacher Affective Sensitivity Scale can provide data useful for this type of program evaluation.

2. The assessment of teacher and teacher-candidate levels of affective sensitivity. As the teaching market has progressively tightened on a national basis, pre-service institutions have given increased consideration to the establishment of student selection (as well as program implementation) criteria. If one of these criteria focuses on teacher sensitivity and concern for other human beings, or some other related objective, the Teacher Affective Sensitivity Scale could be utilized to assess this dimension. This application of the scale may produce some particularly needed information for training institutions. For instance, if it is found that low affective sensitivity cannot be substantially increased due to educational opportunities aimed specifically at ameliorating this deficiency, then more careful screening of initial education applicants may be warranted.

3. The development of a teaching-learning device aimed at helping subjects become aware and increase their levels of affective sensitivity. The Teacher Affective Sensitivity Scale could be used as a training device itself. If awareness is one of the prerequisites of behavior change, then it is conceivable that a teacher's understanding of his/her current level of affective sensitivity may serve as a catalyst for the improvement of this psychological dimension. Utilization of the TASS for training purposes will require further developmental and evaluational activities to appraise the resulting outcomes.

Conclusion

Evidence has been presented in this study that teacher affective sensitivity is (a) an important factor effecting the learning that transpires in the classroom, and (b) a measureable psychological construct. At no point, however, has affective sensitivity been described as the sole constituent of teaching effectiveness. Such a statement would be unrealistic and irresponsible. The investigator concludes that many aspects are available for further study and need to be explored. Research is particularly needed to ascertain how levels of affective sensitivity can be increased, and to assess the relationship between teacher affective sensitivity and affiliated teacher behaviors. To cite one example (others have been described previously), it may be pertinent to correlate a teacher's ability to identify student feelings with the ability to communicate this awareness back to the student (i.e., the remaining phase of the empathic process). It seems hypothetically possible that sensitivity to student feelings may be only tangentially related (if related at all) to other facilitative instructor characteristics. It is assumed that this research will provide impetus for the continued theoretical and methodological investigation of teacher affective sensitivity and the vast number of additional variables associated with the teaching-learning exchange.

REFERENCES

All rt, G. W. The historical background of modern social psychology. In G. A. Lindsey (Ed.), Handbook of social psychology. Cambridge, Mass.: Addison-Wesley, 1954.

Allport, G. W. Personality: A psychological interpretation. New York: Henry Holt, 1937.

Almy, M. Ways of studying children: A manual for teachers. New York: Teachers College Press, 1959.

Alpren, M. Differentiating affective concerns. Educational Leadership, 1972, 29(7), 627-630.

Alschuler, A. (Ed.) New directions in psychological education. Educational opportunities forum. Albany, New York: New York Department of Education, 1969.

Amidon, E. J., & Flanders, N. A. The role of the teacher in the classroom: A manual for understanding and improving teachers' classroom behavior. (Rev. ed.) Minneapolis: Association for Productive Teaching, 1967.

Anderson, V. V., & Kennedy, W. M. Psychiatry in education. New York: Harper, 1932, 300-301.

Arbuckle, D. S. Guidance and counseling in the classroom. Boston: Allyn & Bacon, 1957.

Arbuckle, D. S. Teacher counseling. Cambridge, Mass.: Addison-Wesley, 1950.

Arbuckle, D. S., & Wicas, E. A. The development of an instrument for the measurement of counseling perceptions. Journal of Counseling Psychology, 1957, 4, 304-312.

Asbury, F. R., & Constantino, N. V. Developing the counselor teacher. Journal of the Student Personnel Association for Teacher Education, 1972, 10(4), 83-91.

Aspy, D. N. A study of three facilitative conditions and their relationship to the achievement of third grade students. Unpublished doctoral dissertation, Lexington: University of Kentucky, 1965.

Aspy, D. N. The effect of teacher-offered conditions of empathy, positive regard, and congruence upon student achievement. Florida Journal of Educational Research, 1969, 11, 39-48.

Aspy, D. N., & Hadlock, W. The effects of high and low functioning teachers upon student performance. In R. R. Carkhuff and B. G. Berenson, Beyond counseling and therapy. New York: Holt, Rinehart, & Winston, 1967.

Astin, H. H. Assessment of empathic ability by means of a situational test. Journal of Counseling Psychology, 1967, 14, 57-60.

Bales, R. F. A method for the study of small groups. Cambridge, Mass.: Addison-Wesley Press, 1951.

Barker, R. G., Dembo, T., & Lewin, K. An experiment with young children. In R. G. Barker, I. S. Kounin, & H. F. Wright (Eds.), Child behavior and development. New York: McGraw-Hill, 1943, 441-458.

Bender, I., & Hastorf, A. N. The perception of persons: Forecasting another person's responses on three personality scales. Journal of Abnormal Social Psychology, 1950, 45, 556-561.

Bender, I., & Hastorf, A. N. On measuring generalized empathic ability (social sensitivity). Journal of Abnormal and Social Psychology, 1953, 48, 503-506.

Berenson, D. The effects of systematic relations training upon classroom performance of elementary school teachers. Journal of Research and Development in Education, 1971, 4(2), 70-85.

Birdwhistell, R. L. Kinesics and context. Philadelphia: University of Pennsylvania Press, 1970.

Bishop, C. Affective consequences of teaching. In D. C. Orlich, Institute for training directors of teacher education reform programs. Project No. 0-1-3202, U. S. Dept. of Health, Office of Education, 1973.

Blakeman, J. D., & Emener, W. G., Jr. Training in interpersonal communication: Suggested techniques and approaches. Journal of Research and Development in Education, 1971, 4(2), 36-46.

Block, J. H. Introduction. In J. H. Block (Ed.), Mastery learning: Theory and practice. New York: Holt, Rinehart, & Winston, 1971, 2-12.

Bloom, B. S. Affective consequences of school achievement. In J. H. Block (Ed.), Mastery learning: Theory and practice. New York: 1971, 13-28.

Bloom, B. S. The thought process of students in discussion. In S. J. French (Ed.), Accent on teaching: Experiments in general education. New York: Harper & Brothers, 1954, 23-46.

Body talk: A psychology today game. "Instruction Manual." Psychology Today Publishers.

Boocock, S. S. The life career game. Personnel and Guidance Journal, 1967, 46(4), 328-334.

Borton, T. Reach touch and teach: Student concerns and process education. New York: McGraw-Hill, 1970.

Borton, T. Reach, touch, teach. Saturday Review, 52(3), 1969, 56-58, 69-70.

Branan, J. M. Negative human interaction. Journal of Counseling Psychology, 1972, 19, 81-82.

Brannigan, R. Man's silent signals: Nonverbal vocabulary of gestures and expressions. Time, July 13, 1969, 86.

Bray, D. W., & Campbell, R. J. Selection of salesman by means of an assessment cen er. Journal of Applied Psychology, 1968, 52(1, Pt. 1), 36-41.

Brown, C. C. Methods in psychophysiology. Baltimore: The Williams & Wilkins, 1967.

Bruner, J. S. The process of education. New York: Vintage Books, 1960.

Buchheimer, A. Development of ideas about empathy. Journal of Counseling Psychology, 1963, 10(1), 71-70.

Buchheimer, A., Goodman, J., & Sircus, G. Videotapes and kinescope recordings as situational tests and laboratory exercises in empathy for the training of counselors. Hunter College of the City University of New York, 1965. A technical report submitted to the U. S. Office of Education, NDEA Grant No. 7-42-0550-1670.

Buros, O. K. The sixth mental measurements yearbook. Highland Park, New Jersey: Gryphen, 1965.

Campbell, R. J., Kagan, N., & Krathwohl, D. R. The development and validation of a scale to measure affective sensitivity (empathy). Journal of Counseling Psychology, 1971, 18(5), 407-412.

Cannon, W. B. Bodily changes in pain, hunger, fear and rage. (2nd ed.) New York: Appleton-Century-Crofts, 1936.

Carkhuff, R. R. Helping and human relations: A primer for lay and professional helpers. Vol. 1: Selection and training. New York: Holt, Rinehart, & Winston, 1969 (a).

Carkhuff, R. R. Helping and human relations: A primer for lay and professional helpers. Vol. 2: Practice and research. New York: Holt, Rinehart, & Winston, 1969 (b).

Carkhuff, R. R. Helping and human relations: A brief guide for training lay helpers. Journal of Research and Development in Education, 1971, 4(2), 17-27 (a).

Carkhuff, R. R. Training as a necessary pre-condition of education: The development and generalization of a systematic resource training model. Journal of Research and Development in Education, 1971, 4(2), 3-16 (b).

Carkhuff, R. R., & Truax, C. An evaluation of an integrated didactic and experimental approach. Journal of Consulting Psychology, 1965, 29, 331-336.

Carkhuff, R. R., & Truax, C. Toward explaining success and failure in interpersonal learning experiences. Personnel and Guidance Journal, 1966, 44, 723-728.

Carpenter, C. R., & Greenhill, L. P. Instructional television research project No. 1: An investigation of closed-circuit television for teaching university courses. University Park, Pa.: The Pennsylvania State University, 1955.

Carroll, J. B. Problems of measurement related to the concept of learning for mastery. In J. H. Block (Ed.), Mastery learning: Theory and practice. New York: Holt, Rinehart, & Winston, 1971, 29-46.

Chandler, D. R. Construct validity of a scale of accurate empathy in psychotherapists. Unpublished doctoral dissertation, University of Michigan, 1971.

Chapman, J. L. The development and validation of a scale to measure empathy. Unpublished doctoral dissertation, Michigan State University, 1966.

Chinsky, J. M., & Rappaport, J. Brief cirtique of the meaning and reliability of "accurate empathy" ratings. Psychological Bulletin, 1970, 73(5), 379-382.

Cronbach, C. J. The role of the university in improving education. Phi Delta Kappan, 1966, 47, 539-45.

Cohen, R. D. Recognition of emotional meaning. Unpublished doctoral dissertation, Claremont Graduate School, Claremont, California, 1971.

Coladarci, A. Educational research: The art of going wrong with confidence. Research and Evaluation Conference, Seattle, Washington, 1974.

Coleman, J. Equality of educational opportunity. Washington, D. C.: U. S. Department of Health, Education, & Welfare, Office of Education, 1966.

Combs, A. W. Educational accountability from a humanistic perspective. Phi Delta Kappan, 1973, 19-21.

Combs, A. W. (Ed.) Perceiving, behaving, becoming: A new focus for education. Association for Supervision and Curriculum Development 1962 Yearbook. National Education Association, 1962.

Combs, A. W. A perceptual view of "helpers." Personality theory and counseling practice, papers of first annual conference on personality theory and counseling practice. Gainesville. Florida: University of Florida Press, 1961.

Combs, A. W. The personal approach to good teaching. Educational Leadership, 1964, 21(6), 369-378.

Combs, A. W. The professional education of teachers: A perceptual view of teacher preparation. Boston: Allyn & Bacon, 1965.

Combs, A. W., & Snygg, D. Individual behavior: A perceptual approach to behavior. Boston: Harper, 1969.

Combs, A. W., & Soper, D. W. The helping relationship as described by "good" and "poor" teachers. Journal of Teacher Education, 1963, 14(1), 64-67.

Combs, A. W., Soper, D. W., Gooding, C. T., Benton, J. A., Dickman, J. F., & Usher, R. H. Florida studies in the helping professions. Gainesville, Florida: University of Florida Press, 1969.

Costantino, N. V., & Asbury, T. R. Effectiveness of counselor teaching techniques in the application of a fundamental principle of learning. Journal of the Student Personnel Association for Teacher Education, 1969, 8, 22-26.

Cottrell, K. S. The analysis of situational fields in social psychology. American Sociological Review, 1942, 7, 370-382.

Cronbach, L. J. Processes affecting scores on "understanding of others" and "assumed similarity." Psychological Bulletin, 1955, 52, 177-193.

De Cecco, J. P. The psychology of learning and instruction: Educational psychology. Englewood Cliffs, New Jersey: Prentice-Hall, 1968.

Dinkmeyer, D. The c-group: Focus on self as instrument. Phi Delta Kappan, 1971, 52, 617-619 (a).

Dinkmeyer, D. Top priority: Understanding of self and others. The Elementary School Journal, 1971, 72, 62-71 (b).

Diskin, P. A. A study of predictive empathy and the ability of student teachers to maintain harmonious interpersonal relations in selected elementary classrooms. Unpublished doctoral dissertation, University of Michigan, 1956.

Dixon, W. R., & Morse, W. C. The prediction of teaching performance: Empathic potential. The Journal of Teacher Education, 1961, 12, 322-328.

Dreher, R. E., & Beatty, W. H. Instructional television research project number one: An experimental study of college instruction using broadcast television. San Francisco: San Francisco State College, 1958.

Duffy, E. Activation and behavior. New York: Witey, 1962.

Dymond, R. F. A preliminary investigation of the relation of insight and empathy. Journal of Consulting Psychology, 1958, 12, 228-233.

Dymond, R. F. A scale for the measurement of empathic ability. Journal of Consulting Psychology, 1949, 13(2), 127-133.

Dymond, R. F., Hughes, A. S., & Raabs, V. L. Measurable changes in empathy with age. Journal of Consulting Psychology, 1952, 16, 202-206.

Ebel, R. L. Estimation of the reliability of ratings. Psychometrika, 1951, 16, 407-424.

Ebel, R. L. Is validity necessary? Paper presented to American Educational Research Association National Convention, 1961.

Edwards, A. L. Techniques of attitude scale construction. New York: Appleton-Century-Crofts, 1957.

Eisenberg, S. Implications of video simulation of counseling. Educational Technology, 1971, 11(8), 50-52.

Eisner, E. W. Qualitative intelligence and the act of teaching. Elementary School Journal, 1963, 63, 299-307.

Elashoff, J. D., & Snow, R. E. (Eds.) Pygmalion Reconsidered. Charles A. Jones, 1971.

Emmerling, F. C. A study of the relationships between personality characteristics of classroom teachers and pupil perceptions of these teachers. Unpublished doctoral dissertation, Dissertation Abstracts, October, 1961, 22, 1-54-1055. (abstract)

English, N. B., & English, A. C. A comprehensive dictionary of psychological and psychoanalytical terms. New York: Longmans, Green, 1958.

Enterline, J. S. Project insight. Grade Teacher, 1970, 88(3), 32-56.

Eysenck, H. J. The structure of human personality. New York: Witey, 1953.

Fiedler, F. E. The concept of an ideal therapeutic relationship. Journal of Consulting and Clinical Psychology, 1950, 14(4), 239-245.

Flanders, N. A. Some relationships among teacher influence, pupil attitudes, and achievement. In B. J. Biddle, & W. P. Ellena, Contemporary Research on Teacher Effectiveness. New York: Holt, Rinehart, & Winston, 1964, 196-231.

Frederiksen, N. Validation of a simulation technique. Organizational Behavior and Human Performance, 1966, 1(1), 87-109.

Gage, N. L., & Cronbach, L. J. Conceptual and methodological problems in interpersonal perception. Psychological Review, 1955, 62, 411-421.

Gazda, G. M. Systematic human relations training in teacher preparation and inservice education. Journal of Research and Development in Education, 1971, 4(2), 47-51.

Getzels, J. W., & Jackson, P. W. The teachers personality and characteristics. In N. L. Gage (Ed.), Handbook of research on teaching. Chicago: Rand McNally, 1963, 506-82.

Girod, G. R. The effectiveness and efficiency of two types of simulations as function of level of elementary education training. Final Report, Project No. 9-1-055, U. S. Department of Health, Education, and Welfare, Office of Education, 1969.

Gompertz, K. The relation of empathy to effective communication. Journalism Quarterly, 1960, 37, 533-546.

