

ABSTRACT

THE INFLUENCE OF HUMAN RELATIONS LABORATORY TRAINING UPON THE PERCEIVED BEHAVIORAL CHANGES OF SECONDARY SCHOOL SEMINAR INSTRUCTORS

by Larry J. Krafft

Purpose

It was the purpose of this study to determine the types and degrees of on-the-job perceived behavioral changes which result from the laboratory method of learning, as reflected in a group of secondary seminar instructors.

The study was designed to help determine whether and, if so, in which ways the laboratory method of learning can aid in the process of educating teachers to be more effective small group seminar leaders; also the aim was to determine whether and, if so, the laboratory workshop participants help teachers to be more effective in their interaction with fellow educators. A subsidiary aspect of the study was to isolate three potential predictors of behavioral change following a training laboratory, and to determine the ability of these to predict perceived change six months following the training sessions.



Procedures

Two seminar instructors were randomly selected from each of seventeen secondary schools located in various parts of the United States. These instructors participated in the laboratory training workshop. An untreated control population was randomly selected from the same population with equal criteria. Age ranges and medians, and sex ratios were also comparable between the two groups.

Six months following a ten day laboratory training workshop one individual interviewed all experimental and control subjects, one randomly selected team or departmental co-worker and the principal of each subject. The interview methodology incorporated both unstructured and structured approaches. Interviews were tape recorded unless the respondent requested that only the checklist be used by the interviewer. Respondents were encouraged to examine both factors of stability and of change although only change factors were scored, positively or negatively. Bunker's categorization system was used for the scoring of data. Independent interscorer correlations of .98 were derived from the taped interviews.

A ten item Perceived Small Group Seminar Atmosphere (PSGSA) sentence stem instrument was developed. Validity (construct) and reliability (split-half method, .79) were established. Interscorer correlations were .99.

Predictors of behavioral change were collected by means of relative ranking of training group members on the final day of laboratory sessions. Rankings were completed by all participants and trainers. Reliability of relative predictive powers of the participant himself, of the total training group and of the trainer were compared to the perceived behavioral changes as assessed by means of the interview method.

Findings

1. Laboratory training participants themselves, their peer co-teachers and the respective principals of these same subjects indicate a highly significant perceived behavioral change as the participants function in the on-the-job situation six months following the workshop.

2. Participants are more willing to share information, are more concerned with putting their ideas across, and find it easier to provide truthful feedback and to express their feelings more.

3. Participants make an increased effort to listen better and with more understanding.

4. Participants are less irritating to others, are easier to deal and talk with; they are more tactful, less commanding and more cooperative.

5. Participants are more willing to take a stand on issues, to experiment and try more new ideas.

6. Participants in laboratory training sessions involve others in group decision-making, let others do more thinking and experimenting and are less likely to dominate a discussion.

7. The behavior of participants is more flexible; they more easily take group roles and make helpful contributions to a group.

8. Participants have increased intellectual understanding of human behavior. They are more analytical of behavior and have a clearer perception of the people with whom they interact.

9. Consciousness of group process, of subcurrents and hidden group agendas and of ability to perceive group roles has increased in participants.

10. Participants are more conscious of and sensitive to the feelings, needs and reactions of others.

11. Participants are more able to tolerate shortcomings of others. They are more considerate of individual differences, more understanding of others' problems.

12. Participants are more willing to accept suggestions; they are less defensive and less arbitrary about their "knowledge" and information.

13. Self-confidence, poise and confidence in leading discussions are factors of increase perceived in participants.

14. Ability to be more at ease and comfortable in groups, to feel more inner security are characteristics of the participants.

15. Participants have greater insight into themselves and into their own roles in groups. They are improved in their adjustment to their jobs and are less conflicted about authority figures.

16. Participants did not significantly increase their ability to maintain self-discipline, nor to check and control their own feelings and emotions more carefully.

The failure of this category to differentiate significantly may not be an altogether negative factor since the indication is that laboratory participants tended to express their feelings more openly, thereby evidencing "less self control" but greater willingness to communicate straightforwardly and honestly.

17. Student members of small group seminars instructed by laboratory training participants expressed increased satisfaction with the atmosphere in their small groups.

18. No highly reliable predictors of individual behavioral change were isolated. The predictor with the highest correlation to actual perceived change was the composite prediction of the sensitivity training group members (.55).

Larry J. Krafft

Based upon relevant literature and the findings of this study, it was the conclusion of the author that the perceived behavioral changes of the laboratory workshop participants have improved instruction in their seminar classes. These instructors have also made an impact on their co-workers, teachers and principals, thereby having beneficially affected the potential and/or actual small group instructional behavior of these co-workers. The reader must, however, make his own interpretations and develop his own conclusions regarding these core aspects of the original purposes of the study.

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SECONDARY SCHOOL SEMINAR INSTRUCTORS

By

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TABLE OF CONTENTS

Chapter	Page
I. BACKGROUND OF THE STUDY	1
Purpose	1
Relevance to Education	2
Treatment Design	4
A Perspective on Laboratory Training	7
Problem to be Investigated	9
Definition of Terms	13
Limitations	14
Assumptions	15
Significance	15
Overview of Organization	16
II. RELEVANT LITERATURE	17
Introduction	17
Need for Further Research	19
Measured Effects of Laboratory Training	24
Classroom Climate	35
Small Group Seminars	40
Instructional Leader Behavior	42
Summary	51
III. DESIGN OF THE STUDY	53
The Sample: Experimental and Control	53
Interview Rationale and Methodology	55
The Categorization System	65
Scoring of Interview Data	68
Interview Scoring Reliability	71
Rationale for the Perceived Small Group Seminar Atmosphere (PSGSA) Instrument	74
Development of the PSGSA	78
Administration of the PSGSA	83
Scoring the PSGSA	84
The Prediction of Behavioral Change	87
Summary	88

Chapter	Page
IV. ANALYSIS OF THE DATA	90
Hypothesis One	90
Hypothesis Two	95
Hypothesis Three	104
Hypothesis Four	108
Answering the Core Questions: A	
Perspective	111
Summary and Discussion	121
V. RETROSPECT AND PROSPECT	125
Summary	125
Conclusions	126
Implications	129
Questions for Further Study	131
BIBLIOGRAPHY	134
APPENDICES	147

LIST OF TABLES

Table	Page
3.1. Comparison of scores on the interview form . .	72
3.2. Correlation coefficient of total interview scores, based on three scorers	73
3.3. Reliability of the PSGSA instrument by the Spearman-Brown method	82
3.4. Comparison of scores on the PSGSA instrument	85
3.5. Coefficient of correlation of three different scorers on the PSGSA instrument	86
4.1. Significance of self, peer, principal and composite interview scores	91
4.2. Visual comparison of mean total change scores	94
4.3. Mean score and significance results of total change interview scores, by categories	96
4.4. Rank order of total change interview scores, by categories	97
4.5. Differences in proportions of subjects reported as changed, by scoring category . . .	99
4.6. Mentions of negative change as a proportion of all mentions, by categories	101
4.7. Mentions of unstructured change as a proportion of all mentions, by categories . . .	103
4.8. Mean score and t test results of the PSGSA administration, by individual items	105
4.9. Rank order of PSGSA response items	107

Table	Page
4.10. Predictive power of individual participants, of total groups and of trainers . . .	109
4.11. Significance of the difference between three prediction rank order correlations . . .	110

LIST OF APPENDICES

Appendix	Page
A. Interview Procedure - Outline	148
B. Interview Checklist Form	150
C. Inductively Derived Categories for Content Analysis	151
D. Inductively Derived Categories for Content Analysis (Detail Form for Scorers)	153
E. Analysis and Critique of the Inductivity Derived Content Categories	156
F. Explanatory Letter (for subjects) and Behavior Description Questionnaire (Optional Form)	164
G. Explanatory Letter (for describers) and Behavior Description Questionnaire (Optional Form)	166
H. Participant Ranking Form - Prediction	168
I. Trainer Ranking Form - Prediction	169
J. Perceived Small Group Seminar Atmosphere (PSGSA) Introduction and Instrument	170
K. Instructions for Scoring the PSGSA	172

CHAPTER I

BACKGROUND OF THE STUDY

Innovation in education is approached in numerous ways and results in innumerable designs, methodologies and media. However the personal orientation and interaction of both the student and the teacher is a basic component of effective learning. Whatever an individual does learn is greatly dependent on the rational-emotional response of the potential learner to the rational-emotional stimulus provided by the potential teacher. This study is essentially an attempt to define the perceived behavioral results of an innovative approach to education which aims to affect the core of the learning process, this core being the student, the teacher and the interaction of these.

Purpose

The purpose of this study is to determine the types and degrees of on-the-job perceived behavioral changes which result from the laboratory method of learning, as reflected in a group of secondary seminar teachers. It is designed to add to the general field of education by providing data on the basis of which it can be determined:

1. whether and, if so, to what degree the laboratory method of learning can aid in the process of:
 - a. educating teachers to be more effective small group seminar leaders.
 - b. helping teachers to be more effective in their interactions with fellow educators.
2. whether and, if so, to what degree the predictors of on-the-job change can determine, comparatively, which participants will change in constructive ways.

Relevance to Education

Educational practices in American secondary schools are presently changing at an unprecedented pace. Recent federal legislation and the United States Office of Education have favored school districts proposing innovative practices in the disbursement of funds.¹ The inadequately sized teaching staffs and educational facilities have prompted studies in better school organization and staff utilization.² Private foundations are becoming more willing

¹Forrest E. Connor, "Federal Policy and the Public Schools," introduction to a series of essays, American Association of School Administrators pamphlet, September, 1966.