Gooding, C. T. The perceptual organization of effective teachers. In A. W. Combs, et al., Florida studies in the helping professions, Gainesville: University of Florida Monographs, 196[illegible], 28-36.

Gorden, K. A device for demonstrating empathy. Journal of Experimental Psychology, 1934, 17, 892-893.

Gorman, A. H. Teachers and learners: The interactive process of education. Boston: Allyn & Bacon, 1969.

Greenfield, N. S., & Sternback, R. A. Handbook of psychophysiology. New York: Holt, Rinehart, & Winston, 1972.

Gregg, D. B. Keys to effective behavior. The Journal of Teacher Education, 1971, 22(4), 464-468.

Guba, E. G., & Getzels, J. W. Personality and teacher effectiveness: A problem in theoretical research. Journal of Education Psychology, 1965, 46, 330-44.

Guides to newer media. Chicago: American Library Association.

Gustafson, K. L. Simulation of interpersonal relations. Audio Visual Instruction, 1971, 16(1), 35-37.

Haberman, M. The teaching behavior of successful interns. Journal of Teacher Education, 1965, 16, 215-220.

Hahn, M., and MacLean, M. Counseling psychology, 2nd ed. New York: McGraw-Hill, 1955.

Halamandaris, D. G., & Laughton, A. J. Empathy competence: A search for new direction in Canadian teacher education. Educational Technology, 1972, 20-22.

Hall, H. E., & Bell, G. B. The relationship between two tests of empathy: Dymond's and Kerr's. American Psychologist, 1953, 8, 361-362. (Abstract)

Halpern, H. M. Empathy, similarity, and self-satisfaction. Journal of Consulting Psychology, 1955, 19, 449-452.

Hartman, J. F. An evaluation of the counselor's assessment of the in-session nonverbalized feelings experienced by the client. Unpublished doctoral dissertation, Kent State University, 1971.

Hastorf, A. H., & Bender, I. E. A caution respecting the measurement of empathic ability. Journal of Abnormal and Social Psychology, 1952, 47, 574-576.

Hawks, C. F., & Egbert, R. L. Personal values and the empathic response: Their inter-relationships. Journal of Educational Psychology, 1954, 45, 469-476.

Hefele, T. J. The effects of systematic human relations training upon student achievement. Journal of Research and Development in Education, 1971, 46.

Horn, J. Pygmalion is alive and working in Chicago. Psychology Today, 1974, 7(12), 102-104.

Hoskins, R. G. The biology of schizophrenia. New York: Norton, 1946.

Improving educational assessment and an inventory of measures of affective behavior. Association for Supervision and Curriculum Development. National Education Association, 1969.

Inlow, G. The emergent in curriculum. New York: John Wiley & Sons, 1966.

Isaacson, R. L., McKeachie, W. J., & Milholland, J. E. A correlation of teacher personality variables and student ratings. Journal of Educational Psychology, 1963, 54, 110-117.

Jackson, R. W. The way teaching is. In O. Sand & L. J. Bishop, The Way Teaching Is. Washington, D. C.: Association for Supervision and Curriculum Development, 1966, 7-27.

Janisse, M. P., & Peavler, W. S. Pupillary research today: Emotion in the eye. Psychology Today, 1974, 7(9), 60-64.

Jersild, A. T. In search of self. New York: Bureau of Publications, Teachers College, Columbia University, 1952.

Jones, R. M. Fantasy and feeling in education. New York: New York University Press, 1968.

Joyce, B., Dirr, P., & Hunt, E. Sensitivity training for teachers: An experiment. The Journal of Teacher Education, 1969, 20, 75-83.

Kagan, N., Krathwohl, D. R., & Farquar, W. Developing a scale to measure affective sensitivity. (Educational Research Series No. 30). East Lansing: Michigan State University, 1965.

Kagan, N., Krathwohl, D. R., Goldberg, A. D., Campbell, R. J., Schaubel, P. G., Greenberg, B. S., Danish, S. J., Reshkoff. A., Bowes, J., & Bondy, S. B. Studies in human interaction: Inter-personal recall stimulated by videotape. Educational Publication Services: Michigan State University, Project No. 5-08000, 1967.

Kagan, N., & Schauble, P. G. Affect simulation in interpersonal process recall. Journal of Counseling Psychology, 1969, 16(4), 309-315.

Katz, R. L. Empathy: Its nature and uses. Glencoe, Illinois: The Free Press of Glencoe, 1962.

Kelley, E. C. Education for what is real. New York: Harper, 1947.

Kerlinger, F. N. Foundations of behavioral research. New York: Holt, Rinehart, & Winston, 1965.

Kerr, W. A., & Speroff, B. J. Validation and evaluation of an empathy test. Journal of General Psychology, 1954, 50, 269-276.

Klein, S. E. The message in the medium: Activation-level, meaning, and style in the nonverbal communication of affect. Dissertation Abstracts, 1967, 28(5-B), 2142. (Abstract)

Kleiner, F. B. Personality and training: Their effects on the communication of empathy. Unpublished doctoral dissertation, Ohio State University, 1971.

Knapp, M. L. Nonverbal communication in human interaction. New York: Holt, Rinehart, & Winston, 1972.

Koch, R. Nonverbal observables. Theory into Practice, 1971, 10, 280-294.

Krathwohl, D. R., Bloom, B. S., & Masia, B. B. Taxonomy of educational objectives: The classification of educational goals: Handbook II: Affective domain. New York: David McKay, 1964.

Kratochvil, D., Carkhuff, R. R., & Berenson, B. L. Cumulative effects of parent and teacher-offered levels of facilitative conditions upon indices of student physical, emotional and intellectual functioning. Journal of Educational Research, 1968, 63, 161-164.

Krumboltz, J. E., & Bergland, B. Experiencing work almost like it is. Educational Technology, 1969, 47-49.

Lake, D. G., Miles, M. B., & Earle, R. B. (Eds.). Measuring human behavior: Tools for the assessment of social functioning. New York: Teachers College Press, 1973.

Lang, P. F., Rice, D. G., & Sternbach, R. A. The psychophysiology of emotion. In N. S. Greenfield, & R. A. Sternbach, Handbook of Psychophysiology, New York: Holt, Rinehart, & Winston, 1972, 623-643.

Lawson, J. H. Film: The creative process. New York: Hill & Wang, 1964.

Lesh, T. V. Zen meditation and the development of empathy in counselors. Journal of Humanistic Psychology, 1972, 39-74.

Lessinger, L. M. Every kid a winner: Accountability in education. New York: Simon & Schuster, 1970.

Lifton, W. M. The role of empathy and aesthetic sensitivity in counseling. Journal of Counseling Psychology, 1958, 5, 267-275.

Lindgren, H. E., & Robinson, J. Evaluation of Dymond's test of insight and empathy. Journal of Consulting Psychology, 1953, 17, 172-176.

Lipps, T. Leitfaden der psychologie. Leipsig: W. Englemann, 1909. Cited by A. Buchheimer, The development of ideas about empathy. Journal of Counseling Psychology, 1963, 10, 62.

MacLennan, D. W., & Reid, J. C. Abstracts on research on instructional television and film: An annotated bibliography. Stanford, California: Institute for Communicating Research, 1964.

Mager, R. F. Developing attitude toward learning. Belmont, California: Fearon Publishers, 1968.

Malmo, R. B. Activation: A neuropsychological dimension. Psychological Review, 1959, 66, 367, 386.

Maslow, A. H. Motivation and personality. New York: Harper, 1954.

Maslow, A. H. Some basic propositions of a growth and self-actualization psychology. In Perceiving, behaving, becoming: A new focus for education, ASCD, 1962 Yearbook, NEA, Washington, D. C.: 1962, 34-49.

Matarazzo, R. G. Research on the teaching and learning of psychotherapeutic skills. In A E Bergin, & S. L. Garfield (Eds.), Handbook of psychotherapy and behavior change: An empirical analysis. New York: John Wiley, 1971, 895-924.

McMahon, F. B. Jr. Psychological testing--A smoke screen against logic. Psychology Today, 1969, 2(8), 54-59.

Milam, E. L. Teaching with empathy: The Austin teacher program. Journal of the Student Personnel Association for Teacher Education, 1972.

Milne, B. G., & Kosters, H. G. The first step is awareness. Pierre, South Dakota, Office of Information, 1970.

Moustakas, C. The authentic teacher: Sensitivity and awareness in the classroom. Cambridge: Howard A Boyle, 1966.

Murray, H. A. Explorations in personality. New York: Oxford University Press, 1938.

Nash, O. Portrait of the artist as a prematurely old man. Verses from 1929 on. New York: Little, Brown & Company, 1969, 16.

O'Hern, J. S., & Arbuckle, D. S. Sensitivity: A measurable concept? The Personnel and Guidance Journal, 1964, 42, 572-576.

Parrella, G. C. Projection and adoption: Toward a clarification of the concept of empathy. Quarterly Journal of Speech, April, 1971, 57, 204-213.

Peck, L., & Joyce, B. R. Situation assessment of strength and sensitivity in teaching. The Journal of Teacher Education, 1972, 23, 67-81.

Pincus, E. Guide to filmmaking. New York: The New American Library, 1969.

Platt, J. R. The two faces of perception. In B. Rothblatt (Ed.), Changing perspectives on man. Chicago: University of Chicago Press, 1969.

Plutchik, R. The emotions: Fact, theories and a new model. New York: Random House, 1962.

Prescott, D. A. Emotions and the educative process. Washington, D. C.: American Council on Education, 1958.

Quirk, M. Short-term, integrated didactic and experiential training in affective sensitivity with staff assistants. Unpublished doctoral dissertation, Pullman: Washington State University, 1972.

Rice, B. Rattlesnakes, french fries and pupillometric oversell. Psychology Today, February 1974, 7(9), 55-59.

Rogers, C. R. The characteristics of the helping relationship. The Personnel and Guidance Journal, 37(1), 1958.

Rogers, C. R. Client-centered therapy: A changing approach to psychotherapy. Western Behavioral Sciences Institute, 1964 (Mimeographed).

Rogers, C. R. The freedom to learn. Columbus: Charles E. Merrill, 1969 (a).

Rogers, C. R. The interpersonal relationship in the facilitation of learning. In S. Stoff and H. Schwartzberg (Eds.), The human encounter: Readings in education. New York: Harper & Row, 1969, 418-433 (b).

Rogers, C. R. On becoming a person. Boston: Houghton Mifflin Company, 1961, 39-58.

Rogers, C. R. A theory of therapy, personality and interpersonal relationships, as developed in the client-centered framework. In S. Koch, (Ed.), Psychology: A study of a science. Vol III: Formulation of the person in the social context. New York: McGraw-Hill, 1959, 184-258.

Rogers, C. R., Gendlin, E. T., Kiesler, D., & Truax, C. B. The therapeutic relationship and its impact. Madison, Wisconsin: University of Wisconsin Press, 1967.

Rosenthal, R. The Pygmalion effect Lives. Psychology Today, September, 1973, 7(4), 56-63.

Rosenthal, R., & Jacobson, L. Pygmalion in the classroom. New York: Holt, Rinehart, & Winston, 1968.

Ryans, D. G. Characteristics of teachers. Washington, D. C.: American Council on Education, 1960.

Ryans, D. G. Inventory estimated teacher characteristics as covariants of observer assessed pupil behavior. Journal of Educational Psychology, 1961, 52, 91-97 (a).

Ryans, D. G. Some relationships between pupil behavior and certain teacher characteristics. Journal of Educational Psychology, 1961, 52, 82-90 (b).

Seaver, W. B. Journal of Personality and Social Psychology, 1974, 28(3).

Selye, H. The stress of life. New York: McGraw-Hill, 1956.

Shostrom, E. L. Manual, personal orientation inventory. San Diego: Educational and Industrial Testing Service, 1966.

Shostrom, E. L. The personal orientation inventory. San Diego: Educational and Industrial Testing Service, 1963.

Siegel, S. Nonparametric statistics for the behavioral sciences. New York: McGraw-Hill, 1956.

Silverman, R. E. Psychology. New York: Appleton-Century-Crofts, 1971.

Skinner, B. F. Teaching machines. Science, 1958, 128, 969-977.

Soper, D. W., & Combs, A. W. The helping relationship as seen by teachers and therapists. Journal of Consulting Psychology, 1962, 26, 288.

Soper, D. W., & Combs, A. W. Planning future research in education. Educational Leadership, 1957, 9(5), 315-318.

Speroff, B. J. Empathy and role reversal as factors in industrial harmony. Journal of Social Psychology, 1953, 37, 117-120.

Stefflere, B. Client understanding test (first version). Unpublished, Michigan State University, 1962.

Stoffer, D. L. Investigation of positive behavioral change as a function of genuineness, non-possessive warmth and empathic understanding. Journal of Educational Research, 1970, 63, 225-228.

Stollak, G. E., Gurmey, B. G., & Rothberg, M. (Eds.), Psychotherapy Research, Chicago: Rand McNally, 1966.

Strunk, O. Empathy: A review of theory and research. Psychological Newsletter, 1957, 9, 47-57.

Strunk, O., & Red, K. E. The learning of empathy: A pilot study. Journal of Pastoral Care, 1960, 14, 44-48.

Tierney, T. P. A comparative survey of administrators' opinions using three data collecting procedures. Unpublished doctoral dissertation, Pullman: Washington State University, 1970.

Truax, C. B. Influence of patient statements on judgments of therapist statements during psychotherapy. Journal of Clinical Psychology, 1966, 22, 335-337 (a).

Truax, C. B. An approach to counselor education. Counselor Education and Supervision, 1970, 10(1), 4-15.

Truax, C. B. A scale for the measurement of accurate empathy. Discussion Paper No. 20, Wisconsin Psychiatric Institute, University of Wisconsin, September 26, 1961.

Truax, C. B. Therapist empathy, warmth, and genuineness and patient personality changes: A comparison between interaction unit measures, time sample measures, and patient perception measures. Journal of Clinical Psychology, 1966, 22, 225-229 (b).

Truax, C. B., & Carkhuff, R. R. Toward effective counseling and psychotherapy. Chicago: Aldine, 1967.

Truax, C. B., Carkhuff, R. R., & Douds, O. Toward an integration of the didactic and experiential approaches to training in counseling and psychotherapy. Journal of Counseling Psychology, 1969, 11, 240-247.

Truax, C. B., & Lister, J. L. Effects of short-term training upon accurate empathy and non-possessive warmth. Counselor Education and Supervision, 1971, 10(2), 120-125.

Truax, C. B., & Tatum, C. An extension from the effective psychotherapeutic model to constructive personality change in pre-school children. Childhood Education, 1966, 42, 456-462.

Van Buren, J. D. An assessment of the relationship between the capacity to empathize and the emotional maturity of a group of counselor trainees. Unpublished doctoral dissertation, Boston University, 1963.

Warren, The dictionary of psychology, 1934.

Watson, D. L. On the role of insight in the study of mankind. Psychoanalysis Review, 1938, 22, 358-371.

Webb. Teacher sensitivity: Affective impact on students. The Journal of Teacher Education, 1971, 22(4), 455-459.

Websters new world dictionary of the American language. College edition. New York: The World Publishing Company, 1962.

Weinstein, G., & Fantini, M. D. Toward humanistic education: A curriculum of affect. New York: Praeger Publishers, 1970.

Weiss, J. H. The effect of professional training and amount and accuracy of information on behavioral prediction. Journal of Consulting Psychology, 1963, 27, 257-262.

Wenger, M. A., Jones, F. N., & Jones, M. H. Physiological psychology. New York: Holt, Rinehart, & Winston, 1956.

Wolf R., & Murray, H. A. An experiment in judging personalities. Journal of Psychology, 1937, 3, 345-365.

Wolf, S., & Wolff, H. G. Human gastric function (2nd ed.) New York: Oxford, 1947.

APPENDIX A

CORRESPONDENCE WITH DR. NORMAN KAGAN

MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

COLLEGE OF EDUCATION • DEPARTMENT OF COUNSELING, PERSONNEL SERVICES AND EDUCATIONAL PSYCHOLOGY

March 5, 1974

Ms Constance H. Kravas
N . 1155 Juniper Way
P lman, Washington 99163

Dear Ms. Kravas:

I have re-read your proposal and I am as delighted as the first time I read it with the direction you are going. The TASS is sorely needed.

One question and one suggestion. I am a bit unclear about how you obtain your percentage agreement index from judges - I don't understand what they are agreeing to, the difficulty of each item, the correct answer, or the extent to which answers each creates agrees with answers created by others among them? The suggestion is that you not allow yourself to get completely wedded to judges' reactions as the sole source of correct answers and distractors. We used a few sources. The actual recall data, of course, will not be available to you; but you might bring in "judges" who are known to be very low in affective sensitivity and use their "correct" answers as distractors. You may also find that you can, as we did, create a theory about people who are low in affective sensitivity and then deliberately "play" to their weaknesses. Please also keep careful track of the film clips - if the scale works, it will be far more useful and durable on film than on videotape which, alas, deteriorates over time at a far more rapid rate than does film.

When your dissertation is completed, and if you still have any interest left in the work, you might want to compare a group's scores on your TASS with the same group's scores on our older scale. Or if you prefer, one of my students might be willing to run such a quick study.

I am delighted with what you are doing. Please drop me a note from time-to-time to let me know how it goes and what you find.

Sincerely,

Norman Kagan

NK/dfm

APPENDIX B

CORRESPONDENCE WITH FILM COMPANIES

Constance Helene Farnham Kravas
Department of Education
Cleveland Hall
Washington State University
Pullman, Washington 99163
January 29, 1974

Film Company
Address
City

Dear Sir:

I am a graduate student at Washington State University and am currently conducting research to develop and validate an instrument capable of assessing a teacher's level of "affective sensitivity." The teacher's ability to identify emotions expressed by students in the classroom (affective sensitivity) appears to be an important, yet difficult to measure, dimension of teaching effectiveness.

When completed, this instrument will consist of twenty-two videotaped excerpts (approximately 5-30 secondseach) of teacher-learner interactions. Subjects responding to the scale (I.E. pre-service and in-service teachers) will be asked to identify, via multiple-choice responses that will accompany the simulations, the emotions felt by the student during each videotaped episode.

In order to obtain these videotaped excerpts, I have been viewing previously produced media (16mm films) that contain classroom scenes and, hence, show examples of learner affective expressions. These films have been purchased by the Audio Visual Center, Holland Library, at Washington State University.

One of the scenes that I would like to include as part of the simulation device is a short segment from your film _____.

Could I have your permission to make a videotape excerpt from this film? The 16mm film itself will not be cut or altered. Subjects viewing the videotape will not be asked to rate the film, or the individuals depicted on it, in any way. Rather, the simulation device will be used as an educational tool to help teachers identify and increase their own levels of affective sensitivity.

I would certainly appreciate your consent to this request. If permission is granted, please sign the form at the bottom of this page. A self-addressed envelope has been included for your convenience in returning a reply.

Thank you.

Sincerely,

Connie Kravas

PERMISSION IS GRANTED TO CONSTANCE H. KRAVAS TO USE AN EXCERPT FROM THE FILM _____ ON THE VIDEOTAPE PORTION OF THE TEACHER AFFECTIVE SENSITIVITY SCALE.

_____
Signature

_____
Title

SRA
SCIENCE RESEARCH ASSOCIATES, INC
A Subsidiary of IBM

259 East Erie Street
Chicago, Illinois 60611
(312) 266-5000
Cable SCIRESUS, Chicago

April 8, 1974

Ms. Constance F. Kravas
Department of Education
Cleveland Hall
Washington State University
Pullman, Washington 99163

Dear Ms. Kravas:

Please accept this letter as authorization to reproduce on videotape in connection with research you are doing in connection with a graduate program at Washington State University, a seene, "Incident 2", from SRA INNER-CITY SIMULATION LABORATORY. It is our understanding that this material will be used for research purposes only and will not be sold or distributed for profit. Permission is granted on that basis.

The following acknowledgement should appear on each copy of the work reproduced:

> From INNER-CITY SIMULATION LABORATORY by Donald R. Cruickshank.
> © 1969, Science Research Associates, Inc.
> Reproduced by permission of the publisher.

Incidentally, please note that the title of the program is INNER-CITY SIMULATION LABORATORY not the title indicated in your letter.

If I can be of further assistance, please let me know.

Sincerely,

Barbara A. Heatley
Rights & Permissions

BAH/cd

BFA Educational Media
a division of Columbia Broadcasting System, Inc.
2211 Michigan Avenue
Santa Monica, California 90404
(213) 829-2901

February 11, 1974

Ms. Constance Helene Farnham Kravas
Department of Education
Cleveland Hall
Washington State University
Pullman, Washington 99163

Dear Ms. Kravas:

Your letter of January 29 addressed to Holt, Rinehart and Winston in New York was forwarded to BFA Educational Media since we now distribute most of the materials previously handled by their Media Department. The film in which you are interested, LESS FAR THAN THE ARROW, is now distributed by us.

Unfortunately, we are unable to grant permission for you to videotape a portion of this film for use in your project, since we are contractually prohibited from doing so.

We do appreciate your interest and hope your program will be successful.

Sincerely,

Mollie Ponedel

Mollie Ponedel
Manager, Marketing Services

/mp

Permission is granted to Constance Kravas to use an excerpt from the film "Now Back to the Lesson" on the videotape portion of the Teacher Affective Sensitivity Scale.

Richard J. Clark
signature

Director, Instructional Tech.
title Energy

2/11/74

NBC ENTERPRISES

A [illegible]
THIRTY ROCKEFELLER PLAZA, NEW YORK, N.Y. 10020, CIRCLE 7-8300

NORMAN A. LUNENFELD
Manager
Merchandising

March 19, 1974

Ms. Connie Kravas
Department of Education
Cleveland Hall
Washington State Univ.
Pullman, Wash. 99163

Dear Ms. Kravas:

Your letter to McGraw-Hill Films requesting permission to use segments from "Incident On Wilson Street" has been turned over to me.

I very much regret that we cannot grant you the permissions you ask for. My people (and their unions) were involved in the making of this show and clearances will have to be obtained from all. This is both a laborious and expensive procedure, not warranted, I am sure, by the use you intend.

Under these circumstances, I must withhold our permission but do so with regret.

Sincerely yours,

Norman A. Lunenfeld

NAL/ls

Permission is granted to Constance Kravas to use one excerpt from the film Human Values: Integrity on the videotape portion of the Teacher Affective Sensitivity Scale.

signature

Producer

title

Permission is granted to Constance Kraves to use the films Dick: A 5th Grader and Keith: A 2nd Grader on the videotape portion of the Teacher Affective Sensitivity Scale.

signature

title

Permission is granted to Constance Kravas to use one excerpt from the film Make a Mighty Reach on the videotape portion of the Teacher Affective Sensitivity Scale.

signature

Direct Information & Services Program

title

I/D161A

Permission is granted to Constance Kravas to use one excerpt from the film Strategies of Small Group Learning on the videotape portion of the Teacher Affective Sensitivity Scale.

signature B. Frank Brown

Director, /I/D/E/A/ Information & Services
title

M A L I B U F I L M S i n c.
BOX 428
MALIBU, CA. 90265
213-456-2859

March 1, 1974

Mrs. Constance H. Kravas
Washington State University
Dept. of Education
Pullman, WA 99163

Dear Mrs. Kravas,

Your request for use of a portion of "Human Values-Inte grity" has been forwarded to us from Format Films. We are the producers and current distributors, under the title of Malibu Films,and we are pleased to give you permission to transfer a portion of this film to videotape for the use you stipulate. I, personally, have always loved that shot of the little boy holding the guinea pig and I'm delighted you found it effective also.

Under separate cover I'm taking the opportunity of sending you our latest catalog in hopes that in the future you may find other films you can find useful as teaching tools.

Incidentally, the title of the film "Integrity" has been changed to "It Was My Fault" and this is the way it is listed currently.

Thank you for your interest in our picture.

Sincerely,

(Mrs.) Claire Menken

Enc.

APPENDIX C

COMPREHENSIVE LIST OF FILMS AND VIDEOTAPES

VIEWED FOR SELECTION OF EXCERPTS

TABLE 32

ALPHABETICAL LISTING OF 16mm FILMS VIEWED AND ANALYZED FOR POSSIBLE INCLUSION ON THE TASS*

Film Title	Source (Film Company)	Production Date
Acting with Maturity	Coronet	1969
Alice	National Educational Television	
Alphabet in Teaching Word Recognition	University of Iowa	1956
America's Crises: Marked for Failure	National Educational Television	1965
America's Crises: The Young Americans	National Educational Television	1965
And Gladly Learn, Part I	Utah State University	1967
And Gladly Learn, Part II	Utah State University	1967
Angry Boy	Mental Health Film Board	1951
Answering the Child's Why	Encyclopedia Brittannica	1951
Anyone Can	Bradley Wright Films	1968
As Boys Grow	Medical Arts Production	1957
AskMy Name	Artemis Films, Inc.	1968
Behavior Theory in Practice, Part I and II	Appleton-Century-Crofts	1965
Broader Concept Method, Part I: Developing Pupil Interest	McGraw-Hill	1948
Broader Concept of Method, Part II: Teacher and Pupils Planning and Working Together	McGraw-Hill	1948
Cheating	Young Americana	1952
Children Learn from Film-strips	National Film Board of Canada	1963
Children's Emotions	McGraw-Hill	1950
Classroom Incidents		
1--Stop That Tapping		
Now Back to the Lesson		
This Isn't True		
2--Kathy--Mary Ann		
Stop Talking		
I Don't Want To		
Dirty Pictures		
3--Cheating		
What's the Matter, Chris?		
What Does That Mean?		
The Open Door	ITEMS, Stanford	
Communication Feedback	Bureau of National Affairs, Inc.	1965
Conflict	McGraw-Hill	1956
Conformity	CBS-TV	1962

TABLE 32--Continued

Film Title	Source (Film Company)	Production Date
Control Your Emotions	Coronet	1950
Cooperation, Competition and Conflict	McGraw-Hill	1957
Courtesy For Beginners	Coronet	1967
Creating Instructional Materials	McGraw-Hill	1963
Creative Drama: The First Steps	Northwestern University	1962
Democracy: Your Voice Can Be Heard	Coronet	1970
Design for Physical Education in the Elementary School	Wayne State University	1958
Design to Music	International Film Bureau	1949
Developing Friendships	Coronet	1950
Developing Leadership	Coronet	1949
Developing Reading Maturity: The Mature Reader	Coronet	1964
Developing Your Character	Coronet	1950
Dick: A Fifth Grader	National Educational Television	
Dropout	National Education Association	1961
Effective Learning in the Elementary School	McGraw-Hill	1956
Even the Least of These	Washington State University	1954
Everybody's Prejudiced	National Film Board of Canada	1960
Everyday Courtesy	Coronet	1967
Exploring Our Community	International Film Bureau	1963
Eye of the Storm	ABC News	1970
Fire in Their Learning	National Education Association	1954
For All My Students	University of California	1966
From Sociable Six to Noisy Nine	National Film Board of Canada	1954
From Ten to Twelve	McGraw-Hill	1957
Getting Angry	Film Association	1966
Gifted Ones	National Film Board of Canada	1959
Helping Teachers to Understand Children, Part I and II	U. S. Information Agency	1953
Hickory Stick	National Education Association	1961
High Wall	McGraw-Hill	1952
How Honest Are You		
How Quiet Helps at School	Coronet	1953
How to Take a Test	Young America	1956
Human Beginnings	Brown Trust	1950
Human Growth	Brown Trust	1962
Human Values: Integrity	Format	1969
Improve Your Personality	Coronet	1951

TABLE 32--Continued

Film Title	Source (Film Company)	Production Date
Improve Your Punctuation	Coronet	1959
Improve Your Study Habits	Coronet	1961
Improvised Drama, Program 1	Peter Roebeck and Co.	1968
Incident on Wilson Street	ABD-TV	1964
Inner-City Simulation Laboratory	Science Research Associates	1969
Introduction to Speech Problems	Wayne State University	1960
Keith: A Second Grader	National Educational Television	
Language of Drawing	McGraw-Hill	1947
Learning is Searching	Vassar College	1955
Learning to Study		
Less Far Than the Arrow	Holt, Rinehart, & Winston	1968
Listen Well, Learn Well	Coronet	1952
Lonnie's Day	Coronet	1969
Make a Mighty Reach	C F. Rettering Foundation	1966
Meanings Are in People	Bureau of National Affairs, Inc.	1965
Meeting the Needs of Adolescents	McGraw-Hill	1953
Motivating the Class	McGraw-Hill	1950
Other Fellow's Feelings	Young America	1951
Outsider		
Phoebe	National Film Board of Canada	1965
Plain White Envelope	TV, Radio & Film Committee Methodist Church	1964
Portrait of a Disadvantaged Child: Tommy Knight	McGraw-Hill	1965
Portrait of the Inner City School	McGraw-Hill	1965
Problem Method, Part I: Defining the Problem and Gathering Information	McGraw-Hill	1955
Problem Method, Part II: Using Information to Solve the Problem	McGraw-Hill	1955
Procrastinator		
Punctuation for Beginners	Coronet	1962
Responsibility	Young America	1953
Strategies of Small Group Learning	Institute for Development of Educational Activities	
Take that First Step	Southwest Texas Educational Television	
Teacher: A Community Helper	Sigma Educational Films	1967
Understanding the Gifted	Churchill Films	1964

TABLE 32--Continued

Film Title	Source (Film Company)	Production Date
Way It Is, Part I and II	National Educational Television	1967
Why Billy Couldn't Learn	California Association for Neurologically Handicapped Children	1967

*All of these 16mm films had been purchased by the Audio Visual Center, Holland Library, Washington State University, Pullman, Washington.

TABLE 33

ALPHABETICAL LISTING OF VIDEOTAPES VIEWED AND ANALYZED FOR POSSIBLE INCLUSION ON THE TASS*

Title	Videotape Classification Number	Production Date
Anatone School	3D239	1971
Beat Goes On, The	3H41	1970
Bullfight	2A29	1971
Context Clues	3A35	1970
Convergent Questioning	3D113	1971
Creative Drama	3A153	1970
Culture Shock	3D140	1971
Discussion	3A189	1971
Educational Technology	3A169	1971
Elementary Art	1A13	1967
Experience Chart	3A35	1971
Fibonacci Numbers	1A24	1967
Figuring Figures	3A41	1970
Follow Directions	3A208	1970
Fourth Grade Reading and Science	1A3	1965
Handwriting	3A54	1970
Handwriting	3A153	1970
High School Equivalency Program (HEP)	1A32	1971
HEP Poetry	3A237	1972
High School Art	1A5	1965
High School French	2A8	1967
High School Language	1A16	1965
High School Music	2A7	1967
High School Spanish	2A6	1967
Hooper--A Vanishing Tradition	3D227	1970
Home, Jack	3A29	1970
Indian Child in the Educational Processes	3C197	1970
Individual Conferences	3A154	
Initial Blend	3A160	1970
Inquiry	3E39	1971
Inquiry and Heuristic Discussions	3A188	1971
Interaction Analysis	2A47	
I See	3A41	1970
Junior High Literature	1A17	1965
Junior High Science	1A15	
Kindergarten Visual Motor Program	3A84	1970
Language Response of Preschool Children	3D157	1970
Learning is Teaching	2A29	1955
Listening Comprehension	3A170	1970
Listening Directions	3A208	1970
Main Ideas	3A208	1970
New School Experimental Education	3D111	1971

TABLE 33--Continued

Title	Videotape Classification Number	Production Date
Non-Verbal Behavior	2A49	
Oral Vocabulary	3A149	1970
Pledge of Allegiance	3A82	1971
Praise for Writing	3A160	1970
Problems Facing Chicano Students in Today's Schools	3D221	1972
Questioning Strategies That Work	3A190	1971
Reading Groups	3A182	1967
River Bend School	3A184	1971
Sequence	3A82	1970
Sequence in Reading	3A170	1970
Small Group Discussion	3A163	1971
Threshold to Music	1A24	1966
Visual Discrimination	3A148	1970
Vowel Patterns	3A159	1970
Writing	3A66	1970

*All videotapes listed were obtained from the Media Center, Department of Education, Washington State University, Pullman, Washington.