²David W. Beggs, III, (ed.), Team Teaching: Bold New Venture (Bloomington, Indiana, Indiana University Press, 1964), pp. 13-28.

and able to finance extensive studies in the research and development of innovative practices which, if demonstrated to be effective, can be more wisely introduced into the local school district and be partially supported by federal funds.

Recent innovation has been accomplished in some schools through the use of variously sized student groups and student-teacher ratios; variously sized and equipped physical classroom facilities; variously sized blocks of time; and various modes of staff utilization and teaching methodologies. Large group lecture, small group discussion, and individual study combinations are becoming increasingly common.

Such structural changes, however, will insure no improvement in the educational effectiveness of a school. Innovations such as those mentioned may potentially serve to allow educational practice to improve. Such improvement comes about through change in the knowledge, attitudes and behavior of those interacting in the learning process.³

The small group seminar, as opposed to the "traditional" class, is one setting in which an alteration of interpersonal behavior by both instructor and students is

³John B. Hough, "Changing the Teacher's Instructional Behavior," Michigan Journal of Secondary Education, VII (Winter, 1966), 32-33.

necessary. There is a need to enhance the development of the teacher who is capable of working effectively as a small group seminar leader. In order to generate the greatest over-all effect on seminar instruction, the participant should also effectively influence other teachers so that they too can more effectively use themselves as discussion leaders. The effective seminar instructor's impact on the total educational environment should evidence valuable change.

Treatment Design

Structural innovations such as altered class sizes will not necessarily bring about positively altered behavior by teachers nor will learning by students necessarily be more effective and efficient.⁴ The accomplishment of such change cannot be relegated to chance.

In the desire to bring about positive change on the dimension of interpersonal effectiveness by seminar instructors, the Institute for the Development of Educational Activities (I/D/E/A) of the Charles F. Kettering Foundation, in cooperation with Michigan State University sponsored a workshop for seminar teachers. Goals of the workshop included:

⁴Warren G. Bennis, Kenneth O. Benne and Robert Chin (eds.), The Planning of Change (New York: Holt, Rinehart and Winston, 1962), p. 18.

1. positive behavioral change by the participants in the leading of small group seminar classes.
2. positive behavioral change toward other school personnel (particularly peer teachers) so that these participants' views on small group seminar teaching may be effected by other teachers.⁵

Both these goals involve a quality of leadership. As Combs states, a leader is "one who assists, encourages, helps or facilitates people in the process of changing their perceptions."⁶

Thirty-four seminar teachers from secondary schools across the continental United States were selected to participate. Eight high school students also attended the workshop session at Haven Hill Lodge in Michigan from August 5 to 14, 1966.

The methodological design of the workshop is based on the learning theory expressed in the "laboratory method." The laboratory method of learning is an "experimentally

⁵These goals are expressed in a letter from Mr. Eugene Howard of I/D/E/A, Kettering Foundation, to Dr. John H. Suehr, dean of the laboratory workshop.

⁶Arthur Combs et al., "The Syracuse Studies, Part One," Journal of Social Issues, X (1954), 55.

based technique that attempts to create an attitude of inquiry and openness toward phenomena."⁷

. . . the learning outcomes involve at one and at the same time a cognitive element (increased awareness), an emotional element (changed attitudes), and a behavioral element (changed interpersonal competence).⁸

The design of the laboratory workshop was constructed to be balanced, in respect to scheduled time, somewhat in favor of "sensitivity training" in contrast to the "application sessions." The application sessions were designed to aid the participants in the application of their personalized learnings, acquired through sensitivity training, to their unique on-the-job situations.⁹

As a recipient of an Institute for the Development of Educational Activities (I/D/E/A), Kettering Foundation grant, it was the privilege of the author to visit each of the seventeen innovative schools represented by teachers at the workshop. This enabled him to interview and to tape record the responses of teachers and administrators, as well as to gain the perceptions of students by means of a

⁷ Edgar Schein and Warren Bennis, Personal and Organizational Change through Group Methods: The Laboratory Approach (New York: John Wiley and Sons, Inc., 1965), p. 329.

⁸ Ibid., p. 272.

⁹ Douglas Bunker, Eric Knowles and Matthew Miles, "Comparison of Behavioral Changes Resulting from Human Relations Training Laboratories of Different Lengths," unpublished dittoed copy, May, 1966, p. 17.

questionnaire. These activities are a result of this study design.

A Perspective on Laboratory Training

Laboratory training had an interesting beginning at a workshop held during the summer of 1946.¹⁰ The aim of this workshop was to develop effective leaders in facilitating communication. The focus of small group interaction was on analysis of back-home problems. Staff sessions in the evenings were voluntarily attended by participants where the description and analysis of group and individual behaviors were presented by researchers. People became involved in the accuracy of perceptions, and the here-and-now focus on interaction became the "curriculum" of the evening meetings. It was discovered that:

Group members, if they were confronted more or less objectively with data concerning their own behavior and its effects, and if they came to participate nondefensively in thinking about these data, might achieve highly meaningful learnings about themselves, about the responses of others to them, and about group behavior and group development in general.¹¹

¹⁰For a history of the laboratory movement, refer to Leland P. Bradford, Jack R. Gibb and Kenneth D. Benne (eds.), T-Group, Theory and Laboratory Method: Innovation in Re-education (New York: John Wiley and Sons, Inc., 1964), pp. 1-135.

¹¹Ibid., p. 83.

The goals of laboratory training, as they have been defined by Benne, Bradford and Gibb include:

1. increased awareness of and sensitivity to emotional reactions and expressions in himself and in others.
2. greater ability to perceive and to learn from the consequences of his actions through attention to feelings, his own and others.
3. clarification and development of personal values and goals consonant with a democratic and scientific approach to problems of social and personal decision and action.
4. development of concepts and theoretical insights which will serve as tools in linking personal values, goals and intentions to actions consistent with these inner factors and with the requirements of the situation.
5. fostering the achievement of behavioral effectiveness in transactions with one's environments.
6. recognition that continuing opportunities to apply new learnings will occur in back-home situations, though removed from the supportive environment of the laboratory.
7. learning how to learn. Each learner is asked to become an analyst of his own process of learning.¹²

Laboratory training has been utilized most in business and industry but is now beginning to pervade agencies of social interaction including education.

¹²Ibid., pp. 16-19.

Problem to Be Investigated

The problem to be investigated in this study deals with a description of the kinds of behavioral changes, if any, which have functionally resulted from the laboratory workshop and transferred to the back-home teaching environment of the participants. A subsidiary aspect of this study deals with an examination of potential predictors of back-home behavioral change.

In order to determine whether laboratory training has brought about valuable change in the participants, the following general question is to be answered.

1. What perceived behavioral changes resulting from the laboratory workshop, if any, have taken place in the teacher-participants as they function in their back-home teaching environments?

In an attempt to define predictors of successful changes in the back-home educational situation, three potential predictors have been isolated for reliability study.

2. In relative comparison to the members of his sensitivity training group, how reliably does the participant predict the degree to which his own behavior will change in his back-home teaching environment?

3. As a group, how reliably do the members predict the back-home behavioral change of each member of the group?

4. How reliably does the trainer of a sensitivity training group predict the back-home behavioral change of his group members?

The following two questions will be answerable on the basis of data supplied in response to the first question. However, since the data which will be supplied as a result of this study will necessarily be interpreted (value judgments) in terms of the characteristics which the reader perceives as being valuable leadership characteristics in the seminar class and in relationship to his fellow educators, it shall be the charge of the reader to determine whether and to what degree the noted behavioral changes positively affect small group seminar instruction. Simultaneously, in concluding discussion, it will be the privilege of the author to make his interpretation of the results.

5. In view of the data, have the perceived behavioral changes, if any, improved seminar instruction in the participants' classes? In which ways and to what degree?

6. In view of the data, have the perceived behavioral changes, if any, influenced the relationships of the participants with their fellow educators, and thereby positively affected the potential and/or actual instructional behavior of these fellow educators? In which ways, and to what degree?

The specific questions and related hypotheses are:

Question One

Have perceived behavioral changes occurred in the laboratory participants?

Hypothesis One

The mean perceived behavioral change of the experimental group shall significantly exceed that of the control group.

Subhypothesis One

The mean perceived behavioral change of the experimental group shall significantly exceed that of the control group, as reported by self descriptions.

Subhypothesis Two

The mean perceived behavioral change of the experimental group shall significantly exceed that of the control group, as reported by peer descriptions.

Subhypothesis Three

The mean perceived behavioral change of the experimental group shall significantly exceed that of the control group, as reported by principal descriptions.

Subhypothesis Four

The mean perceived behavioral change of the experimental group shall significantly exceed that of the control group, as reported by composite change descriptions.

Question Two

On which dimensions shall perceived behavioral change differ significantly in the experimental group from the perceived behavioral change in the control group?

Hypothesis Two

The mean perceived behavioral change of the experimental group shall differ significantly from the control group on the scores of some individual categories of change but not on the scores of other categories, according to composite categorical ratings.

Question Three

Is there a significant difference in the perceived small group seminar atmosphere as reported by students of the experimental group instructors as compared to control group instructors' students?

Hypothesis Three

The small group seminar atmosphere, as reported by mean scores on the Perceived Small Group Seminar Atmosphere instrument, shall be perceived as being significantly more desirable (lower mean scores) among students of experimental group instructors as compared to students of control group instructors.

Question Four

What is the relative predictive power of the participant himself, of the total T group of which he is a member and of the trainer of the T group at the conclusion of the sessions, as compared to perceived behavioral changes in the on-the-job situation six months following laboratory training?

Hypothesis Four

There is no significant difference between the predictive power of the participant, of the total T group and of the trainer of the T group as measured by means of rank order predictions of positive change correlated with rank order of composite change scores.