APPENDIX D

LIST OF FIIMS AND FILM EPISODES INCORPORATED

ON FIRST SCALE DRAFT

TABLE 34

FILM TITLES AND DESCRIPTIONS--FIRST SCALE DRAFT

Film Title	Description
America's Crises: Marked for Fai ure Part I	Cleveland scolded by teacher
America's Crises: Marked for Failure, Part II	Boy feels snake
	Girl looks at snake, seems a little frightened yet fascinated
	Mirror scene
	Girl finds triangle--feels pleased
Answering the Child's Why	Teacher scolds Molly for not asking for help
Ask My Name	Teacher asks students to introduce selves. Edwardo called on.
Classroom Incidents	"Now back to the lesson"--boy rolls eyes.
	"Katy, Mary Ann, Stop Talking"--teacher criticizes girls for talking
	"Cheating"--David caught
Dick: A Fifth Grader	Dick says, "I know, I know." Wants to respond. Isn't called upon. Teacher gives social studies assignment; Dick seems to get into it.
	Dick and another student recite French; sit down and giggle.
Drop Out	Teacher has Joe read in front of class
	Boy in remedial class struggles, is helped.
	Dan gets build-up speech from coach

TABLE 34--Continued

Film Title	Description
Eye of the Storm	Disbelief on girl's face.
	Boy hit another boy, teacher questions.
	Russel ashamed of behavior.
	Brain has hands over head; buries face on desk, mutters to self.
For All My Students	Confrontation between teacher and student; student storms out of room.
	Ed Maderas
Human Values: Integrity	Boy hugs "Snappy".
Incident on Wilson Street: Reel 1	Johnny talking of Elizabeth Taylor and divorce.
	Teacher talking to Howie who wants to be an artist like his father.
	Angela discusses goal of being a nurse.
	Teacher tries to talk Johnny out of being mad.
Incident on Wilson Street: Reel 2	Angela; teacher and students talk with her; she plugs ears.
Inner-City Simulation Laboratory	Film #2: Baseball game; pick up equipment.
	Film #5: Library scene.
	Film #3: Marsha didn't get homework done.
Keith: A Second Grader	Keith called to front to be "sharing teacher."
	Keith wants to be called on; raises hand; disappointed.

TABLE 3/4--Continued

Film Title	Description
Less Far Than the Arrow	Jim makes mechanical drawing during poetry lesson.
	Jim not interested in poetry; says so.
Make a Mighty Reach	Sex lesson--"Archery".
Strategies of Small Group Learning	Value group--focus on Kathy.

APPENDIX E

COLLATED JUDGE RESPONSE CATEGORIES; PERCENTACE AGREEMENT INDICES; NOTATIONS OF "CORRECT"--"INCORRECT" MULTIPLE-CHOICE RESPONSES

TABLE 35

MULTIPLE-CHOICE OPEN-ENDED RESPONSE CONSTRUCTION:
JUDGE GROUP I; VIDEOTAPE HALF I

Scene	Ratio	Percentage	"Correct" Response
Scene 1			
1. a. The teacher likes me. She knows that I'm smart.	1/12	.08333	
b. Hey, I've got it. I'm excited. I want to share my ideas.	10/12	.83333	X
c. What an interesting lesson. I can really "get into" this one.	0	.00000	
d. Other	1/12	.08333	
2. a. I'm frustrated. I wish she would have called on me.	7/12	.58333	X
b. I like the teacher. She seems to like me.	1/12	.08333	
c. I didn't notice anybody else	0	.00000	
d. Other	4/12	.33333	
Scene 2			
3. a. Big deal! Who cares what the class is talking about anyway?	1/12	.08333	
b. Boy, do I feel "put down." The teacher makes me feel stupid.	8/12	.66666	X
c. I don't care. Go ahead and send me to the office.	0	.00000	
d. Other	3/12	.25000	
4. a. The teacher doesn't understand me. I don't like the teacher for picking on me.	10/12	.83333	X
b. I feel humiliated. I wonder what the rest of the class is thinking.	1/12	.08333	
c. Why did the teacher interrupt? I wanted to finish this argument.	1/12	.08333	
d. Other	0	.00000	
Scene 3			
5. a. Yuk! What an icky looking animal.	1/12	.08333	
b. Gee, it feels funny!	1/12	.08333	
c. This is fun, but a bit scary.	10/12	.83333	X
d. Other	0	.00000	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
6. a. I better do it because he suggested I do it.	0	.00000	
b. I wonder if the other students like the snake.	1/12	.08333	
c. I like the teacher. I'm glad he's helping me with something I'm unsure of.	8/12	.66666	X
d. Other	3/12	.25000	
Scene 4			
7. a. This is kind of fun, but I'm not really sure what I'm doing.	8/12	.66666	X
b. So that's what I look like.	2/12	.16666	
c. I'm contented. I did what my teacher asked.	1/12	.08333	
d. Other	1/12	.08333	
8. a. If she tells me to do it it must be okay. But it seems a little silly.	2/12	.16666	
b. I'm happy I got to hold the mirror. The teacher knew I wanted to. She's nice.	7/12	.58333	
c. Please don't make me do this. I'm shy.	2/12	.16666	
d. Other	1/12	.08333	
Scene 5			
9. a. I'm angry and frustrated that I can't make my point.	6/12	.50000	X
b. I'm right! I won't stand for prejudice.	3/12	.25000	
c. I only wanted to hear. She embarrassed me.	1/12	.08333	
d. Other	2/12	.16666	
10. a. Boy, you're just like all the rest. You don't even care.	9/12	.75000	X
b. I bet you would be sorry if you only knew the truth.	1/12	.08333	
c. I don't have to take that from you or anybody else	2/12	.16666	
d. Other	0	.00000	

TABLE 35--Continued

Scene			Ratio	Percentage	"Correct" Response
Scene 6					
11.	a.	I'm confused by all of this.	2/12	.16666	
	b.	It's hard to get a word in to express your feelings.	1/12	.08333	
	c.	I'm feeling defensive. I still think I said something. You're not really listening to me.	9/12	.75000	X
	d.	Other	0	.00000	
12.	a.	I feel pretty good about the group members.	1/12	.08333	
	b.	They want me to talk and then don't give me a chance. What's the use.	5/12	.33333	X
	c.	You can't tell me that! You really don't understand me. That's your problem.	1/12	.16666	
	d.	Other	4/12	.33333	
Scene 7					
13.	a.	People do get married for love. But it sure is embarrassing for me to say that word "love."	8/12	.66666	X
	b.	People shouldn't get divorced because that hurts me.	1/12	.08333	
	c.	I'm never going to get divorced. I'll really be in love and happy.	1/12	.08333	
	d.	Other	2/12	.16666	
14.	a.	I like the teacher listening and paying attention to me. I like her.	1/12	.08333	
	b.	The teacher doesn't understand how I feel.	1/12	.16666	
	c.	Stop this. You're embarrassing me.	6/12	.50000	X
	d.	Other	4/12	.25000	
Scene 8					
15.	a.	I'm determined. I'm serious about my goal. It's important to me.	3/12	.25000	
	b.	I wish people would let me be what I want to be.	1/12	.08333	
	c.	I feel pretty lonely and scared here. I'm not like the others.	7/12	.58333	X
	d.	Other	1/12	.08333	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
16. a. She understands and cares about how I feel.	7/12	.58333	X
b. It's hard to try to get along with others. They haven't tried with me.	2/12	.16666	
c. She seems to like me, but I wonder if she wants me to be tough like the others.	2/12	.16666	
d. Other	1/12	.08333	
Scene 9			
17. a. Oh boy! I feel proud. I'm really happy to be on the track team.	9/12	.75000	X
b. Gee I'm cool. They're all focusing on me.	1/12	.08333	
c. I'm thankful for the confidence you have in me.	1/12	.08333	
d. Other	1/12	.08333	
18. a. How can I ever thank you?	0	.00000	
b. He thinks I'm pretty good. I'll have to show h n how good I am.	1/12	.08333	
c. I think they really accept me. I like	11/12	.91666	X
d. Other	0	.00000	
Scene 10			
19. a. I wasn't being funny. I've heard that physical activity can help.	2/12	.16666	
b. I feel good about myself right now. They think I'm clever.	4/12	.33333	X
c. I'm unsure about myself and am feeling a bit stupid.	4/12	.33333	
d. Other	1/12	.16666	
20. a. I don't really trust you guys. Don't get so personal.	2/12	.16666	
b. Don't laugh at me. I'm trying to make a point.	3/12	.25000	
c. They heard my joke and laughed. That makes me feel accepted.	4/12	.33333	
d. Other	3/12	.25000	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
Scene 11			
21. a. I really didn't want to do my homework.	0	.0000	
b. I feel funny about not getting that assignment in, but I'm doing the right thing at home, what with mom busy and all.	2/12	.16666	
c. I feel a need to defend myself. I feel guilty for not doing my homework.	9/12	.75000	X
d. Other	1/12	.08333	
22. a. The teacher isn't buying it. She doesn't like me for not doing my homework.	2/12	.16666	
b. The teacher was listening to me!	1/12	.08333	
c. I wonder if she believes me. She's sort of threatening.	7/12	.58333	X
d. Other	2/12	.16666	
Scene 12			
23. a. Hey, I'm over here. Look at me. I know the answer.	2/12	.16666	
b. I'm disappointed that I wasn't chosen. It's frustrating not to be called on when you know the answer.	8/12	.66666	X
c. I never get to participate. How come she never calls on me?	1/12	.08333	
d. Other	1/12	.08333	
24. a. Maybe she doesn't care for me.	10/12	.83333	X
b. Can't she see how badly I want to do it.	1/12	.08333	
c. I'm angry and don't like the teacher.	1/12	.08333	
d. Other	0	.00000	
Scene 13			
25. a. I did it now! I wanted to stay and talk to my friend. I wish I weren't here.	1/12	.08333	
b. Why me? I wasn't making that much noise.	1/12	.08333	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
c. I'm embarrassed and upset. What will the other kids think.	10/12	.83333	X
d. Other	0	.00000	
26. a. I dislike the teacher. The teacher embarrassed me in front of the whole class.	9/12	.75000	X
b. I'm sorry. I shouldn't have done it.	1/12	.08333	
c. I like the teacher and understand why she made me move.	0	.00000	
d. Other	2/12	.16666	
Scene 14			
27. a. I'm embarrassed and frightened, but it feels good to see them concerned about me.	6/12	.50000	X
b. I don't feel very good about myself. I'm ashamed.	3/12	.25000	
c. I wish they would leave me alone. I don't want to listen to them talk about me.	3/12	.25000	
d. Other	0	.00000	
28. a. I don't want them to know how I really feel.	1/12	.08333	
b. They accept me. That makes me feel good.	8/12	.66666	
c. I'm scared. I wish I were someplace else.	2/12	.16666	
d. Other	1/12	.08333	
Scene 15			
29. a. I don't know what to say. I wish I could get away from here.	2/12	.16666	
b. Great! Now I've got her. She's going to do what I want.	0	.00000	
c. I don't like myself very well. I never seem to do the right thing.	9/12	.75000	X
d. Other	1/12	.08333	
30. a. She's disappointed in me, but I guess she wants to help.	4/12	.33333	X
b. I don't think you're interested in me.	2/12	.16666	
c. You're always too busy to talk to.	3/12	.25000	
d. Other	3/12	.25000	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
Scene 16			
31. a. I'm a little embarrassed, but it makes me feel good too.	7/12	.58333	X
b. I'm perturbed. I offered up a piece of myself and now everyone is laughing.	1/12	.08333	
c. I'm crazy for saying those things; I wish I hadn't. They sound ridiculous now.	2/12	.16666	
d. Other	2/12	.16666	
32. a. I'm resentful. Why did she have to betray a confidence?	1/12	.08333	
b. They probably think I'm crazy. But I'm glad the teacher likes what I wrote.	10/12	.83333	X
c. I'm overwhelmed by all this attention.	1/12	.08333	
d. Other	0	.00000	
Scene 17			
33. a. I love you, Snappy.	8/12	.66666	X
b. Snappy likes me. I'm pleased.	2/12	.16666	
c. I want some attention.	1/12	.08333	
d. Other	1/12	.08333	
34. a. I'm contented. I'd much rather play with Snappy than drink punch.	2/12	.16666	
b. No one else pays attention to us. They don't seem to really care about us.	8/12	.66666	X
c. I'm afraid the teacher will catch me holding you, Snappy.	1/12	.08333	
d. Other	1/12	.08333	
Scene 18			
35. a. Is this for real? This class is so dumb.	0	.00000	
b. I am bored stiff. This poetry stuff is for the birds.	11/12	.91666	X
c. These car drawings are really great.	1/12	.08333	
d. Other	0	.00000	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
36. a. Why does the teacher make us do this anyway? No one is listening.	6/12	.50000	X
b. How can that girl like reading her poem? She's weird.	2/12	.16666	
c. If they like that stuff, let them do it. I'm oblivious to them.	2/12	.16666	
d. Other	2/12	.16666	
Scene 19			
37. a. I don't have to talk if I don't want to.	1/12	.08333	
b. That's such a hard question to answer.	0	.00000	
c. I feel uptight. I'm frightened.	10/12	.83333	X
d. Other	1/12	.08333	
38. a. She frightens me and now the whole class is staring at me. Why do I have to talk?	7/12	.58333	X
b. I wish she would speak in Spanish or that I could understand her better.	1/12	.08333	
c. People are different here. What are these people going to think of me?	2/12	.16666	
d. Other	1/12	.16666	
Scene 20			
39. a. I hope I don't get one I can't pronounce.	1/12	.08333	
b. I feel threatened by the difficulty of this.	1/12	.08333	
c. Hey, I got the right answer. It feels good to get it right.	10/12	.83333	X
d. Other	0	.00000	
40. a. He's understanding. The teacher is trying to help me.	9/12	.75000	X
b. I feel inferior. The teacher is so much smarter.	1/12	.08333	
c. He sure makes me work hard.	2/12	.16666	
d. Other	0	.00000	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
Scene 21			
41. a. I'm pretty neat! All these guys look up to me.	2/12	.16666	
b. What a waste of time. I can't sit still a minute longer.	2/12	.16666	
c. I want some attention.	7/12	.58333	X
d. Other	1/12	.08333	
42. a. Now let's see what you're going to do.	3/12	.25000	
b. I don't understand this. They are all working on the stupid assignment. Brownies!	2/12	.16666	
c. Nobody pays any attention to me. They don't like me, but I don't like them either.	5/12	.41666	X
d. Other	2/12	.16666	
Scene 22			
43. a. Crap! Here it comes. All I need is more work.	7/12	.58333	X
b. I'm bored and I don't like this class.	2/12	.16666	
c. I'm preoccupied with my own thoughts.	1/12	.08333	
d. Other	2/12	.16666	
44. a. I feel bored with the class and the teacher.	3/12	.25000	
b. This guy is too much! I don't like him.	6/12	.50000	X
c. Why is the teacher doing this to me?	2/12	.16666	
d. Other	0	.00000	

JUDGE GROUP II; VIDEOTAPE HALF II

Scene 23			
45. a. I feel defensive. I'm being picked on.	2/12	.16666	
b. Poetry is plain useless for me. And besides, it's boring.	7/12	.58333	X

TABLE 35--Continued

Scene			Ratio	Percentage	"Correct" Response
	c.	I'm feeling pretty good despite everything else.	1/12	.08333	
	d.	Other	2/12	.16666	
46.	a.	I'm no kid. Why treat me like one?	8/12	.66666	X
	b.	They really didn't understand what I was feeling.	1/12	.08333	
	c.	What makes them feel they can understand poetry. It's not scientific.	1/12	.08333	
	d.	Other	2/12	.16666	
Scene 24					
47.	a.	I like to get up in front of people, but I don't particularly care for French.	2/12	.16666	
	b.	I should have done better, but I don't care.	1/12	.08333	
	c.	Boy, am I glad that's over. How embarrassing. But I didn't do badly.	7/12	.58333	X
	d.	Other	2/12	.16666	
48.	a.	I really wonder what everyone is thinking of me after that.	5/12	.41666	X
	b.	I was self-conscious when I was up there in front.	1/12	.08333	
	c.	Ick! I wonder why she always calls on me.	2/12	.16666	
	d.	Other	4/12	.33333	
Scene 25					
49.	a.	I don't want that snake near me. I don't like it.	1/12	.08333	
	b.	I'm curious, but still a little frightened.	9/12	.75000	X
	c.	Wow! It sure doesn't look like me.	1/12	.08333	
	d.	Other	1/12	.08333	
50.	a.	They must think I'm really brave.	1/12	.08333	
	b.	The teacher and I share a common interest in snakes.	1/12	.08333	
	c.	I'm engrossed and hardly aware of the others.	6/12	.50000	X
	d.	Other	4/12	.33333	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
Scene 26			
51. a. The teacher accepts me.	2/12	.16666	
b. I caught it! Gee, that was fun.	9/12	.75000	X
c. I'm not sure about catching these big circles.	1/12	.08333	
d. Other	0	.00000	
52. a. I'll try to do what the teacher asked.	1/12	.08333	
b. I really like my teacher. She's nice.	6/12	.50000	X
c. I'm glad the teacher rolled it to me. She thinks I'm nice.	5/12	.41666	
d. Other	0	.00000	
Scene 27			
53. a. Boy, that really made me feel good!	8/12	.66666	X
b. I'm busy, but I'll listen a bit.	1/12	.08333	
c. How embarrassing!	1/12	.08333	
d. Other	2/12	.16666	
54. a. I'm relieved. For a minute there, I thought I was going to get it.	0	.00000	
b. I'm glad the teacher saw me pitch.	1/12	.08333	
c. Hey thanks! You care about me.	9/12	.75000	X
d. Other	2/12	.16666	
Scene 28			
55. a. He hurt my feelings. I was right to hit him.	7/12	.58333	X
b. I'm mad. He deserved to get it.	3/12	.25000	
c. I feel everybody picks on me.	1/12	.08333	
d. Other	1/12	.08333	
56. a. I hate Russell.	1/12	.16666	
b. I'll defend myself against you, too.	1/12	.08333	
c. I don't really want to talk about this. You don't understand.	5/12	.41666	X
d. Other	4/12	.33333	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
Scene 29			
57. a. I'm feeling rotten and confused. Wish I hadn't called him names.	7/12	.58333	X
b. I don't care. I'm glad I did it.	2/12	.16666	
c. I really can't stand him. He deserved to be called names.	0	.00000	
d. Other	3/12	.25000	
58. a. I wonder if she's mad at me.	1/12	.08333	
b. I'm hurt, but I'm not going to let anybody know how hurt I am.	1/12	.08333	
c. The teacher's threatening me. I wish she'd leave me alone.	7/12	.58333	X
d. Other	3/12	.25000	
Scene 30			
59. a. This is a neat subject.	1/12	.08333	
b. Oh boy! I was right!	9/12	.75000	X
c. Give me a chance. I think I can do it.	1/12	.08333	
d. Other	1/12	.08333	
60. a. I'm feeling a little anxious about this.	0	.00000	
b. You're such a nice teacher.	4/12	.33333	
c. This is fun. It feels good to have the teacher's approval.	6/12	.50000	X
d. Other	2/12	.16666	
Scene 31			
61. a. I'm different from everyone else because I can't talk well.	2/12	.16666	
b. I'm a little embarrassed but pleased to be getting all this attention.	6/12	.50000	X
c. I've been helped by nurses and I want to help people too.	1/12	.08333	
d. Other	3/12	.25000	
62. a. She's interested. I think she really likes me.	5/12	.41666	
b. You're pushing me. You seem to care, but I wish you wouldn't ask so many questions.	5/12	.41666	

TABLE 35--Continued

	Scene	Ratio	Percentage	"Correct" Response
	c. These questions don't bother me. I like to talk about nurses and my experiences in the hospital.	1/12	.08333	
	d. Other			
Scene 32				
63.	a. I'm feeling scared about this.	0	.00000	
	b. If I sit up tall, she will call on me.	2/12	.16666	
	c. I feel important.	9/12	.75000	X
	d. Other	1/12	.08333	
64.	a. The teacher likes me. I like her for calling on me today.	2/12	.16666	
	b. Boy, now I have some control and power!	3/12	.25000	
	c. I'm feeling happy. I'm into my own feelings and not really thinking about the rest of the class.	6/12	.50000	X
	d. Other	1/12	.16666	
Scene 33				
65.	a. I couldn't feel worse. I feel so alone and inadequate.	8/12	.66666	X
	b. I got the booby prize. Why do I have to pick up this junk.	1/12	.08333	
	c. I hate to play ball. I always strike out.	2/12	.16666	
	d. Other	1/12	.08333	
66.	a. They left me all alone. I feel they don't care about me.	7/12	.58333	X
	b. The teacher doesn't even appreciate all the work I do.	2/12	.16666	
	c. I really don't like the teacher very well.	1/12	.08333	
	d. Other	2/12	.16666	
Scene 34				
67.	a. Gosh, I wish it were over. I'm really dumb.	10/12	.83333	X
	b. I hate you teacher.	1/12	.08333	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
c. This is really a bummer. I don't like to read.	1/12	.08333	
d. Other	0	.00000	
68. a. Why don't you care about me?	2/12	.16666	
b. You're a real zero. You make me feel so stupid.	9/12	.75000	X
c. I resent her snobbish attitude. What makes her think she's so smart?	1/12	.08333	
d. Other	0	.00000	
Scene 35			
69. a. Shove it, teacher.	3/12	.25000	
b. It's alright. I'm not one of his students anyway.	1/12	.08333	
c. I feel two inches high.	7/12	.58333	X
d. Other	1/12	.08333	
70. a. What a grouch! I hate him.	8/12	.66666	X
b. I'll bet he gives it to me now.	2/12	.16666	
c. You don't have to make such a big deal about it.	1/12	.08333	
d. Other	0	.00000	
Scene 36			
71. a. Oh well, I really don't care anyway.	2/12	.16666	
b. How humiliating. I really messed up this time. Now I'm in for it.	7/12	.58333	X
c. I'm feeling insecure. I didn't know the test answers.	2/12	.16666	
d. Other	1/12	.08333	
72. a. I don't care if I was cheating. She's really a crab.	1/12	.08333	
b. She's deliberately picking on me.	2/12	.16666	
c. They must think I'm terrible.	5/12	.41666	X
d. Other	4/12	.33333	
Scene 37			
73. a. I'm happy. I like to do this.	11/12	.91666	X
b. I'm feeling relaxed and comfortable.	1/12	.08333	
c. See, I can touch my nose.	0	.00000	
d. Other	0	.00000	

TABLE 35--Continued

Scene			Ratio	Percentage	"Correct" Response
74.	a.	She chose me. She must like me.	5/12	.41666	X
	b.	Wow! Everyone is watching me touch my nose.	2/12	.16666	
	c.	I like the teacher and the students.	2/12	.16666	
	d.	Other	2/12	.16666	
Scene 38					
75.	a.	This is disgusting. I want to be able to use the drinking fountain too.	1/12	.08333	
	b.	But that's not fair! I don't think I'm going to like this lesson as much as I thought.	7/12	.58333	
	c.	I'm confused. I'm not sure I believe her.	4/12	.33333	
	d.	Other	0	.00000	
76.	a.	Why does the teacher dislike me? I'm hurt.	4/12	.33333	
	b.	I don't like those blue-eyed people.	1/12	.08333	
	c.	Something funny is going on. You don't really mean this, do you?	6/12	.50000	
	d.	Other	1/12	.08333	
Scene 39					
77.	a.	I hate myself. I'm a failure.	0	.00000	
	b.	I'm really P. O.'d. He can't talk about my mother like that.	11/12	.91666	X
	c.	Nobody cares about me or how I feel.	1/12	.08333	
	d.	Other	0	.00000	
78.	a.	To hell with them!	6/12	.50000	X
	b.	I want to get out of here. They're poking fun at me.	3/12	.25000	
	c.	The teacher's not even listening to me. He doesn't care.	2/12	.16666	
	d.	Other	1/12	.08333	
Scene 40					
79.	a.	This makes me angry. This whole thing doesn't make any sense at all.	10/12	.83333	X
	b.	I feel hurt. I'm no worse than anyone else here.	1/12	.16666	

TABLE 35--Continued

Scene	Ratio	Percentage	"Correct" Response
c. Stop threatening me.	0	.00000	
d. Other			
80. a. I'm frustrated. I know how to sit in a chair, but you aren't giving me a chance.	1/12	.08333	
b. You're just saying this to pick on me.	1/12	.08333	
c. This is horrible. I don't like what you're doing. How can you say those awful things.	8/12	.66666	X
d. Other			
Scene 41			
81. a. I feel helpless.	1/12	.08333	
b. I feel like I'm the focus of attention and I want to withdraw.	1/12	.08333	
c. I feel so mad at everyone. Still, I'm feeling guilty about it.	8/12	.66666	X
d. Other	2/12	.16666	
82. a. The teacher doesn't like what I've done. She can't make me like him.	5/12	.41666	X
b. I'm proud of all this attention from the teacher and the rest of the kids.	1/12	.08333	
c. Why don't you shut up and leave me alone?	4/12	.33333	
d. Other	2/12	.16666	
Scene 42			
83. a. I feel rejected. I don't think the librarian likes me.	2/12	.16666	
b. Now I'm going to get it. I didn't even do anything wrong.	8/12	.66666	X
c. I don't want to be here.	1/12	.08333	
d. Other	0	.00000	
84. a. I'm scared. I hope the teacher doesn't get mad at me.	5/12	.41666	X
b. I'm not like the other kids.	1/12	.16666	
c. This librarian is a witch.	4/12	.33333	
d. Other	1/12	.08333	

APPENDIX F

JUDGE MEAN-REPORTED DEGREE-OF-DIFFICULTY IN IDENTIFYING STUDENT FEELINGS

TABLE 36

JUDGE REPORTED DEGREE-OF-DIFFICULTY IN IDENTIFYING STUDENT EMOTION

Degree of Difficulty

Scene	Item	Very Easy	Easy	Neither	Difficult	Very Difficult	Scene	Item	Very Easy	Easy	Neither	Difficult	Very Difficult
1	1	2	5	3	2	0	22	43	1	5	2	2	2
	2	3	5	3	1	0		44	3	4	2	2	1
2	3	0	2	6	3	1	23	45	2	7	2	1	0
	4	0	6	3	3	0		46	1	7	2	2	0
3	5	1	4	7	0	0	24	47	2	4	4	2	0
	6	0	5	4	3	0		48	0	1	6	2	3
4	7	0	3	3	5	1	25	49	2	6	5	0	0
	8	0	3	3	4	2		50	2	6	4	0	1
5	9	1	7	2	1	0	26	51	3	6	2	1	0
	10	1	8	1	1	0		52	3	5	3	1	0
6	11	0	1	7	3	1	27	53	6	3	2	1	0
	12	0	3	6	3	0		54	4	6	1	1	0
7	13	0	5	4	2	0	28	55	6	0	5	1	0
	14	0	4	5	3	0		56	3	0	8	1	0
8	15	0	7	3	2	0	29	57	1	2	6	3	0
	16	0	5	6	1	0		58	0	4	5	3	0
9	17	3	5	4	0	0	30	59	5	5	1	0	0
	18	3	4	3	1	0		60	3	4	4	0	0
10	19	1	2	4	5	0	31	61	0	5	6	1	1
	20	1	1	3	6	1		62	1	3	6	2	1
11	21	0	4	5	2	1	32	63	3	7	2	0	0
	22	0	2	5	4	1		64	2	7	2	0	1
12	23	1	8	3	0	0	33	65	6	3	2	1	0
	24	0	7	4	1	0		66	2	6	4	0	0
13	25	0	7	3	2	0	34	67	6	4	2	0	0
	26	0	5	6	1	0		68	4	5	1	2	0
14	27	1	4	3	3	1	35	69	2	4	5	1	0
	28	1	4	1	5	1		70	2	4	4	2	0
15	29	0	3	5	4	0	36	71	5	3	2	2	0
	30	0	2	5	4	1		72	4	5	1	1	1
16	31	1	4	5	2	0	37	73					
	32	1	3	5	3	0		74					
17	33	1	6	0	4	1	38	75	2	5	5	0	0
	34	1	5	1	3	2		76	2	4	3	3	0
18	35	2	5	4	1	0	39	77	7	0	2	2	1
	36	0	2	5	5	0		78	4	4	3	1	0
19	37	1	5	3	2	0	40	79	3	4	3	2	0
	38	1	5	2	2	2		80	4	4	2	1	1
20	39	2	4	4	2	0	41	81	5	3	4	0	0
	40	1	7	3	1	0		82	3	2	6	1	0
21	41	1	2	3	6	0	42	83	2	6	2	0	2
	42	0	3	2	7	0		84	3	5	2	1	1

APPENDIX G

OPEN-ENDED AND REVERSE-HALF JUDGE RESPONSES; PERCENTAGE AGREEMENT/DISAGREEMENT SCORES FOR EACH CATEGORY

TABLE 37

MULTIPLE-CHOICE OPEN-ENDED RESPONSE CONSTRUCTION: JUDGE GROUP I; VIDEOTAPE HALF I

Scene No.	1		2		3		4		5		6		7		8		9		10		11	
Judge # / Item No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	b	a	d	a	c	c	c	b	a	a	b	b	b	b	d	a	a	c	a	d	c	c
2	d	d	d	a	b	d	b	a	b	c	c	d	d	c	c	a	c	c	d	b	b	b
3	b	d	d	a	c	d	a	d	a	a	c	d	a	c	c	b	b	c	c	a	b	d
4	b	a	b	a	a	b	a	c	a	a	c	b	a	c	c	b	a	c	c	b	c	c
5	b	a	a	a	c	d	b	b	d	b	a	b	c	d	a	c	a	b	a	d	c	c
6	b	d	b	c	c	c	a	b	d	a	c	d	a	d	c	a	a	c	c	d	d	d
7	b	a	b	a	c	c	a	b	a	a	c	a	a	c	a	a	a	c	b	c	c	c
8	b	a	b	b	c	c	a	b	a	a	a	b	a	d	a	a	a	c	b	c	c	c
9	b	d	b	a	c	c	a	a	c	c	c	c	a	a	c	a	d	c	b	c	c	c
10	b	b	b	a	c	c	a	b	a	a	c	c	a	c	c	c	a	c	d	a	c	c
11	b	a	b	a	c	c	d	c	b	a	b	b	d	d	c	a	a	c	c	b	c	a
12	a	a	b	a	c	c	a	b	b	a	c	d	a	c	b	d	a	c	b	c	c	a
Total A	1	7	1	10	1	0	8	2	6	9	2	1	8	1	3	7	9	0	2	2	0	2
B	10	1	8	1	1	1	2	7	3	1	1	5	1	1	1	2	1	1	4	3	2	1
C	0	0	0	1	10	8	1	2	1	2	9	2	1	6	7	2	1	11	4	4	9	7
D	1	4	3	0	0	3	1	1	2	0	0	4	2	4	1	1	1	0	2	3	1	2
KEY	B	A	B	A	C	C	A	B	A	A	C	B	A	C	C	A	A	C	B	C	C	C