Hypotheses and subhypotheses shall be stated in the null form for the purpose of statistical treatment (Chapter IV) .

Definition of Terms

Application Sessions: Periods of structured time during which concentrated effort is made to direct the attention of participants in laboratory training toward the beneficial application of new learnings to day-to-day situations.

Laboratory Training: Utilizes the laboratory method of learning. A design for a learning environment including, basically, sensitivity training and application sessions.

Participant: Person, excluding staff, who participates in laboratory training.

Perceived Behavioral Change: Change in behavior by the subject as designated by his describers.

Respondent: Person being interviewed.

Secondary Schools: Schools having grades seven through twelve or segments of this grade distribution.

Sensitivity Training: Also called "Training Group" or "T-Group." A method by which the here-and-now phenomena of group processes are freely discussed. Each participant has the opportunity to examine and diagnose his feelings and ideas about himself and others, and to adjust his behavior in a desired manner.

Small Group Seminar: A relatively unstructured discussion group of from five to eighteen students and one instructor. (For a more detailed discussion, see pages 40 to 52.)

Trainer: Person with certain competencies in directing sensitivity training sessions.

Limitations

The experimental and control population of the study were selected from schools which have at least one common factor different from the majority of secondary schools in the United States. These schools have small group seminars. Some of these seminars are instructed by the subjects of this study. Care must be taken that generalizations of the resultant data not be loosely applied to teachers in class grouping arrangements other than small group seminars. However, some new learnings or new hypotheses may result relevant to the total personal effects of learning laboratory sessions.

Assumptions

The assumption is made that if behavior or behavioral change in an experimental or control subject is perceived by self and others, this perception is the factor of importance, regardless of whether the actual behavior is congruent with these perceptions

It is assumed that back-home environments are important factors in the determination of individual behavior following laboratory training. Certain types and degrees of behavioral change may be nurtured or inhibited by varying environmental situations. Therefore learnings acquired at the completion of a laboratory training session may be differentially applied due, in part, to the specific back-home conditions.

Significance

This study is designed to determine the types and degrees of on-the-job perceived behavioral changes which result from the laboratory method of learning, as reflected in a group of secondary seminar teachers.

As a result of this study sets of data are available indicating the behavioral results of a specific type of teacher education. Indications will become more apparent to what degree the laboratory method meets the demands of personnel development in continually changing educational environments. The need for teachers, particularly for

designated small group discussion leaders, is to become increasingly capable in the development of a climate of openness to experiences and of effectively utilizing themselves in the facilitation of significant student learning.

Improved methods of teacher selection and placement are several of the potential benefits resulting from the isolation of reliable predictors of positive individual on-the-job change.

Overview of Organization

This study is organized into five chapters. Following this introductory chapter, a review of significant relevant literature is discussed in Chapter II. The design, the instruments, the sample, and the procedure are presented in the third chapter. Chapter IV consists of an analysis and discussion of the data in respect to specified hypotheses. Chapter V includes a summary of conclusions. Implications and recommendations for further research are also expressed in the final chapter.

CHAPTER II

RELEVANT LITERATURE

Introduction

Throughout the process of laboratory training development, the practitioners have had a strong commitment to research.¹ This research has included studies of interaction analysis, group composition, trainer style, group and individual behavior, interpersonal perceptions, and impact on both immediate and long range learning and change.² The number of studies attempting to make long range assessment is small due to limitations of adequate research designs, (relevant instrumentation) adequate control groups, finances and the geographical scattering of participants. ✓

The literature to be reviewed in this chapter shall include previous studies dealing with the impact of laboratory training on participants. It shall also be necessary

¹Edgar H. Schein and Warren G. Bennis, Personal and Organizational Change through Group Methods: The Laboratory Method (New York: John Wiley and Sons, Inc., 1965), p. 238.

²Dorothy Stock, "A Survey of Research on T Groups," T-Group Theory and Laboratory Method: Innovation in Re-education, eds. Leland P. Bradford, Jack R. Gibb and Kenneth D. Benne (New York: John Wiley and Sons, Inc., 1964), pp. 395-441.

to examine which personal characteristics it may be most desirable to develop in teachers who are expected to interact with increasing effectiveness with small groups of students, and who are expected to help bring about positive change in their relationships with their education colleagues.

Studies of classroom interaction, effective teaching behavior and small group leadership frequently disagree regarding specific kinds of desirable behaviors due to different goals in terms of student learning. However, as the literature since the studies by Lewin et al.³ will reveal, there are certain personal perspectives and small group leadership behaviors which seem to be most effective in the attainment of small group learning goals as described by Howard.

Seminars should help students to:

1. build concepts and opinions on the basis of knowledge.
2. use the seminar group as a critical audience upon whom to try out various personal ideas.
3. use the seminar as a forum for an exchange of experiences.

³Kurt Lewin and Ronald Lippitt, "An Experimental Approach to the Study of Autocracy and Democracy: A Preliminary Note," Sociometry, I (1938), 292-300.

4. use the seminar for the purpose of relating ideas acquired through independent study, large group lectures, or learning laboratories.
5. discuss controversial issues.⁴

More than in most educational enterprises, in laboratory training increased intellectual understanding of the subject matter and altered attitudes are not enough. The aim, whether an individual or an intact organizational group is the unit in training, is to enable participants to make adaptive changes in their perceptions and behavior in their "back-home" organizational setting. From the theoretical perspective underlying this type of training, adaptive changes are likely to be those which improve self-understanding and the capacity for open, meaningful working relationships with others--relationships in which both collaboration and conflict can be rendered productive.⁵

Such "meaningful working relationships with others" are basic to effective leadership in seminars and in influencing the perceptions and behavior of co-workers.

Need for Further Research

The aims of T group and the laboratory method have been defined in a variety of ways since its inception.

⁴Eugene R. Howard, "Possibilities for Team-Teaching in the Senior High School," Team Teaching: Bold New Venture, ed. David W. Beggs, III (Bloomington, Indiana: Indiana University Press, 1964), pp. 89-90.

⁵Douglas R. Bunker, "The Effect of Laboratory Training upon Individual Behavior (reprint copy; Proceedings of the Sixteenth Annual Meeting, Industrial Relations Research Association, December, 1963), p. 1.

Argyris expressed the problem of relating the T group experience to others as being a function of:

1. wide individual and group variations of meaningfulness and learning from the experience.
2. the same words have different meanings to different people. Explanations of real feelings such as "trust," "love" and "acceptance" are difficult to relate.⁶

Argyris continues with his general version of T group aims:

Basically it is a group experience designed to provide maximum possible opportunity for the individuals to expose their behavior, give and receive feedback, experiment with new behavior, and develop everlasting awareness and acceptance of self and others.⁷

In addition, Argyris mentions the learning of the nature of effective group functioning and the development of a group to achieve specific goals at the least possible human losses as being important aims.⁸

Obstacles to the transfer of learning from the laboratory situation to the back-home environment have had

⁶Chris Argyris, "T-Groups for Organizational Effectiveness," Harvard Business Review, XLII (March-April, 1964), 74.

⁷Ibid., p. 63.

⁸Ibid.

notable attention. Those listed are applied to the management-labor organizational situation, but are applicable to educational organizations as well.

1. Need to buck a complacent or skeptical management.
A frequent reaction is to retaliate by over-selling or withdrawing.
2. "Those who need it most" are too frequently selected by upper management to attend.
3. Participants may be forced back to the old role if they lack a supportive climate or organizational influence.
4. If a total department is involved, there may be high morale within the group, but may be resented by other groups and so result in more friction.
5. Too often only lower level managers are sent. These usually wish their bosses would be there but return and often conform to bosses' expectations.⁹

The human organism, says Festinger, tries to establish internal harmony among its opinions, attitudes, knowledge and values. Dissonance exists if there is lack of

⁹Robert R. Blake, Jane S. Mouton, Louis B. Barnes and Larry E. Greiner, "Breakthrough in Organization Development," Harvard Business Review, XLII (November-December, 1964), 133-134.

consistency, so the organism drives toward dissonance reduction. Resultant pressures are proportional to the dissonance.¹⁰

This theory supports the reasons given by Blake et al. for loss of transfer due to the organizational situation. Festinger goes on to propose three methods of dissonance alteration. These are to (1) change the dissonance relationships, (2) add new cognitive elements consistent with existing understandings, or (3) decrease the importance of the dissonance producing element.¹¹

One case is presented in which the author contends that a training laboratory for civil rights workers was a failure. The prime reasons cited are that the trainers were not really invited or accepted by the group, and that the group was not ready for the goals of the laboratory. These people were too involved in the goals of their movement, so were unwilling to look at themselves and their goals with honest openness. They tended to be strongly defensive, to maintain "tunnel vision," and to attempt to develop the same attitude among newly recruited volunteers.¹² A commentary

¹⁰ Leon Festinger, A Theory of Cognitive Dissonance (Evanston, Illinois: Row Peterson and Company, 1957), p. 16.

¹¹ Ibid., pp. 18-24.

¹² Martin Lakin, "Human Relations Training and Interracial Social Action: Problems in Self and Client Definition," Journal of Applied Behavioral Sciences, II (April, May, June, 1966), 139-145.

by Robert Allen disagrees. He expresses that the reasons for failure were not as stated by Lakin, but that behavioral scientists have a history of being aloof from social movements. This caused the civil rights workers to associate their trainers with the status quo.¹³ This suggests that there may need to be some degree of readiness for laboratory training or, at least, that there be no major organized resistance to goals of laboratory training.

In another situation several negative results of laboratory training were reported. A few enthusiastic participants returned to their back-home situations, attempted to bring about change, and lost their jobs as a result.¹⁴ Research is necessary to help define the back-home results of the laboratory method of learning.¹⁵

¹³Ibid., pp. 146-147.