Scene No.	12		13		14		15		16		17		18		19		20		21		22	
Judge # / Item No.	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
1	c	a	b	a	a	d	c	a	c	b	a	b	b	c	c	c	c	a	c	a	a	a
2	a	a	c	d	b	b	c	c	a	b	a	a	b	a	d	d	a	c	a	a	b	b
3	b	a	c	a	c	c	c	d	b	c	a	b	b	c	c	a	c	a	c	c	a	b
4	b	a	c	a	a	a	c	d	c	b	a	b	b	b	c	a	c	a	d	c	a	a
5	b	b	a	d	c	b	a	c	a	b	b	a	b	a	c	d	c	a	a	b	d	b
6	b	a	c	a	a	b	c	c	a	b	a	b	b	b	d	c	b	c	a	b	d	b
7	b	a	c	a	c	b	c	a	a	b	a	b	b	a	c	a	c	a	c	c	a	b
8	b	a	c	a	a	b	d	a	a	b	b	b	b	a	c	a	c	a	c	c	a	b
9	b	a	c	a	a	b	c	d	a	b	c	b	b	a	c	a	c	c	c	d	b	b
10	a	a	c	a	a	b	c	a	d	b	a	b	b	a	c	a	c	a	b	c	a	c
11	d	c	c	b	b	c	c	b	a	a	d	a	b	b	a	c	b	b	c	b	d	c
12	b	a	c	a	a	b	a	b	d	b	a	c	c	d	c	a	c	a	c	a	a	a
Total A	2	10	1	9	7	1	2	4	7	1	8	2	0	6	1	7	1	9	2	3	7	3
B	8	1	1	1	2	8	0	2	1	10	2	8	11	2	0	1	1	1	2	2	2	6
C	1	1	10	0	3	2	9	3	2	1	1	1	1	2	10	2	10	2	7	5	1	2
D	1	0	0	1	0	1	1	3	2	0	1	1	0	2	1	2	0	0	1	2	2	0
KEY	B	A	C	A	A	B	C	A	A	B	A	B	B	A	C	A	C	A	C	C	A	B

TABLE 38

MULTIPLE-CHOICE OPEN-ENDED RESPONSE CONSTRUCTION: JUDGE GROUP II; VIDEOTAPE HALF II

Scene No.	23		24		25		26		27		28		29		30		31		32	
Judge # / Item No.	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
15	a	c	d	b	b	b	a	c	d	a	d	d	d	c	c	b	b	a	c	c
16	b	a	b	a	b	c	b	b	a	d	a	a	d	d	b	c	b	a	c	c
17	b	a	a	d	b	d	c	b	a	c	b	c	a	b	b	c	b	b	c	b
18	b	d	c	a	a	d	b	c	a	c	a	d	a	d	b	d	a	b	c	b
19	a	a	a	a	b	d	b	c	a	c	c	c	b	d	b	c	d	a	c	b
20	b	a	c	c	b	c	b	b	a	c	b	c	b	a	b	c	d	b	c	c
21	d	a	d	d	b	c	b	a	b	b	a	d	a	c	b	b	c	c	b	d
22	b	a	c	a	b	c	b	b	a	c	a	c	a	c	b	b	b	b	c	c
23	d	a	c	c	c	a	b	c	a	c	a	d	d	c	b	b	b	a	c	a
24	b	a	c	d	b	c	b	c	c	c	b	b	a	c	b	d	b	d	d	c
25	b	d	c	d	b	c	b	b	d	d	c	c	a	c	a	b	d	a	c	c
26	c	b	c	a	d	d	a	b	a	c	a	a	a	c	d	c	a	b	b	a
Total A	2	8	2	5	1	1	2	1	8	0	7	2	7	1	1	0	2	5	0	2
B	7	1	1	1	9	1	9	6	1	1	3	1	2	1	9	4	6	5	2	3
C	1	1	7	2	1	6	1	5	1	9	1	5	3	7	1	6	1	1	9	6
D	2	2	2	4	1	4	0	0	2	2	1	4	0	3	1	2	3	1	1	1
KEY	B	A	C	A	B	C	B	B	A	C	A	C	A	C	B	C	B	A	C	C

Scene No.	33		34		35		36		37		38		39		40		41		42	
Judge # / Item No.	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
15	a	a	a	c	c	a	c	d	a	a	c	a	c	b	a	c	c	c	b	a
16	a	d	a	a	a	a	c	c	b	d	c	a	b	d	a	d	c	b	a	a
17	a	a	a	b	c	a	b	b	a	c	b	c	b	a	b	c	c	a	b	a
18	a	a	b	b	c	b	b	b	a	a	b	a	b	b	a	d	a	a	b	c
19	a	b	a	b	c	d	c	c	a	a	c	d	b	a	a	a	d	c	c	c
20	c	a	a	b	a	a	b	c	a	d	b	c	b	a	a	c	c	a	b	b
21	c	d	c	b	b	a	a	d	a	c	a	c	b	c	a	c	d	d	a	c
22	a	a	a	b	c	a	b	c	a	a	b	c	b	a	a	c	c	a	b	a
23	a	a	a	a	c	a	b	c	a	a	c	c	b	b	a	c	b	c	b	a
24	b	a	a	b	a	a	d	d	a	b	b	c	b	a	d	c	c	d	b	b
25	d	b	a	b	c	b	a	a	a	d	b	a	b	c	a	c	c	a	b	d
26	a	c	a	b	d	c	b	d	a	b	b	b	b	a	a	b	c	c	d	c
Total A	8	7	10	2	3	8	2	1	11	5	1	4	0	6	10	1	1	5	2	5
B	1	2	1	9	1	2	7	2	1	2	7	1	11	3	2	1	1	1	8	2
C	2	1	1	1	7	1	2	5	0	2	4	6	1	2	0	8	8	4	1	4
D	1	2	0	0	1	1	1	4	0	3	0	1	0	1	0	2	2	2	1	1
KEY	A	A	A	B	C	A	B	C	A	A	B	C	B	A	A	C	C	A	B	A

TABLE 39

JUDGE SCORES ON REVERSE HALF OF MULTIPLE-CHOICE TEST: JUDGE GROUP I; VIDEOTAPE HALF II

	Scene No.	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
	Item No.																				
Judge #		45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69	70 71 72 73 74 75 76 77 78 79 80 81 82 83 84																		
1		b b c a b c b b a a b a b d b c c a c b b a a a c	b a a a c c c c c a b d a b a																		
2		b c b b b c b c a b b b b a a c c a c a b b a a c	b a a a c b c b a a c b c c c																		
3		b b c a b c b b a a b b a c b c b a c c c a a c c	b c c a c c c b a b b c a c a																		
4		b c c a b c c a a b a b b a b c b c c b a b c b a c	c c a a c c b a a c a a c c a																		
5		b b c a b a b a a b b c a a c b b c c b c a a a c c	c c c c a b c b a a a a a a c																		
6		b c c b b c a b a c a c b a b c b a c b c a c a c c	b b b c c b b a b c b c a a a																		
7		b b c a b c b c a c a b a b b c b b c c a a a b b c	b c a b c c b a a c c a c a a																		
8		b c c a a c b b a b c b a a b c b b c b a a a b c a	c c a c c c c c c a c c a c a																		
9		a b c a b c b c a c a b a a b c b a c c a a c b b a	c c a a c c b c a c b a a a a																		
10		b c c a b c b b a c a b a a b c b b c a a a a b c a	a a a a c b c b c b a c a c a																		
11		b c c b b a a a a c c b a c b c a a b a b a a b b c	c c c b c c c c c a a a a a c																		
12		b b c a b a b c a c a a a b b c c a b a c b a b c c	c c c a b b c b c b a c a b a																		
Total A		1 0 0 9 1 3 2 3 12 2 6 2 8 7 1 0 1 7 0 4 5 9 8 5 1	3 3 3 9 3 0 0 0 6 8 4 3 10 4 9																		
B		11 6 1 3 11 0 9 5 0 4 4 8 4 2 10 1 8 3 2 5 3 3 1 7 3	3 2 1 2 2 4 1 9 0 4 2 3 0 2 0																		
C		0 6 11 0 0 9 1 4 0 6 2 2 0 2 1 11 3 2 10 3 4 0 3 0 8	6 7 8 1 7 8 11 3 6 0 6 5 2 6 3																		
D		0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 1 0 0 0																		
KEY		B A C A B C B B A C A C A C B C B A C C A A A B C	A B C A A B C B A A C C A B A																		

TABLE 40

JUDGE SCORES ON REVERSE HALF OF MULTIPLE-CHOICE TEST: JUDGE GROUP II; VIDEOTAPE HALF I

Scene No.	1		2		3		4		5		6		7		8		9		10		11	
Judge # / Item No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
15	b	b	c	c	c	c	c	b	c	c	c	b	a	c	c	a	c	c	c	b	c	c
16	b	a	c	c	c	a	c	b	c	c	c	b	a	c	c	a	a	c	a	b	b	b
17	b	a	b	b	c	c	a	b	a	a	c	b	a	a	c	a	a	c	b	c	c	c
18	b	c	a	b	c	c	a	b	a	b	b	a	a	c	c	a	a	c	c	c	b	c
19	b	b	c	a	b	c	c	b	a	c	c	b	a	a	c	a	c	c	b	c	c	d
20	b	a	b	a	b	c	a	b	a	a	c	c	a	a	c	b	a	c	b	c	c	b
21	b	a	c	c	c	c	b	c	b	b	c	b	a	a	b	a	c	b	a	b	c	c
22	b	a	b	a	c	c	a	a	c	a	c	b	a	a	a	a	a	c	b	c	c	c
23	b	b	b	b	b	c	a	b	a	c	c	b	a	a	a	a	a	c	c	c	c	c
24	b	a	b	b	c	c	b	b	a	a	c	c	a	c	c	c	a	c	c	b	c	c
25	b	a	a	a	c	c	a	c	a	c	c	b	a	c	c	c	a	c	a	b	b	c
26	b	b	c	c	a	a	a	b	a	c	b	b	a	c	c	b	c	c	c	c	c	b
Total A	0	7	2	4	1	2	7	1	8	4	0	1	12	6	2	8	8	0	3	0	0	0
B	12	4	5	4	3	0	2	9	1	2	2	9	0	0	1	2	0	1	4	5	3	3
C	0	1	5	4	8	10	3	2	3	6	10	2	0	6	9	2	4	11	5	7	9	8
D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
KEY	B	A	B	A	C	C	A	B	A	A	C	B	A	C	C	A	A	C	B	C	C	C

Scene No.	12		13		14		15		16		17		18		19		20		21		22	
Judge # / Item No.	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
15	c	b	c	b	a	b	c	c	a	b	c	b	b	a	c	b	c	a	c	c	a	b
16	a	b	c	b	a	a	c	a	a	c	a	a	b	c	b	c	c	a	a	c	a	b
17	c	b	a	a	a	b	c	b	a	b	c	b	b	a	c	a	c	a	a	c	a	b
18	b	b	c	a	a	b	c	a	b	b	a	a	b	c	c	a	c	c	c	c	a	b
19	b	b	c	b	a	b	c	a	a	b	a	b	b	c	c	c	c	a	a	b	a	b
20	b	a	b	a	a	b	a	a	b	b	a	b	b	a	c	a	c	c	b	b	a	b
21	a	c	c	a	a	a	c	a	a	b	a	b	b	a	a	c	c	a	c	b	c	b
22	b	b	c	b	a	b	a	c	a	b	a	b	b	c	c	a	c	c	c	c	a	b
23	b	b	c	a	a	b	a	c	a	c	c	b	a	c	c	c	c	a	c	c	c	b
24	c	c	b	a	a	c	c	c	c	b	a	a	b	a	c	a	c	a	c	c	a	b
25	c	b	a	b	a	a	a	a	a	c	a	a	b	a	c	a	c	a	c	a	b	b
26	b	b	c	a	a	b	a	b	a	b	a	c	b	a	c	c	c	a	c	b	a	b
Total A	2	1	2	7	12	3	5	6	9	0	9	4	1	7	1	6	0	9	2	1	9	0
B	6	9	2	5	0	8	0	2	2	9	0	7	11	0	1	1	0	0	1	4	1	12
C	4	2	8	0	0	1	7	4	1	3	3	1	0	5	10	5	12	3	9	7	2	0
D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KEY	B	A	C	A	A	B	C	A	A	B	A	B	B	A	C	A	C	A	C	C	A	B

APPENDIX H

COMPUTER SPECIFICATION TO DETERMINE HIGHLY DISCRIMINATING ITEMS; CHI-SQUARE AND RHO COMPUTATIONS

TO: Connie Kravas (Cleveland Hall 262) Department of Education

FROM: Sam C. Saunders, Academic Services

DATE: January 18, 1974

SUBJECT: Some computational and statistical problems related to a determination of affective sensitivity.

ABSTRACT: The notation and concepts which are thought to be the most influential in the quantitative measurement of affective sensitivity are introduced, and a method of data analysis is presented in order to provide a basis for computer programs which can handle effectively the large samples which are yet to be attained.

DETERMINATION OF AFFECTIVE SENSITIVITY

1. Formulation of Concepts.

We have a set of m questions and a group of n judges. Each judge is presented with the set of questions. Let X_{ij} denote the response of the j^{th} judge to the i^{th} question where i=1,...,m and j=1,...,n.

There are four responses for each question; say these are

(a,b,c,d)

and

$$X_{ij} = \begin{cases} a \equiv 1 & \text{with probability } p_{ij} \\ b \equiv 2 & \text{with probability } q_{ij} \\ c \equiv 3 & \text{with probability } r_{ij} \\ d \equiv 4 & \text{with probability } s_{ij} \end{cases},$$

where for each couple (i,j) we have

$$p_{ij} + q_{ij} + r_{ij} + s_{ij} = 1.$$

Let us introduce the indicator function, for any relation Π to be

$$\{\Pi\} = \begin{cases} 1 & \text{if } \Pi \text{ is true} \\ 0 & \text{if } \Pi \text{ is not true.} \end{cases}$$

Now we define

$$n_{it} = \sum_{j=1}^{n} \{x_{ij}=t\} \qquad \text{for } t = 1,2,3,4.$$

Thus n_{i1} is the number of answers on the i^{th} question with response a (or the first response).

The agreed response for the i^{th} question is the answer (or the index) x_i such that

$$n_{i,x_i} = \max \{n_{i,1}, n_{i,2}, n_{i,3}, n_{i,4}\}$$

whenever

$$n_{i,x_i} > n_{i,j} \quad \text{for } j \neq x_i.$$

Otherwise, there is no agreed response for the i^{th} question.

Let S_j be the score of the j^{th} judge

$$S_j = \sum_{i=1}^{n} \{x_{ij} = x_i\} \quad j = 1,\ldots,n,$$

that is, S_j is the number of agreed responses of the j^{th} judge.

Let the scores of the judges be ordered, i.e.

$$S_{(0_1)} \geq S_{(0_2)} \geq \ldots \geq S_{(0_n)}$$

where 0_1 is the number of the judge with the highest number of agreed responses and similarly 0_j for $j=2,\ldots,n$ is the number of the judge which had exactly j-1 scores higher than his own. Note that ties can occur.