¹⁴Irving R. Weschler, Robert Tannenbaum and John H. Zenger, "Yardstick for Human Relations Training," Adult Education, VII (Spring, 1957), 152.

¹⁵Ibid., pp. 152-158; Robert Tannenbaum, Irving R. Weschler and Fred Massarik, Leadership and Organizations: A Behavioral Science Approach (New York: McGraw-Hill Book Company, Inc., 1961), pp. 231-238; and Edgar H. Schein and Warren G. Bennis, Personal and Organizational Change through Group Methods: The Laboratory Approach (New York: John Wiley and Sons, Inc., 1965), p. 237.

Measured Effects of Laboratory Training

Participants in the pioneering 1946 laboratory workshop responded to a brief questionnaire sent to them.

Lippitt reported:

. . . a broadened view of the problems of community relations, motivation to become more active in contributing to the solution of these problems, the more effective use of specific skills of stimulating and leading others, more sophisticated planning of action strategy, new confidence in own potentialities and in available resources, and personal changes in prejudiced attitudes.¹⁶

An intensive case study was made of an individual who participated in a 1954 training group. Scores on a RGST (Reactions to Group Situations Test)¹⁷ were obtained two months prior to training and six months afterward. The analysis is made in terms of "changes in his affective approach, culture preference, underlying concerns, and the relation of his valency pattern to role preference and sociometric choices."¹⁸ Some changes were recorded. There was a

¹⁶Ronald Lippitt, Training in Community Relations: Toward New Group Skills (New York: Harper and Bros., 1949), p. 209.

¹⁷Saul Ben-Zeev, Ida Heintz Gradolph, Phillip Gradolph, William F. Hill, Dorothy Stock and Herbert A. Thelen, "Methods for Studying Work and Emotionality in Group Operation" (Chicago: Human Dynamics Laboratory, University of Chicago, 1954), p. 208.

¹⁸Dorothy Stock, "Interrelations Among Changes in the Three Components of Valency: A Case Study," Emotional Dynamics and Group Culture, eds. Dorothy Stock and Herbert A. Thelen (Washington, D.C.: National Training Laboratories, 1958), pp. 171-184.

reduction in his need for structure, a decrease in expressed dependency, a reduction in the degree to which he is threatened by fight, and less rejection of persons who freely express positive affect. These results are consistent with shifts in perception of his own role, the role of others and that of the total group.

Several tests were administered to participants in eighteen laboratories before, during, and/or after training. Responses to a sociometric test of social perception indicate a statistically insignificant change in the predicted direction of increased insight. An opinion blank indicated that opinions about groups changed; concern with group leadership also changed. Follow-up questionnaires indicate that a significant number of participants see themselves as having changed in specific ways. This change was attributed to the training.¹⁹

In another study, the management team of a small manufacturing company were brought together for T-group activities during six consecutive hours per day, and they

¹⁹Cynthia C. Wedel, "A Study of Measurement in Group Dynamics Laboratories" (unpublished Ph.D. dissertation, George Washington University, 1957), Lewis E. Durham and Jack R. Gibb, compilers, An Annotated Bibliography of Research: National Training Laboratories, 1947-1960 (Washington, D.C.: National Training Laboratories, 1960).

worked on the job the remainder of the day.²⁰ This case history describes the aim of the group as having been the improvement of economic and organizational goals. These goals were subjectively reported as having been attained due to opening of communications, and the development of increased interpersonal trust and cooperation.

A questionnaire measuring self-identity at the beginning, middle, end, and ten months following a two week conference in laboratory training for twenty middle management personnel demonstrated the greatest change at the conclusion of the two weeks.²¹ "Some difference" existed ten months later, but the difference was not clearly specified. The data suggest that:

. . . our results give some support to the proposition that a person's self-identity is influenced by the opinion that others have of him which they communicate to him and that the more that is communicated, the more change there is in self-identity. The data also suggest that the state of the individual plays a part as well--for the more he is dissatisfied with his present self-perceptions, the more likely he is to change them.²²

²⁰Arthur H. Kuriloff and Stuart Atkins, "T-Group for a Work Team," Journal of Applied Behavioral Science, II (January, February, March, 1966), 63-93.

²¹John R. P. French, Jr., John R. Sherwood and David L. Bradford, "Change in Self-Identity in a Management Training Conference," Journal of Applied Behavioral Science, II (April, May, June, 1966), 210-218.

²²Ibid., p. 218.

Forty-six middle managers who participated in a two week laboratory completed a "Problem Analysis Questionnaire" at the termination of the sessions. The study does not follow the participant back home, but it describes how his work would look to him at this time:

1. His work would seem to be more human and less impersonal.
2. He sees clearer connections between how well interpersonal needs are met and how well the work gets done.
3. He sees himself clearly as the most significant part of his work problems.
4. He sees no clear connection between his new perceptions and how he translates these into action.²³

The author emphasizes that this is true only at the point of reentry into the work world.

Although there is little doubt that he sees things differently following this program than he did before, at this point in our research we have no notion of the extent to which seeing things differently is translated into doing things differently in the organization.²⁴

²³Barry J. Oshry and Roger Harrison, "Transfer from Here-and-Now to There-and-Then: Changes in Organizational Problem Diagnosis Stemming from T-Group Training," Journal of Applied Behavioral Science, II (April, May, June, 1966), 196.

²⁴Ibid., p. 198.

"Managerial Grid Seminars," a different style of T group training wherein all activities were structured learning experiments, were the methodology utilized in two one-week sessions for thirty-three managers and twenty-three union members. A forced-choice questionnaire, aimed at assessing attitudes regarding supervisory practices, was administered at the beginning and after completion of training. The results indicated that a wide gap between managers and union members persisted between the pre- and post-test. However, their immediate views did change in the same direction. These changes were characterized by increased endorsement of the production orientation (which was the primary aim of these "Managerial Grid" seminars) and increased rejection of people orientation with the exception of an increased desire to accomplish tasks through interdependent cooperation toward common goals.²⁵

An interesting study in management training is reported by Argyris, the major portion of which does not deal with an on-the-job follow-up, but does incorporate some innovative methodologies. All T group sessions were taped on the tape recorder. Trained experts listened to these tapes together in scoring the interaction in terms of pre-determined categories. The listeners "negotiated" between

²⁵Robert R. Blake and Jane S. Mouton, "Some Effects of Managerial Grid Seminar Training on Union and Management Attitudes Toward Supervision," Journal of Applied Behavioral Science, II (October, November, December, 1966), 395-397.

themselves if there was a difference of opinion regarding categorization. Final interscorer correlations were presented on the basis of final agreements and disagreements.²⁶

Four members of a board of supervisors were interviewed as a group one year following the laboratory sessions. There was some disagreement between them regarding some specific changes in the organization but the overall reaction was very favorable.²⁷ Fourteen months following the sessions the same four board members reacted highly positively. They noted especially (1) greater openness and frankness, (2) less hostility, (3) more effective problem solving, and (4) fewer feelings of frustration.²⁸

Argyris commented:

I was frankly surprised to see how alive and active the learning from the change sessions continued to be during the fourteen month period. There were many discussions among the board members examining and re-examining what they felt were the results. Moreover, individuals were still experimenting with new kinds of behavior. Thus, although it was not my initial intent to develop a change process, it may be that the type of process described may be worth further exploration by those interested in organization change.²⁹

²⁶Chris Argyris, Organization and Innovation (Homewood, Illinois: Richard J. Irvin, Inc., 1965), pp. 249-254.

²⁷Ibid., pp. 186-189.

²⁸Ibid., p. 190.

²⁹Ibid., p. 192.

To reinforce the finding of Argyris, Schutz and Allen report that the majority of positive effects remained constant or increased over time six months following a two-week laboratory.³⁰ The FIRO-B (Fundamental Interpersonal Relations Orientation-Behavior) questionnaire was administered before, after and six months following a laboratory composed of a mixed composition of seventy-one people. An undergraduate class of thirty students were administered the same form two weeks apart, and again three months later, to serve as the control group. Eighty-three per cent of all responses reported favorable effects, four per cent were unfavorable and thirteen per cent indicated no change.³¹ Increased intellectual understanding of interpersonal, group and individual behavior together with increased personal effectiveness and competence as a person were the basic effects reported.

Three studies are reported in which sensitivity training results are compared to different methodologies. Psychiatric patients in a Veterans Administration Hospital were divided into two groups. One group participated in sensitivity training, the other in group therapy. Interview

³⁰William C. Schutz and Vernon L. Allen, "The Effects of a T Group Laboratory on Interpersonal Behavior," Journal of Applied Behavioral Sciences, II (July, August, September, 1966), 283.

³¹Ibid., p. 282.

and questionnaire results demonstrated no significant differences following release with the exception that a higher per cent of those involved in sensitivity training were employed, even though the members of this group had had a shorter period of treatment.³²

An assessment was made of three groups of participants following an in-service training session for a Canadian utility. One group participated in the laboratory training method, a second group in a conventional administration course, and the third group did not participate. The data were collected by means of a general interview and a Manager Behavior Prescription form. Boyd and Elliss reported least change for the nontrained managers (34 per cent) more by those participating in the conventional course (50 per cent) and most improvement by those having been involved in laboratory training (65 per cent).³³

Teachers with the greatest personal involvement in a summer workshop which included sensitivity training became far more effective as innovators than those who participated

³²D. L. Johnson, P. G. Hanson, P. Rothaus, R. B. Morton, F. A. Lyle and R. Moyer, "Follow-up Evaluations of Human Relations Training for Psychiatric Patients," eds. Edgar Schein and Warren Bennis, Personal and Organizational Change through Group Methods: The Laboratory Approach (New York: John Wiley and Sons, 1965), pp. 166-167.

³³Douglas Bunker, "Individual Applications of Laboratory Training," Journal of Applied Behavioral Science, I (April, May, June, 1965), 135-136.

in only structured lecture type learning situations, and also far more than those not involved at all.³⁴

Thirty-four self-selected persons, most of whom were elementary school principals, participated in a three week training laboratory in 1958.³⁵ Measures were obtained both during the laboratory and ten months later, back home in the organizational setting. Two control groups were used: one was nominated by the experimental subjects, the other was a random group drawn from a national directory of principals. Miles developed an open-ended change-description questionnaire based on laboratory learning theory. These questionnaires were mailed to experimental and control subjects and to co-workers chosen by the subjects. Miles found that the laboratory participants were seen by themselves and by friends to have changed significantly more than the control subjects in the predicted direction. Content of changes reported more frequently regarding experimental than controls

. . . fell mostly into the areas of increased sensitivity to others, equalitarian attitudes, skills of communication and leadership, and

³⁴Robert S. Fox and Ronald Lippitt, "The Innovation of Classroom Mental Health Practices," Innovation in Education, ed. Matthew B. Miles (New York: Bureau of Publications, Teachers College, Columbia University, 1964), pp. 295-296.

³⁵Matthew B. Miles, "Human Relations Training: Processes and Outcomes," Journal of Counseling Psychology, VII (Winter, 1960), 301-306.

group task and maintenance skills. Personal traits, such as "more considerate," "relaxed," account for about a quarter of the reported changes in the E group, with organization-relevant changes (such as "delegates more") and group-relevant changes (such as "aids group decision making") making up the remainder.³⁶

Utilizing the same basic methodologies as did Miles, Bunker studied a large diverse population of participants from six different training laboratories. His outstanding contribution was the development of an objective coding system which allows the assessment of the content within each subject's total change score.³⁷ The report discloses that laboratory training tends to be individual and varied in effect, as demonstrated in the content categories. Eleven of the fifteen categories discriminated between the

³⁶Matthew B. Miles, "Learning Processes and Outcomes in Human Relations Training: A Clinical-Experimental Study," Personal and Organizational Change through Group Methods: The Laboratory Approach, eds. Edgar H. Schein and Warren G. Bennis (New York: John Wiley and Sons, Inc., 1965), p. 251.

³⁷Douglas Bunker, "The Effect of Laboratory Education Upon Individual Behavior," reprint copy, Proceedings of the 16th Annual Meeting, Industrial Relations Research Association, December, 1963. For a detailed analysis of the codification rules for the content categories, see Michael I. Valiquet, "Contribution to the Evaluation of a Management Training Program" (unpublished Master's dissertation, Sloan School of Industrial Management, 1964).

experimental and control subjects beyond the .05 level of significance.³⁸

Those persons who learned most through sensitivity training were those who avoided assigning blame to others and to the system.³⁹ Those who learned the least were described before the laboratory as inconsiderate of others and closed to new ideas. Their perceptions of organizational problems placed the causes outside themselves. "If this pattern can be confirmed by other findings, it will appear that trainability has similar dimensions to training outcomes."⁴⁰

A set of predictors for on-the-job change was examined in comparison to recorded changes.⁴¹ No written instruments seemed to show any promise of accuracy. The single most accurate predictor was the amount of learning at the laboratory itself, as measured by trainer ratings. Correlation between trainer ratings and measured change was .55. Self ratings were totally unreliable. Beyond these vague

³⁸Douglas Bunker, "Individual Applications of Laboratory Training," Journal of Applied Behavioral Science, I (April, May, June, 1965), 142.

³⁹Oshry and Harrison, p. 196.

⁴⁰Bunker, "The Effect of Laboratory Education Upon Individual Behavior," p. 267.

⁴¹Miles, "Human Relations Training: Process and Outcomes," p. 305.

indicators, predictors for change in on-the-job behavior have not been isolated.

Classroom Climate

In the history of education the most striking phenomenon is that schools of learning, which at one epoch are alive with the ferment of genius, in a succeeding generation exhibit merely pedantry and routine. The reason is that they are overladen with inert ideas. Except at rare intervals of intellectual ferment, education in the past has been radically infected with inert ideas. . . . Every intellectual revolution which has ever stirred humanity into greatness has been a passionate protest against inert ideas.⁴²

Most educators spend a great deal of time planning how to, and then actually in attempting to change other people.⁴³ Teachers attempt to help others to change or, in other words, to learn. Sensitivity training with its stress upon process rather than content, upon the trainee rather than the trainer and upon emotional rather than cognitive learning is a protest against inert ideas.⁴⁴ Any productive learning session is a rejection of ideas which exist for their own sake only and does involve exploration for new meanings. Learning involves the alteration of perceptions

⁴² Alfred North Whitehead, The Aims of Education and Other Essays (New York: Macmillan Company, 1929), p. 13.

⁴³ Stephen Corey, Helping Other People Change (Columbus, Ohio: Ohio State University Press, 1963), p. 3.

⁴⁴ Henry Clay Smith, Sensitivity to People (New York: McGraw-Hill Book Company, 1966), p. 197.

and attitudes. For these changes to be of consequence it is necessary for behavioral change to result.⁴⁵

Research and writing has been done regarding classroom climates⁴⁶ which are most conducive to active learning situations in contrast to situations emphasizing attempts at the transfer of inert ideas.

A classroom climate resulting in low productivity is characterized by a strong emphasis on academic competition;⁴⁷ results of a study demonstrate that an increase in anxiety among perceivers reduces the amount of information transmitted;⁴⁸ defensiveness by members reduces the quantity of learning and the creative production level of the group.⁴⁹

An indirect climate, as compared to a direct and a variable climate, has been shown to foster more expression of feelings, greater supportiveness of the teacher and the class, and a greater quantity of interaction with the teacher and other students. Less class time was used for

⁴⁵ Ronald Lippitt, "The Use of Social Research to Improve Social Practice," American Journal of Orthopsychiatry, XXXV (July, 1965), 666.

⁴⁶ O. F. Peterson, "Leadership and Group Behavior," Leadership in Action (Washington, D.C.: National Training Laboratories, National Education Association, 1961), p. 29.

⁴⁷ Jane Warters, Group Guidance (New York: McGraw Hill Book Company, Inc., 1960), p. 239.

⁴⁸ Glen Mellinger, "Interpersonal Trust as a Factor in Communication," Journal of Abnormal and Social Psychology, LIII (May, 1956), 308.

⁴⁹ Jack R. Gibb, "Defensive Communication," Journal of Communication, XI (September, 1961), 148.

"discipline," controversial issues were discussed more frequently and there was less subject matter orientation.⁵⁰ A permissive group's morals and job satisfaction is far higher than that of a restrictive group.⁵¹

To the degree that the needs of the individual in each group are met, to that degree is the individual personally committed to the functions and goals of the group.⁵² In consequence, his learning will be comparable.⁵³ High I.Q. students have been shown to produce far better in groups in which they are personally compatible with their group members in contrast to groups in which they are less

⁵⁰David B. Crispin, "Student Behavior in Three Different Climates" (unpublished Ph.D. dissertation, Temple University, 1963).

⁵¹Robert Tannenbaum, Irving R. Weschler and Fred Massarik, Leadership and Organization: A Behavioral Science Approach (New York: McGraw-Hill Book Company, Inc., 1961), p. 336; and Kurt Lewin, Ronald Lippitt and R. K. White, "Patterns of Aggressive Behavior in Experimentally Created Social Climates," Journal of Social Psychology, X (1939), 297-298.

⁵²C. Gratton Kemp, Perspectives on the Small Group Process (Boston: Houghton Mifflin Company, 1964), p. 137; Peterson, p. 29; Herbert Thelen, "Educational Dynamics: Theory and Research," Journal of Social Issues, VI (1950), 30; and Herbert Thelen, Dynamics of Groups at Work, (Chicago: University of Chicago Press, 1962), pp. 46-53.

⁵³David Jenkins, "Interdependence in the Classroom," unpublished paper presented at a symposium sponsored by the Educational Psychology Division of the American Psychological Association, September 7, 1950.

compatible. The same tended to be true of lower I.Q. students, but of a lesser magnitude.⁵⁴

A group climate which reduces individual defensiveness and anxiety about exposure of one's inadequacy and gives acceptance and emotional support to all students will do a great deal to prevent or repair feelings of rejection, of inadequate self-image, of failure. Such a climate is paramount in creating readiness for learning, and in being able to face and solve difficulties inhibiting individual and group growth and development.⁵⁵

Trust and security, mutual confidence and respect, a genuine desire to understand the views of others and to respect their right to have these views are among basic characteristics of a constructive group learning climate.⁵⁶ A realization by group members that motivation and significant learnings are personal, and that all genuine growth stems from the creative power of the individual are integral requirements.⁵⁷

⁵⁴Albert J. Lott and Bernice E. Lott, "Group Cohesiveness and Individual Learning," Journal of Educational Psychology, L (1966), 71-73.

⁵⁵Kemp, p. 136.

⁵⁶Peterson, p. 29; Warters, p. 236; Carl R. Rogers, On Becoming a Person (Boston: Houghton-Mifflin Company, 1961), pp. 276-277; and Nathaniel Cantor, "A Way of Thinking about Learning," Adult Leadership, I (1953), 11.

⁵⁷Ibid., p. 11; Arthur Combs and Donald Snygg, Individual Behavior: A Perceptual Approach to Behavior (New York: Harper and Brothers, 1959), pp. 252-253; and Rogers, p. 276.