Let k be a preselected number of experts (expert judges) where $1 < k < n$ and we assume that 0_k is a unique index (some method of breaking a tie is introduced) to be defined. Let

$$e_{i,t} = \sum_{j=1}^{k} \{x_{i,0_j} = t\} \quad \text{for } t = 1,2,3,4$$

be the number of answers among the k experts on the i^{th} question with response t, i.e., e_{i1} is the number of expert responses on the i^{th} question with the first answer.

Let y_i denote the expert response for the i^{th} question which is defined as the response agreed upon by the k experts, when it exists. It is given by

$$e_{i,y_i} = \max \{e_{i,1}, e_{i,2}, e_{i,3}, e_{i,4}\}$$

whenever

$$e_{i,y_i} > e_{i,j} \quad \text{for } j \neq y_i.$$

2. Computer program for determination of affective sensitivity.

We have two sets of judges

Set I: 1,2,...,12 ; Set II: 15,16,...,26

We have two groups of questions

Group A: 1,2,...,44 ; Group B: 45,...,84.

On each card is recorded: number of the judge and all of his answers for one group of questions. For instance, the i^{th} judge in group A has answers

$$x_{i,1}, x_{i,2}, \ldots, x_{i,44}$$

Each question has four possible answers. These are designated a,b,c,d or equivalently 1,2,3,4.

A subset of one of the sets of judges is specified, say J.
A subset of one of the groups of questions is specified, say Q.

Then we have the computer calculate, for given J and Q,

$$n_{it} = \sum_{j \in J} \{ x_{ij} = t \} \quad \text{for each } i \in Q.$$

The agreed response of the judges J for the i^{th} question in Q is x_i where x_i is the index (answer) such that

$$n_{i,x_i} = \max_{t=1}^{4} n_{i,t}$$

whenever $n_{i,x_i} > n_{i,t}$ for $t \neq x_i$.

Otherwise, there is no agreed response. (Have computer say so).

Let S_j be the score of the j^{th} judge on questions Q ..

$$S_j = \sum_{i \in Q} \{x_{ij} = x_i\} \quad \text{for each } j \in J$$

i.e. S_j is the number of agreed responses of the j^{th} judge.

For example, if

$$J = \{1,4,12\} \ , \ Q = \{1,2,8\},$$

we would obtain a matrix display:

Response of judges: 1,2,12
scores: S_1, S_4, S_{12}.

Questions	Answers 1 a	2 b	3 c	4 d	Agreed Response
1	n_{11}	n_{12}	n_{13}	n_{14}	x_1
2	n_{21}	n_{22}	n_{23}	n_{24}	x_2
8	n_{81}	n_{82}	n_{83}	n_{84}	x_8

3. The computation of the chi-square statistics and correlation coefficients.

In either of the appropriate sets I or II we consider a given subset J of one set of judges and the complimentary set E. Let a set of questions Q be given. We call the set E the set of experts.

Thus, we compute, for $i \in Q$

$$e_{it} = \sum_{j \in E} \{x_{ij}=t\} \quad , \quad n_{it} = \sum_{j \in J} \{x_{ij}=t\}$$

the number of expert and non-expert judges responses, respectively on the i^{th} question with the t^{th} answer.

For example, if $Q = (1,2,\ldots,m)$ we would have two matrices:

Expert Response

Questions	1	2	3	4
1	e_{11}	e_{12}	e_{13}	e_{14}
2	e_{21}	e_{22}	e_{23}	e_{24}
.	.	.	.	.
m	e_{m1}	e_{m2}	e_{m3}	e_{m4}

Non-expert Response

1	2	3	4
n_{11}	n_{12}	n_{13}	n_{14}
n_{21}	n_{22}	n_{23}	n_{24}
.	.	.	.
n_{m1}	n_{m2}	n_{m3}	n_{m4}

We wish to test the hypotheses of no difference between experts and non-experts.

Suppose that $E^{\#} = k$ and $J^{\#} = 12-k$ are the number of expert and non-expert judges respectively. For each $i \in Q$ the chi-square test of identical response with 3 degrees of freedom is

$$\chi^2(i) = k(12-k) \sum_{t=1}^{4} \left(\frac{e_{it}}{k} - \frac{n_{it}}{12-k} \right)^2 \Big/ (e_{it} + n_{it})$$

and we reject at 90% level if $\chi^2 > 6.251$.

The correlation between expert and non-expert answers on the i^{th} question is, for $i \in Q$

$$\rho_i = \frac{\sum_{t=1}^{4} e_{it}\, n_{it} - \frac{k(12-k)}{4}}{\left[\left(\sum_{1}^{4} e_{it}^2 - \frac{k^2}{4}\right)\left(\sum_{1}^{4} n_{it}^2 - \frac{(12-k)^2}{4}\right)\right]^{\frac{1}{2}}}$$

We would thus obtain, if for example $Q = \{1,2,\ldots,m\}$

1	$\chi^2(1)$,	p_1
2	$\chi^2(2)$,	p_2
⋮	. . . . .	
m	$\chi^2(m)$,	p_m .

We look for the discriminatory questions, i.e., those whose correlation is negative or low. This would be those questions which the experts answered correctly but the non-experts answered incorrectly.

TABLE 41

CHI-SQUARE AND RHO COMPUTATIONS TO DETERMINE
HIGHLY DISCRIMINATING SCALE ITEMS

Question No.	Chi-Square	RHO	Number of Entry
1	0.0000000	1.0000000	1
2	2.8571410	0.5659165	3
3	5.5999980	-0.0509647	3
4	2.6666650	0.0509647	3
5	0.4444442	0.9597599	3
6	0.7999998	0.9584233	2
7	2.8571410	0.6831301	3
8	3.7037010	0.7639519	3
9	3.7037010	0.7639519	3
10	7.9999980	-0.3168621	3
11	0.7999998	0.9584233	2
12	1.0370350	0.8971500	3
13	0.0000000	1.0000000	1
14	3.9999970	0.1740776	2
15	1.0370350	0.8971500	3
16	1.3333330	0.8273792	3
17	1.9999980	0.6970967	2
18	0.3636362	0.9925233	2
19	7.9999980	-0.3758230	3
20	2.8571410	0.4436070	2
21	1.3333320	0.8703883	2
22	0.4444442	0.9597599	
23	0.8888887	0.8664003	3
24	3.7037010	0.7639519	3
25	1.9999980	0.4685214	3
26	0.1142856	0.9597599	2
27	0.0000000	1.0000000	1
28	1.9999980	0.8268106	3
29	1.0285700	0.6363636	2
30	0.8888887	0.6764814	3
31	1.8888887	0.6764814	3
31	1.0370350	0.8971500	3
32	1.3333320	0.8703883	2
33	0.1481481	0.9746973	2
34	3.9999970	0.2254938	3
35	0.3636362	0.9925233	2
36	0.1142856	0.9597599	2
37	0.7999998	0.9891005	3
38	3.9999970	0.2254938	3
39	0.0000000	1.0000000	1
40	3.7037010	0.2929682	2
41	4.5925890	0.3883786	3
42	0.3809522	0.9813359	3
43	1.3333330	0.9505864	3

TABLE 41--Continued

Question No.	Chi-Square	RHO	Number of Entry
45	0.3636362	0.9925233	2
46	0.4444444	0.8273792	2
47	0.3636362	0.9925233	2
48	1.3333320	0.8703883	2
49	3.2727240	0.8703883	2
50	1.3333320	0.8703883	2
51	1.3333330	0.9505864	3
52	1.5999980	0.5222331	3
53	0.0000000	1.0000000	1
54	0.8888887	0.8664003	3
55	2.2222200	0.3799803	3
56	1.9999980	0.8892973	3
57	1.9999980	0.6970967	2
58	1.7142830	0.7816609	4
59	0.7999998	0.9891005	3
60	0.3636362	0.9925233	2
61	1.9999980	0.8268106	3
62	11.9999900	-0.4539899	3
63	0.7999998	0.9584233	2
64	0.1777776	0.8783103	3
65	5.5999980	-0.0975900	3
66	1.9999980	0.6970967	2
67	1.9999980	0.8268106	3
68	2.8571410	0.4436070	2
69	0.4444442	0.9597599	3
70	3.9999970	0.0392534	3
71	1.2063480	0.5703519	3
72	0.4444442	0.9597599	3
73	1.3333330	0.9505864	3
74	1.7142830	0.6673084	3
75	0.0000000	1.0000000	2
76	0.3636362	0.9925233	2
77	0.1481481	0.9745973	2
78	0.4444444	0.8273792	2
79	0.0000000	1.0000000	2
80	0.8888887	0.8664003	3
81	5.5999980	-0.1740777	4
82	0.7999998	0.9584233	2
83	3.9999970	0.2927700	3
84	1.3333320	0.8703883	2

APPENDIX I

RATINGS OF VIDEOTAPE EXCERPT QUALITY

TABLE 42

MEDIA EXCERPT EVALUATION: VIDEOTAPE HALF I

Scene #	Test Item #	Description	Videotape Ranking			
			Low	Medium Low	Above Average	Hi
1	1 2	Pioneers. Boy volunteers "I know, I know."				X
2	3 4	Argument. Teacher scolds Cleveland.			X	
3	5 6	Snake lesson; boy handles snake; "Feels kind of rough."			X	
4	7 8	Student looking at self in mirror.		X		
5	9 10	Teacher lecturing about law; asks student to be quiet.				
6	11 12	Values discussion; Kathy accused of not saying enough.			X	
7	13 14	Johnny talks about divorce.				X
8	15 16	Boy talking about being an artist like his father.	X			
9	17 18	Boy tries out for the track team.		X		
10	19 20	Group discussion about sex.			X	

TABLE 42--Continued

Scene #	Test Item #	Description	Videotape Ranking			
			Low	Medium Low	Above Average	High
11	21 22	Girl discussing home situation that prevents her from finishing home assignment.			X	
12	23 24	Teacher asks for helpers--Boy flags arm.			X	
13	25 26	Teacher asks girl (talking to neighbor) to take seat in front of room.		X		
14	27 28	Group talks about their concern for Angela.	X			
15	29 30	Molly.			X	
16	31 32	Discussion of class journals--Charles.				X
17	33 34	Snappy.			X	
18	35 36	Poetry lesson--draws pictures of cars.		X		
19	37 38	3 new students--Edwardo	X			
20	39 40	Student is helped to pronounce words.			X	

TABLE 42--Continued

Scene #	Test Item #	Description	Videotape Ranking			
			Low	Medium Low	Above Average	High
21	41 42	Silent reading. Boy sharpens pencil.	X			
22	43 44	Teacher angry--gives homework assignment.			X	

TABLE 43

MEDIA EXCERPT EVALUATION: VIDEOTAPE HALF II

Scene #	Test Item #	Description	Videotape Ranking			
			Low	Medium Low	Above Average	High
23	45 46	Poetry lesson; Gary says he doesn't like poetry.			X	
24	47 48	French class. Dick and another boy recite--sit down.			X	
25	49 50	Snake lesson. Girl is asked what a snake doesn't have that she does.				X
26	51 52	Playground scene. Teacher throws hula-hoop to a girl.			X	
27	53 54	Teacher calls on Ed Maderas tells him he watched him pitch at Friday's game.	X			
28	55 54	Two boys have fought. Teacher asks boy about it. He says that Russell calls him names.	X			
29	57 58	Teacher asks Russell why he called other boy names.	X			
30	59 60	Geometric puzzle. Teacher asks a girl where the triangle is.			X	

TABLE 43--Continued

Scene #	Test Item #	Description	Videotape Ranking			
			Low	Medium Low	Above Average	High
31	61 62	Angela talks about a goal of being a nurse.	X			
32	63 64	Keith is called on to be the "sharing teacher."	X			
33	65 66	Boy strikes out--is asked to pick up playground equipment.			X	
34	67 68	Teacher has Joe read in front of class.				X
35	69 70	Teacher stares at attendance slip collector.		X		
36	71 72	Teacher catches David cheating;--to principal			X	
37	73 74	Singing game; Larry Williams touch your nose.		X		
38	75 76	Brown-eyed people can't use drinking fountain--girl responds non-verbally.			X	
39	77 78	Oscar and Hal fight.		X		
40	79 80	Brian covers head with hands.				X

TABLE 43--Continued

Scene #	Test Item #	Description	Videotape Ranking			
			Low	Medium Low	Abvoe Average	High
41	81 82	Teacher talks to Johnny about being mad.		X		
42	83 84	Library scene.	X			

APPENDIX J

INSTRUCTOR AND PEER RANKINGS OF EXPERIMENTAL GROUP II SUBJECTS ON THE DIMENSION OF AFFECTIVE SENSITIVITY

TABLE 44

PEER-RANKINGS OF EXPERIMENTAL GROUP II PARTICIPANTS ON THE DIMENSION OF AFFECTIVE SENSITIVITY

Experimental Group II Subject	Peer Ranking Orders												
	Peer Number											Totals	Pooled Ranking Order
	1	2	3	4	5	6	7	8	9	10	11		
A	4	4	5	5	1	7	5	8	2	3	2	46	2
B	9	9	9	8	3	8	9	1	9	9	9	83	9
C	7	7	6	2	2	9	6	7	3	8	6	63	7
D	2	6	4	7	6	2	4	2	8	7	8	56	6
E	8	8	7	9	7	4	3	6	6	6	3	67	8
F	6	3	8	6	4	5	1	5	7	1	7	53	5
G	3	5	3	4	5	6	8	3	4	2	4	47	3
H	10	10	10	10	10	10	10	10	10	10	10	110	10
I	1	1	1	1	8	3	7	9	5	4	1	41	1
J	5	2	2	3	9	1	2	4	1	5	5	49	4

TABLE 45

INSTRUCTOR-RANKINGS OF EXPERIMENTAL GROUP II PARTICIPANTS ON THE DIMENSION OF AFFECTIVE SENSITIVITY

Experimental Group II Subject	Instructor Ranking Orders				Pooled Ranking Order
	Instructor 1	Instructor 2	Instructor 3	Totals	
A	7	8	6	21	8
B	9	9	9	27	9
C	5	5	3	13	4
D	8	4	7	19	6
E	6	6	8	20	7
F	1	1	1	3	1
G	3	2	5	10	3
H	10	10	10	30	10
I	4	7	4	15	5
J	2	3	2	7	2

1--Highest affective sensitivity
10--Lowest affective sensitivity

TABLE 46

COMBINED RANKINGS OF PEERS AND INSTRUCTORS

Experimental Group II Subject	Peer-Ranking Orders											Instructor Ranking Orders			Totals	Composite Ranking Order
	Peer Number											Instructor No.				
	1	2	3	4	5	6	7	8	9	10	11	1	2	3		
A	4	4	5	5	1	7	5	8	2	3	2	7	8	6	67	5
B	9	9	9	8	3	8	9	1	9	9	9	9	9	9	111	9
C	7	7	6	2	2	9	6	7	3	8	6	5	5	3	76	7
D	2	6	4	7	6	2	4	2	8	7	8	8	4	7	75	6
E	8	8	7	9	7	4	3	6	6	6	3	6	6	8	87	8
F	6	3	8	6	4	5	1	5	7	1	7	1	1	1	56	2
G	3	5	3	4	5	6	8	3	4	2	4	3	2	5	57	4
H	10	10	10	10	10	10	10	10	10	10	10	10	10	10	140	10
I	1	1	1	1	8	3	7	9	5	4	1	4	7	4	56	2
J	5	2	2	3	9	1	2	4	1	5	5	2	3	2	56	2