Some of the operational characteristics of an effective learning-producing group as listed by McGregor are:

1. The "atmosphere tends to be informal, comfortable, relaxed." There are no obvious tensions. It is a working atmosphere in which people are involved and interested. There are no signs of boredom.
2. There is a lot of discussion in which virtually everyone participates, but it remains pertinent to the task of the group.
3. The members listen to each other. Every idea, though it may seem extreme, is given a hearing.
4. There is disagreement. The group seeks to resolve disagreement rather than to dominate the dissenter.
5. People are free in expressing their ideas and feelings both on the problem and on the group's operation.
6. The chairman does not dominate the group. Leadership shifts, depending on the circumstances.
7. The group carries on continuous honest self-evaluation.⁵⁸

⁵⁸ Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, Inc., 1960), pp. 232-235.

Small Group Seminars

The classroom climate and interactional results previously described have been found to develop and maintain themselves with the greatest facility in the small group seminar. A student reports:

By working in small groups I have learned to get along better with people. I have learned more about the subject working in small groups because each person gets to do more on the project and it is more interesting.⁵⁹

Other students noted improvement of leadership skills, personality, social interaction and development of a life pattern and goals.⁶⁰

Large group lectures cannot alone provide for the interpersonal understanding and interaction necessary, even though they may serve their unique legitimate functions. Nor can independent study provide the interaction, feedback, social and emotional needs of the student. It is the small group seminar which can fulfill many of the learning needs described. Small groups are the "natural" media, states Tonsor, by which the individual discovers and maintains his identity.⁶¹ Small group seminars can be determinants of

⁵⁹Ruth Cunningham and Associates, "A Group Creates Its Climate," Educational Leadership, V (March, 1948), 358.

⁶⁰Ibid., pp. 358-359.

⁶¹Kemp, p. 103.

individual achievement and activities. Important personal support is provided by the small group.⁶²

It has been demonstrated that idea productivity varies inversely with size. The smaller the group, the greater is the number of ideas produced.⁶³ Groups of four are slower on concrete problems than are groups of two, but are faster on abstract problems.⁶⁴ Thirty-two academic discussion groups were structurally varied in size. The findings were that

1. there was a consistent inverse relationship between group size and student satisfaction. Students claim greater satisfaction in the smaller groups.
2. instructors were more inclined than students to show satisfaction with larger groups.
3. smaller groups showed slightly higher academic achievement than did larger groups.⁶⁵

⁶²Ibid., p. 104.

⁶³Jack R. Gibb, "The Effects of Group Size and Threat Reduction upon Creativity in a Problem-Solving Situation," American Psychologist, VI (1951), 324.

⁶⁴D. W. Taylor and W. L. Faust, "Twenty Questions: Efficiency in Problem Solving as a Function of Size of Group," Journal of Experimental Psychology, XLIV (1952) 366-368.

⁶⁵Kemp, pp. 100-101.

Small group seminars can be utilized to fulfill a variety of aims in a variety of ways.⁶⁶ Some of the operational benefits for students include opportunities to build concepts and opinions on the basis of knowledge; to exchange experiences and related ideas acquired in learning laboratories, large group sessions or in independent study; and to discuss controversial issues.⁶⁷ Even when the small group seminar is not overtly active a great deal of learning may be taking place.

. . . the silent period may be the most fruitful portion of the meeting for here the participant is balancing the turn of the group discussion with his own experience, background, and observations in the practical situation in his own community. When there is a period of silence, everyone is thinking, weighing possible solutions to the problem under consideration, perhaps making and rejecting possible decisions.⁶⁸

Instructional Leader Behavior

Classroom climate, it has been shown, is a significant factor relating to the type and quality of learning which results. This classroom climate is dependent on the relationships between group participants. These relationships

⁶⁶Richard Schmuck, Mark Chesler and Ronald Lippitt, Problem Solving to Improve Classroom Learning (Chicago: Science Research Associates, 1966), p. 52.

⁶⁷David W. Beggs, III. (ed.), Team Teaching: Bold New Venture (Bloomington, Indiana: Indiana University Press, 1964), pp. 89-90.

⁶⁸Kemp, p. 106.

are multi-dimensional between teacher and students. They exist between and among students as well as between and among teachers who influence one another.⁶⁹ The small group seminar provides an environment in which positive relationships and interaction may develop. The size of the group is, however, not a sufficient condition for the development of a productive group climate. The behavior of the seminar instructor is an instrumental factor determining the processes and outcomes of two-person and of small group seminar sessions.

It is now established that good personal relations in the classroom depend on the ability of the teacher to relate in wholesome fashion to students, accepting them emotionally and being capable of understanding their problems and aspirations. It is also becoming increasingly clear that a good climate for learning in the school depends on the character of the social relations among students.⁷⁰

A student needs acceptance by his teacher for his adjustment to the situation but also needs a reasonable degree of acceptance from his peers.⁷¹

⁶⁹Ronald Lippitt, "The Learner and the Classroom Group," Forces in Learning (Washington, D.C.: National Training Laboratories, National Education Association, 1961), pp. 32-33.

⁷⁰Chester W. Harris (ed.), Encyclopedia of Educational Research (New York: Macmillan Company, 1960), p. 848.

⁷¹Ibid., p. 848.

The influence of the teacher, as it is reflected in his relations with students . . . is a powerful factor in determining the character of the group climate. Productive work or academic achievement in school seems to be related to group climate.⁷²

Teachers have been named by students as the major cause of their disliking school.⁷³ Pleas have been made to orient teachers to the realities of the personal needs of students so that the latter need not regard school as a negative force in their lives.⁷⁴

The classical study directed by Lewin has initiated further research into the results of various leadership approaches. Democratically led groups, in contrast to autocratically led groups, demonstrated

1. more cooperative behavior.
2. larger numbers of constructive suggestions offered.
3. more give and take of objective criticism without personal involvement.
4. superior group products.
5. development of a feeling of "we'ness" as opposed

⁷²Ibid., p. 850.

⁷³Samuel Tenenbaum, "Attitudes of Elementary School Children to School, Teachers and Classmates," Journal of Applied Psychology, XXVIII (1944), 139.

⁷⁴Edgar Z. Friedenberg, The Vanishing Adolescent (New York: Dell Publishing Company, Inc., 1959), pp. 217-218.

to "I'ness."

6. more stable and unified group structure.⁷⁵

If there is a high prestige figure in a group (such as a teacher among students) who is perceived as a power figure, the members will tend to function, not on the basis of what they think, but rather on the basis of what they think is safe to say or what this power figure wants to hear.⁷⁶ In further support of the Lewin findings, participatory leadership is more effective as a technique in changing attitudes than is supervisory leadership. Additionally, the participatory leader had more influence on the group, and the group was somewhat better satisfied with results of decisions than were the supervisory subjects.⁷⁷ The effective group process leader will usually use his skills to facilitate group decisions regarding their own particular goals.⁷⁸ Students may, however, resist efforts to bring

⁷⁵Kurt Lewin and Ronald Lippitt, "An Experimental Approach to the Study of Autocracy and Democracy: A Preliminary Note," Sociometry, I (1938), 653-657.

⁷⁶Peterson, p. 29; and Gordon L. Lippitt, Leadership in Action (Washington, D.C.: National Training Laboratories, National Education Association, 1961), pp. 29-30.

⁷⁷Paul A. Hare, "Small Group Discussions with Participatory and Supervisory Leadership," Journal of Abnormal and Social Psychology, XLVIII (1953), 692.

⁷⁸Thomas Gordon, Group-Centered Leadership (Boston: Houghton-Mifflin Company, 1955), p. 89.

them more actively into the learning process due to peer group norms and acquire habits of apathy.⁷⁹ The teacher can begin to overcome this resistance by encouraging more interpersonal acceptance among students and by encouraging student evaluation of classroom activities and of the teacher's behavior.⁸⁰ This necessitates

. . . teacher recognition of the affective orientation of students, acceptance of that attitude, and use of it to achieve cognitive goals. If the teacher can make possible the satisfaction of the pupils' affective needs within the classroom, then the pupil will be more likely to respond cognitively. This will provide satisfaction of teacher needs and the classroom will become an effective group.⁸¹

The teacher expends his energies to be an effective change agent. This change may be brought about both in students and fellow teachers who, in turn, affect more students. Though his goal is behavioral change, changes in perception and attitude are prerequisite steps.⁸² To be an effective

⁷⁹Schmuck, Chesler and Lippitt, p. 59.

⁸⁰Ibid., p. 59.

⁸¹Calvin C. Nelson, "Affective and Cognitive Attitudes of Junior High School Teachers and Pupils," Journal of Educational Research, LVIII (October, 1964), 83.

⁸²David H. Jenkins and Ronald Lippitt, Interpersonal Perception of Teachers, Students and Parents (Washington, D.C.: Adult Education Service, National Education Association, 1951), p. 92.

change agent he can best attain learning goals by attaining group climate and interaction as has been described. Behaviors and characteristics developed by effective change agents are derived. Corey notes:

I suggest that no consultative relationship, irrespective of the technical skill of the consultant, can affect other than the simplest changes unless the consultant can listen, can ask valid questions, can be sensitive to their affect, and can induce the person seeking help to feel free to reveal the way he sees things. Possibly, the most important ingredients are mutual respect, genuine empathy on the part of the consultant, and trust on the part of the person seeking help.⁸³

It has been reported that students learned significantly more mathematics and social studies when taught by teachers who used more acceptance and clarification of student ideas and feelings as well as less direction and criticism. Students whose teachers used less acceptance and clarification and more direction and criticism learned less.⁸⁴

The teacher can help set a positive climate by demonstrating a real desire to understand views of his students and peers, by respecting their right to hold views different from his own, by encouraging others to work on the basis of what is right rather than who is right.⁸⁵ Competent teachers

⁸³ Corey, p. 73.