APPENDIX K

ADVERBIAL DESCRIPTORS OF STUDENT FEELINGS

TABLE 47

ADVERBIAL DESCRIPTORS OF STUDENT FEELINGS AS IDENTIFIED BY RESPONDENTS*

Scene #	In this scene, the student felt:	Frequency (No. of times emotion was identified)	Scene #	In this scene, the student felt:	Frequency (No. of times emotion was identified)
1	accepted	1		unhappy	1
	desirous of sharing	1	5	comfortable	1
	eager	1		embarrassed	4
	excited	4		extroverted	1
	frustrated	4		frightened	1
	pleased with self	1		happy	3
	wanting recognition	1		pleased	2
				proud	1
				shy	1
2	angry	5	6	accepted	2
	confused	3		expectation	1
	defensive	1		embarrassed	1
	embarrassed	1		happy	3
	frustrated	1		proud	4
	picked-on	1		satisfied	1
	resentment	1		self-confident	1
	shitty	1		shy	1
				swell-headed	1
3	alone	1		unsure	1
	desirous of personal attention	1	7	anti-climaxed	1
	fierce	1		disappointed	5
	lonely	6		frustrated	2
	love	1		mad	1
	unable to integrate with group	1		not upset	1
				resigned--waiting for the next time	1
4	apprehensive	1		stretched	1
	confused	1			
	culture shocked	1	8	angry	1
	disoriented	1		bored	2
	embarrassed	2		disgusted	1
	frightened	2		disbelief	1
	pressured	1		frustrated	3
	scared	1		incredulous	1
	shy	1		mad	1
	uncomfortable	1		missed-off	2
	uncomprehending	1		resentful	1

TABLE 47--Continued

Scene #	In this scene, the student felt:	Frequency (No. of times emotion was identified)	Scene #	In this scene, the student felt:	Frequency (No. of times emotion was identified)
9	clever	1		pleased with performance	1
	discomfort	1		scared	1
	embarrassed	2		thrilled	1
	embarrassed but correct	1		timid	1
	happy	1			
	levity	1	13	confused	2
	satisfied with attention	1		happy	1
				joyful	1
				pleased	1
10	embarrassed	1		shy	1
	happy	2			
	interested	1	14	angry	3
	pleased with attention	4		defiant	1
	shy	1		frustrated	2
				hurt	1
				impatient	1
11	concerned	1		mad	1
	confident	1		pissed	1
	curious	1		proud	1
	egocentric	1		righteous anger	1
	embarrassed	1		vengeful	1
	looking for support	1	15	discomfort	1
	proud	2		embarrassed	5
	rebellious	1		funny	1
	relieved	1		happy	2
	self-assured	1		pleased	2
	self-conscious	1		proud	3
	smug	1			
	superior	1	16	angry	2
	unsure	1		burnt	1
				contemplative	1
12	apprehensive	1		defensive	1
	eager to please	1		embarrassed	1
	fearful	1		frustrated	1
	funny	1		hurt	1
	happy	1		indifferent	1
	interested	1		mad	1
	nervous	2		resentful	1
	open to teacher and the experience	1		wanting to retort	1

TABLE 47--Continued

Scene #	In this scene, the student felt:	Frequency (No. of times emotion was identified)	Scene #	In this scene, the student felt:	Frequency (No. of times emotion was identified)
17	fearful	2		mad	1
	interested	3		oblivious	1
	interested--but tentatively	1		shitty	1
	scared	4		too proud to relent	1
				truculent	1
18	awed	1		uncertain	1
	bored	6			
	disgusted	1	21	alone	1
	disinterested	1		dejected	2
	frustrated	1		depressed	1
	uninterested	1		disappointed in self	1
19	annoyed	1		incompetent	1
	defensive	1		left out	1
	frustrated	3		lonely	1
	ignored	1		picked-on	1
	left-out	1		rejected	1
	surprised	1		shy	1
	treated unfairly	1			
	why don't they shut up?	1	22	disappointed	1
				embarrassed	5
20	angry	2		focused on himself	1
	defiant	1		helpless	1
	embarrassed	1		incompetent	1
	frustrated	1		lonely	1
	helpless	1		pain	1
				rejected	1

*n=10 respondents

Note: In some instances, a respondent identified less/more than one emotion per scene. As a consequence, the totals in each frequency category vary.

APPENDIX L

TEACHER AFFECTIVE SENSITIVITY SCALE

TEACHER AFFECTIVE SENSITIVITY SCALE

Instructions

You will be viewing scenes of classroom sessions. Your task is to identify the feelings that particular students were experiencing when the videotaped episodes were filmed.

Although during any one scene a student may exhibit a variety of feelings, for purposes of this instrument, you are to concentrate on identifying the feelings that the student had at the end of the scene.

On the following pages are multiple-choice items consisting of several responses. Each videotaped scene that you will be viewing has two corresponding multiple-choice items. The first item per scene focuses on the student's feelings about himself or the subject he was talking about. The second item focuses on the student's feelings about the teacher and/or the other students in the classroom.

After you view each scene, read the 2 multiple-choice items and ask yourself the following question:

> If the student was to view this same scene, and if he was able to be completely open and honest with himself (i.e., if he could identify his real feelings) which of these responses would he use to describe his feelings?

After you have selected the response that you believe most accurately describes what the student was feeling, indicate your choice on the answer sheet.

TEACHER AFFECTIVE SENSITIVITY SCALE

SCENE #1

1. At the end of this scene, the feelings I have about myself and/or the subject matter are:

   a. I'm glad that I'm smart. I hope the teacher likes me.

   b. Hey, I've got it. I'm excited. I want to share my ideas

   c. Gee this is interesting. I can really "get into" it.

2. The feelings I am experiencing concerning the teacher or the student(s) with whom I have been interacting are:

   a. I'm frustrated. I wish she would have called on me.

   b. I like the teacher. She seems to like me.

   c. I didn't notice anybody else.

SCENE #2

3. At the end of this scene, the feelings I had about myself and/or the subject matter were:

   a. This makes me angry. This whole thing doesn't make any sense at all.

   b. I feel hurt. I'm no worse than anyone else in here.

   c. Stop threatening me.

4. The feelings I was experiencing toward the teacher or the student(s) with whom I was interacting were:

   a. I'm frustrated. I know how to sit in a chair, but you aren't giving me a chance.

   b. You're just saying this to pick on me.

   c. This is horrible. I don't like what you're doing. How can you say these awful things.

SCENE #3

5. At the end of this scene, the feelings I have about myself and/or the subject matter are:

   a. I love you, Snappy.

b. Snappy likes me. I'm pleased.

c. I want some attention.

6. The feelings I am experiencing concerning the teacher and/or the student(s) with whom I have been interacting are:

a. I'm contented. I'd much rather play with Snappy than drink punch.

b. No one else pays any attention to us. They don't seem to really care about us.

c. I'm afraid the teacher will catch me holding you, Snappy.

SCENE #4

7. At the end of this scene, the feelings I have about myself and/or the subject matter are:

a. I'm embarrassed. I wish I could get away from here.

b. That's such a hard question to answer.

c. I feel uptight. I'm frightened.

8. The feelings I am experiencing concerning the teacher and/or the student(s) with whom I have been interacting are:

a. She frightens me and now the whole class is staring at me. Why do I have to talk?

b. I wish she would speak in Spanish or that I could understand her better.

c. People are different here. What are these people going to think of me?

SCENE #5

9. At the end of this scene, the feelings I have about myself and/or the subject matter are:

a. People do get married for love. But it sure is embarrassing for me to say that word "love."

b. People shouldn't get divorced. They should know better.

c. I'm happy. It's fun to get all this attention.

10. The feelings I am experiencing concerning the teacher or the student(s) with whom I have been interacting are:

    a. I like the teacher listening and paying attention to me. I like her.

    b. The teacher understands how I feel. She seems to like me.

    c. You're embarrassing me. I felt silly saying it out loud.

SCENE #6

11. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. Oh boy! I feel proud. I'm really happy to be on the track team.

    b. Gee! They're all focusing on me. I must be a pretty good runner.

    c. I'm thankful for the confidence you have in me.

12. The feelings I am experiencing concerning the teacher or the student(s) with whom I have been interacting are:

    a. Thanks a lot. It's going to be fun to be on the team.

    b. He thinks I'm pretty good. I'll have to show him how good I am.

    c. I think they really accept me. I like them too.

SCENE #7

13. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. Hey, I'm over here. Look at me. I know the answer.

    b. I'm disappointed that I wasn't chosen. It's frustrating not to be called on when you know the answer.

    c. I never get to participate! How come she never calls on me?

14. The feelings I am experiencing toward the teacher or the student(s) with whom I have been interacting are:

    a. Why doesn't she call on me? She doesn't care for me.

    b. Can't she see how badly I want to do it?

    c. I'm angry and hurt. I don't like the teacher when she ignores me.

SCENE #8

15. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. Crap! Here it comes. All I need is more work.

    b. Man, am I bored! What a stupid teacher.

    c. Wow! I don't believe it! Why get so mad at us?

16. The feelings I am experiencing toward the teacher and/or the student(s) with whom I have been interacting are:

    a. I feel picked on. I didn't do anything wrong, but he's down on me anyway.

    b. This guy is too much! I don't like him.

    c. Why is the teacher doing this to me?

SCENE #9

17. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. I wasn't being funny. I've heard that physical activity can help.

    b. I feel good about myself right now. They think I'm clever.

    c. I'm unsure about myself and am feeling a bit stupid.

18. The feelings I am experiencing toward the teacher or the student(s) with whom I have been interacting are:

    a. This discussion is too embarrassing. I don't want to say what I'm really feeling.

    b. Don't laugh at me. I'm trying to make a point.

    c. They heard my joke and laughed. That makes me feel accepted.

SCENE #10

19. At the end of this scene, the feelings I had about myself and/or the subject matter were:

    a. I'm different from everyone else because I can't talk well.

    b. I'm a little embarrassed but pleased to be getting all this attention.

    c. I've been helped by nurses and I want to help people too.

20. The feelings I was experiencing toward the teacher or the student(s) with whom I was interacting were:

    a. She's interested. I think she really cares about me.

    b. You're pushing me. I wish you wouldn't ask so many questions.

    c. These questions don't bother me. I like to talk about nurses.

SCENE #11

21. At the end of this scene, the feelings I had about myself and/or the subject matter were:

    a. It was kind of neat to be up there in front. But I don't particularly care for French.

    b. I should have done better, but I don't care.

    c. Boy, am I glad that's over. How embarrassing! But I didn't do badly.

22. The feelings I was experiencing toward the teacher or the student(s) with whom I was interacting were:

    a. I really wonder what everyone is thinking of me after that.

    b. I was self-conscious when I was up there in front.

    c. Ick! I wonder why she always calls on me. I don't really like this stuff.

SCENE #12

23. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. Yuk! What an icky looking animal.

    b. Gee, it feels funny!

    c. This is fun, but a bit scary.

24. The feelings I am experiencing toward the teacher or the student(s) with whom I have been interacting are:

    a. I better do it because he suggested I do it.

    b. I wonder if the other students like the snake.

    c. I like the teacher. I'm glad he thinks I'm brave.

SCENE #13

25. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. This is kind of fun, but I'm not really sure what I am doing.

    b. So that's what I look like!

    c. I'm contented. I did what my teacher asked.

26. The feelings I am experiencing concerning the teacher or the student(s) with whom I have been interacting are:

    a. If she tells me to do it, it must be okay. But it seems a little silly.

    b. I'm happy I got to hold the mirror. The teacher knew I wanted to. She's nice.

    c. I'm kind of shy. It makes me feel funny to get this attention.

SCENE #14

27. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. I'm angry and frustrated that I can't make my point.

    b. I'm right! I won't stand for prejudice.

    c. I only wanted to hear. She embarrassed me.

28. The feelings I am experiencing concerning the teacher or the student(s) with whom I have been interacting are:

    a. Boy, you're just like all the rest. You don't even care.

    b. I bet you would be sorry if you only knew the truth.

    c. I don't have to take that from you or anybody else.

SCENE #15

29. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. I'm a little embarrassed, but it makes me feel good too.

    b. I'm perturbed. I offered up a piece of myself and now everyone is laughing.

    c. I'm crazy for saying those things; wish I hadn't. They sound so ridiculous now.

30. The feelings I am experiencing concerning the teacher and/or the student(s) with whom I have been interacting are:

    a. Why did she have to read it? She had no right to.

    b. They probably think I'm crazy. But I'm glad the teacher likes what I wrote.

    c. Good grief! All this attention is really great!

SCENE #16

31. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. Big deal! Who cares what the class is talking about anyway?

    b. Boy, do I feel "put down." The teacher makes me feel stupid.

    c. I don't care. Go ahead and send me to the office.

32. The feelings I am experiencing concerning the teacher or the student(s) with whom I have been interacting are:

    a. The teacher doesn't understand me. I don't like the teacher for picking on me.

    b. I feel humiliated. I wonder what the rest of the class is thinking.

    c. Why did the teacher interrupt? I wanted to finish this argument.

SCENE #17

33. At the end of this scene, the feelings I had about myself and/or the subject matter were:

    a. I really don't want that snake near me. I don't like it.

    b. I'm curious, but still a little frightened.

    c. What a strange looking animal.

34. The feelings I was experiencing toward the teacher or the student(s) with whom I was interacting were:

    a. They must think I'm really brave.

    b. Both the teacher and I think snakes are neat.

    c. I'm engrossed and hardly aware of the others.

SCENE #18

35. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. Is this for real? This class is so dumb.

    b. I am bored stiff. This poetry stuff is for the birds.

    c. What makes them think they can understand poetry?

36. The feelings I am experiencing concerning the teacher or the student(s) with whom I have been interacting are:

    a. Why does the teacher make us do this anyway? No one is listening.

    b. How can that girl like reading her poem? She's weird.

    c. If they like that stuff, let them do it. I'm oblivious to them.

SCENE #19

37. At the end of this scene, the feelings I have about myself and/or the subject matter are:

    a. I'm feeling rotten and confused. I don't like to talk.

    b. It's hard to get a word in to express your feelings.

    c. I still think I said something. You're not really listening to me.

38. The feelings I am experiencing concerning the teacher or the student(s) with whom I have been interacting are:

    a. I feel pretty good about the group members.

    b. They want me to talk and then don't give me a chance. What's the use?

    c. You can't tell me that! You really don't understand me.

SCENE #20

39. At the end of this scene, the feelings I had about myself and/or the subject matter were:

    a. I feel helpless.

    b. I feel like I'm the focus of attention and I want to withdraw.

    c. I feel so mad at everyone. Still, I'm feeling guilty about it.

40. The feelings I was experiencing toward the teacher or the student(s) with whom I was interacting were:

    a. The teacher doesn't like what I've done. But she can't make me like him.

    b. I know I'm right. I don't care what you think.

    c. Why don't you shut up and leave me alone.

SCENE #21

41. At the end of this scene, the feelings I had about myself and/or the subject matter were:

    a. I couldn't feel worse. I feel so alone and inadequate.

    b. I got the booby prize. Why do I have to pick up this junk?

    c. I hate to play ball. I always strike out.

42. The feelings I was experiencing toward the teacher or the student(s) with whom I was interacting were:

    a. They left me all alone. I feel they don't care about me.

    b. The teacher doesn't even appreciate all the work I do.

    c. I hate baseball and I hate them. It feels good to be by myself out here.

SCENE #22

43. At the end of this scene, the feelings I had about myself and/or the subject matter were:

    a. Gosh I wish it were over. I'm really dumb.

    b. I hate you, teacher.

    c. This is really a bummer. I don't like to read.

44. The feelings I was experiencing toward the teacher or the student(s) with whom I was interacting were:

    a. Why don't you care about me?

    b. You're a real zero. You make me feel so stupid.

    c. I resent her snobbish attitude. What makes her think she's so smart?