⁸⁴ John B. Hough, "Changing the Teacher's Instructional Behavior," Michigan Journal of Secondary Education, VII (Winter, 1966), 32.

⁸⁵ Peterson, p. 30.

must be accepting of their students and aware of the feelings of others in order to help solve group and individual problems.⁸⁶

The teacher, as a person, develops understanding for others, understandings of himself, and satisfying relationships through perceptive interaction with others in many situations. He grows by becoming aware of the strengths, weaknesses, needs and desires of others. In the light of this awareness he examines his own strengths, weaknesses, needs and desires.⁸⁷

Those who seem to know all the answers, need no additional data, and regard themselves as givers of information rather than as participants in the learning process tend to put others on the defensive.⁸⁸ In contrast, the defensiveness of others is decreased by communicating that one is willing to experiment with his own behavior, attitudes and ideas.⁸⁹

As teachers recognize emotional aspects of group behavior, individual anxieties and hidden motives, interpersonal threats and competition, problems of relations of leadership and authority, factors of individual involvement in groups, they will be better able to help classes become groups where the group task is individual

⁸⁶Paul Eberman, "Personal Relationships: One Key to Instructional Improvement," Educational Leadership, IX (October, 1951), 391-392; and Gordon L. Lippitt, pp. 29-30.

⁸⁷J. E. Nations, "The Teacher as a Person," Educational Leadership, XX (November, 1962), 103.

⁸⁸Rogers, pp. 276-277; and Gibb, "Defensive Communication," p. 148.

⁸⁹Ibid.

learning and where group forces of cohesion are exerted on the learning of each individual.⁹⁰

The competent teacher strives to increase his own sensitivity to existing situations and to feelings of others, and further develops his own flexibility to meet the demands of the particular needs within the situation.⁹¹ But perhaps most important is the awareness of himself, of his own strengths and weaknesses, of his own needs and blind spots.⁹²

Congruent with goals for effective teaching, Luft has itemized a number of reasons for the teacher's participation in laboratories designed to help him learn more about his own behavior in groups.

1. To take the time to explore the factors influencing the teacher's own motivation in learning and teaching.
2. To recognize the development and power of group norms.
3. To learn about social and personal obstacles to learning.

⁹⁰Leland P. Bradford, "The Teaching-Learning Transaction," Human Forces in Teaching and Learning (Washington, D.C.: National Training Laboratories, National Education Association, 1961), p. 9.

⁹¹Hough, p. 32.

⁹²Joseph Luft, Group Processes: An Introduction to Group Dynamics (Palo Alto, California: The National Press, 1963), p. 45.

4. To distinguish between surface appearance of groups and the covert life that may not be apparent, but still is highly important.
5. To learn more about the value of self-determination in groups.
6. To become more aware of the variety of leadership functions.
7. To recognize the teacher's power as a leader and the group's power toward their own members and toward the teacher.
8. To learn about the evolution of status and role within a classroom group.⁹³

Interactions between and among both students and teachers should serve to release rather than inhibit the creative capacities of all.⁹⁴ Instructors can be instrumental in the development of climates in which students and teachers are co-learners.⁹⁵ Imagination, openness to new experiences and honest willingness to experiment with new behaviors are basic ingredients to progress in teaching and learning.

⁹³Ibid., pp. 46-47.

⁹⁴American Association of School Administrators Commission, Imperatives in Education (Washington, D.C.: American Association of School Administrators, 1966), p. 50.

⁹⁵Hough, p. 33.

Summary

Research has accompanied laboratory training since its inception in the latter part of the 1940's. Some of this research has been directed toward evaluation of the crucial back-home situation, as has been related in this chapter. Some rather significant studies have been reported but design and procedural improvement can and must be made. That the development of such improvement is possible will be evident in the following chapter.

In order to utilize the findings of this study, it will be necessary for the reader to answer to his own satisfaction two basic questions. These are:

- In view of the data, have the perceived behavioral changes, if any, improved seminar instruction in the participants' classes? In which ways? To what degree?
- In view of the data, have the perceived behavioral changes, if any, influenced the relationships of the participants with their fellow educators, and thereby positively affected the potential and/or actual instructional behavior of these fellow educators? In which ways? To what degree?

Sections in this chapter on classroom climate and on behavior of instructional leaders serve as a perspective

from which the reader can evolve his own tentative answers to the stated questions.

In Chapter III, the design, sample, instruments and procedures will be discussed.

CHAPTER III

DESIGN OF THE STUDY

This study was designed to determine the perceived behavioral changes, if any, in personal and interpersonal competencies of secondary seminar instructors, and to measure their impact, if any, on the small group seminar learning environment. Predictors of such changes are also assessed for their potential reliability.

The Sample: Experimental and Control

Seventeen secondary schools in the United States were identified as utilizing the small group seminar as a medium for teaching. An unlimited number of qualified persons were solicited to apply for acceptance to the laboratory training workshop. A minimum of four applicants' names was requested from each school. Requirements to be met by applicants were:

1. Presently teach at least one small group seminar.
2. Intend to teach seminars at the same institution next school year.
3. Be willing and able to attend the workshop (all expenses paid).

Two participants from each of the seventeen schools were randomly selected from among the applicants' names. Two more names were randomly selected from among each schools' applicants to constitute the control group for the study. Of the thirty-four teacher-participants, thirty-two remained as experimental subjects in the study. Two were eliminated due to inability to meet all specified qualifications. Of the control group population, two were randomly eliminated from those schools in which the two eliminated workshop participant subjects taught. Two additional control subjects were lost; one due to illness and non-availability on the scheduled interview days, the other having left the school at which he had been teaching. Therefore, the final number of control group remains at thirty.

According to the random selection of experimental and control subjects, the age ranges and median ages fell as shown.

	<u>Experimental</u>	<u>Control</u>
Age Range	22 to 55	23 to 57
Median Age	30.0	30.5

The sex distribution is:

	<u>Experimental</u>	<u>Control</u>
Male	21	21
Female	<u>11</u>	<u>9</u>
Total	32	30

It is evident that neither age nor sex are significant variable factors in experimental-control comparison. Each group is composed of approximately two-thirds males and has a median age near thirty.

Interview Rationale and Methodology

Upon examination of previous studies and instruments which attempt to assess the behavioral results of a learning situation, it was decided that there were no objective instruments which effectively measure the sought-for outcomes of the laboratory training sessions with teachers.

Pre-post tests, even if they are directly applicable, present the drawbacks of sensitizing both experimental and control subjects to the measures.¹ Miles and Bunker separately reported studies of similar methodology in which unstructured self and peer descriptions were solicited by means of a written questionnaire. Some of the problems here were incomplete responses and poor personal communication, poorly controlled participant selection, and inadequate methods of selecting a control group and peer describers (selected by the participants themselves).²

¹Matthew B. Miles, "Learning Processes and Outcomes in Human Relations Training: A Clinical Experimental Study," Personal and Organizational Change through Group Methods: The Laboratory Method, eds. Edgar Schein and Warren G. Bennis (New York: John Wiley and Sons, 1965), p. 244.

²Douglas R. Bunker, "The Effect of Laboratory Education upon Individual Behavior," ibid., p. 256.

The interview was the method of data collection selected, since it was not necessary to contact huge numbers of subjects and describers. Disadvantages include:

1. The cost, in terms of time, effort and money, is great in comparison to other methods.
2. The categorization of data and neat statistical analysis is more difficult than with more objective types of instruments.
3. The perceptions which respondents relate to the interviewer may not reflect their true behavior.
4. It is difficult to demonstrate consistency and impartiality of the interviewer or interviewers.
5. The respondent may feel uncomfortable with an interviewer, therefore being less likely to relate information than he would be means of written response.³

Each of these disadvantages has been recognized and countered.

1. The greater burden of the monetary cost is borne by a foundation interested in educational innovation.⁴
2. Bunker developed a system of categorizing information directly relevant to the sought-for information.

³Robert M. W. Travers, An Introduction to Educational Research (New York: The Macmillan Company, 1964), pp. 229-232.

⁴Institute for the Development of Educational Activities, Kettering Foundation.

It is easily adaptable to interview data.⁵

3. It is true that the perceptions related by respondents may not reflect true behavior; to counter-balance this is one of the purposes of the control group. The same objection may also be rendered to other forms of measurement. [Also, the interview is the most accurate indicator of overt behavior.⁶]
4. One interviewer did all interviewing for the purpose of maximal consistency.⁷ A reliability study of these interviews has been completed (Table 3.2).
5. Should a respondent feel uncomfortable or forget to mention something which he considers significant, he is given the opportunity to follow up with a written response (Appendices F and G).

The interview method has particular advantages.

1. The interview serves to facilitate understanding, openness and free response, if the interviewer has the appropriate skill and personality. Questions concerning the purpose of the interview can easily be clarified.

⁵Bunker, pp. 259-260.

⁶Thomas C. McCormick and Roy G. Francis, Methods of Research in the Behavioral Sciences (New York: Harper and Brothers, 1958), p. 127.

⁷Ibid., pp. 133-134.

2. A far higher percentage of responses is gained than by other methods. Questionnaires are more often completed by those who have a particular interest in the outcomes of the study. In the case of this study, there were no refusals to an interview request.
3. Meanings can be clarified; i.e., if the interviewer is in doubt regarding the positive or negative quality of a statement or of the specific intention of the describer, he has the opportunity to seek a more meaningful description to facilitate categorical placement of data, if relevant. The respondent may also seek clarification from the interviewer.
4. The interviewer can proceed at a pace comfortable to the respondent. Questionnaires are often completed hurriedly and without adequate consideration of meanings.
5. More significant relevant data can be collected in a brief interview than by means of a long detailed questionnaire.⁸ Change and opinion regarding personal change seem to be most effectively assessed by the interview method.⁹

⁸ Travers, pp. 232-233.

⁹ McCormick, p. 127.

Several dilemmas became apparent in designing the interview. The first was whether to highly structure the format of the interview or to leave it relatively unstructured. In a highly structured interview, the respondent is more likely to receive clues as to the "right" type of response to a specific question and will tend to distort his responses in this direction. It has, however, the advantage of getting to desired types of information directly and quickly. In contrast, the results of unstructured interviews are more likely to deal with genuine perceptions, and relate the real responses of respondents thereby being more valid. This method has the disadvantages of taking more time, allowing the respondent to feel less secure and may result in the omission of valuable information which was simply forgotten during the interview situation.¹⁰

Following several trials, it was decided that the most desirable and effective method was to utilize both unstructured and structured formats during each interview. The time and energy of the interviewer were judged to be at a lower premium than the apparent increase in the validity of the study. The initial portion of the interview was unstructured to the degree that the respondent was given an introductory statement regarding the commonality of behavioral change of most persons over a period of time; that

¹⁰Ibid., p. 129.

change may be seen as good, bad, or indifferent; that it may be in some types of behaviors and not in others; that it may be seen as being of great or of little significance. However, it was also emphasized that there is probably a greater "core" of stability about an individual's behavior than there is of change; that it is of value and necessary to a person to be reasonably stable. The respondent was then asked to look at his own behavior (or that of the colleague whom he is asked to describe) one year previous to the present in comparison to now; whether and, if so, what kinds of stability factors are noteworthy about this person--good, bad, or indifferent--as well as what kinds of change factors have been operating during this period of time, if any.¹¹

The interviewer served as a clarifier, encourager and facilitator during the ensuing unstructured portion of the interview. Respondents were, however, given no further specific directions, other than a restatement of the original introduction or portions thereof, if so requested.

When respondents had nothing more to discuss regarding the directions set by the initiatory statement, the interviewer took a more directive position asking the subject to respond to each category on the checklist format.

¹¹See Appendix A for an outline of the interview procedure.

He was asked to state whether or not he perceived himself effective or ineffective in the named behaviorism; whether he sees himself as having been stable or changing on this dimension during the previous year's time; if change is noted, whether it is positive or negative (Appendices A and B).

At the conclusion of each interview, the person was given a brief stamped self-addressed questionnaire.¹² He was asked to include any information which he may have forgotten during the interview, if he so desired. Otherwise, he may discard the form. (Of all the interviews, only three forms were returned. Not one included relevant information beyond that obtained by means of the interview.)

A second dilemma in the design of the interview revolved about the use of a tape recorder. Advantages for its use include the possibility of having an interscorer reliability study completed, and that the interviewer need not use the checklist format for scoring purposes during the interview.¹³ A major disadvantage includes the probability that the recorder will tend to inhibit the candid reactions of some respondents. This dilemma was resolved by a candid

¹² See Appendices F and G for the introductory letters and forms of the Behavior Description Questionnaire.

¹³ John W. Best, Research in Education (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1959), pp. 168-169.

explanation at the beginning of each interview regarding the purposes of the recorder and uses of the tape; each person was promised anonymity with the exceptional purpose of checking the reliability of the interviewer's scoring; information on the tapes would be used only as data applicable to the checklist format. Each person was given the opportunity to request that the recorder not be used if he had any negative feelings about its presence. Thirty-nine per cent of the interviews were not recorded. Each of these was, with the permission of the respondent, scored on the checklist format during the interview.

The experimental and control groups were randomly chosen from the same qualified population. Peer describers of experimental and control subjects were chosen from among peer co-workers. These peers were randomly selected from a list of teachers who had worked closely with the subject, usually as a team or department member, over a period of at least one school year previous to the present year. Following a preliminary trial run of the total data collection procedure in an actual school situation, it was determined that an interview with one peer describer of each experimental and control subject would be the desirable and reasonable limit of interviews within the context of available scheduled time.

At each school, the following were the persons interviewed.

Two experimental subjects (laboratory participants)

Two peer describers of experimental subjects
(one for each experimental)

Two control subjects (without treatment)

Two peer describers of control subjects (one for
each control)

One principal.

Included in the original design of the study had been a provision for the assessment of behavioral changes of both experimental and control subjects as perceived by their common supervisor, the principal. Results of the trial run indicated that it is not feasible to utilize the structured portion of the interview in simultaneously noting the perceived behaviors of four other individuals. Therefore, the unstructured interview was the only method used in gaining principals' reactions.

Severe limitations are imposed on this portion of the study. It is the experience of the interviewer that principals talked almost exclusively about experimental subjects, by choice. Some of the reasons for this may have been:

1. Principals had been particularly cognizant of the experimentals' participation in the workshop and had made note of their behavior.

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2. Principals tended to desire to talk about experimental subjects but lacked motivation, beyond the rationale presented by the interviewer, to discuss behavior of selected controls.
3. Congruent with the previous statements, principals tended to have control subjects "categorized," without expectation of behavioral change. Such anticipation may have alerted principals to change in experimentals.
4. It is extremely difficult to discuss the behaviors of four different individuals during one interview. One subject of the interview, as done with subjects and peers, is the maximum recommended by the interviewer.

Interviews with supervisors (principals) do add some valuable information and perspective to the total study.¹⁴ As such, and with the limitations on experimental-control comparison as described, results shall be presented in the following chapter.

¹⁴Robert Tannenbaum, Irving R. Weschler and Fred Massarik, Leadership and Organization: A Behavioral Science Approach (New York: McGraw-Hill Book Company, Inc., 1961), p. 338.

Categorization System

The system devised by Bunker for the purpose of categorizing perceived change data evolved, originally, from a study directed by Miles who developed an open-ended questionnaire.¹⁵ This questionnaire was designed to gain information which begins to answer the question, "What are the durable effects of laboratory education upon individual performance and interaction in a work setting?"

Bunker used the same mailed questionnaire to gather data from 346 participants who had been involved in six different training laboratories in 1960 and 1961.

The focus of the inquiry was upon individual behavioral changes in the trainee's experience. The methods employed tended to tap those aspects of behavior which are most visible and interpersonally consequential.¹⁶

The scoring categories were developed by an inductive process from the information supplied by the respondents on the open-end, perceived change questionnaire. These categories were so developed by Bunker and experts in order to learn about the dimensions intrinsic to the descriptions. This argument, for validity, is that "the important discriminations are those made by people in the work settings

¹⁵Bunker, p. 258.

¹⁶Douglas Bunker, "Individual Applications of Laboratory Training," Journal of Applied Behavioral Science, I (April, May, June, 1965), 137.

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in which change is being assessed."¹⁷ Therefore, format permits respondents to use descriptive constructs that are both personally meaningful and organizationally relevant.¹⁸

A thorough study was completed by Valiquet on the content categories of Bunker's format. He notes that

These constructs or variables seemed intuitively to encompass the attitudinal and behavioral change goals of . . . openness, consensus, management of conflict, self control, distribution of influence, etc.--goals which hopefully would tend to reduce threat, build commitment and collaboration, and tap the full capacities of individuals and teams, thereby improving organizational effectiveness.¹⁹

The content categories, as constructed by Bunker, fall into three comprehensive sets: (A) overt behavioral changes, (B) inferred changes in insight and attitude and (C) global or non-specific changes. In addition to the thorough analysis on the content categories completed by Valiquet and the careful derivation of these by Bunker and his associates, the categories have been tested over a "lengthy period of time in a broad spectrum of organizational settings."²⁰ Bunker reports that all scoring was

¹⁷ Ibid., p. 138.

¹⁸ Michael Ian Valiquet, "Taken from: Contribution to the Evaluation of a Management Training Program," (unpublished dittoed copy, 1964), p. 1.

¹⁹ Ibid., p. 2.

²⁰ Ibid.

done without knowledge of the classification of the subject in order to avoid the "halo effect," yet that the agreement between independent scoring decisions of trained scorers exceeded 90 per cent.²¹

For the purpose of the present study, the entire Bunker format was adapted to accommodate a checklist design rather than to serve as the purely descriptive entity provided by Bunker.²² Scoring rules were maintained to coincide with Bunker, the exception being the differentiated weighting of the structured and unstructured interview portions. (See next section, Scoring of Interview Data.) Bunker included a third section to his categorization format, entitled "Global Judgements." Within this section were included the many non-specific and vague behavioral and gross changes in character mentioned on the written responses.²³ Results indicated that this category did not discriminate between experimental and control subjects.

Valiquet comments:

Much of this is probably due to a well-known research phenomenon. When respondents are asked to accommodate a researcher and wish to oblige, but have no specific or concrete behavioral referents on which to base their replies,

²¹Bunker, "Individual Applications of Laboratory Training, p. 138.

²²Compare Appendix B (checklist format) with Appendix C (Bunker's inductively derived categories).

²³Valiquet, p. 12.

they tend to furnish vague and global descriptions. In addition, it is likely that these global descriptions incorporate a large part of the "normal" or base rate of change and growth evident in most everyone.²⁴

Due to the nature of the interview, in contrast to written response, it was decided to omit the global category in the adapted checklist format of this study for three reasons.

1. Such global change references could most easily be ignored during the scoring of the unstructured portion of the interview.
2. The structured portion of the interview would demand response to specifics, making the global category useless.
3. This category has been demonstrated to lack discriminative powers.

Scoring of Interview Data

A point of value of (3) is given to any change noted within one of the given categories, if notated under the unstructured portion of the interview. A point value of (2) is ascribed to a response under the structured portion. Plus or minus scores are indicated, dependent upon whether the change is indicated as being for increase (+) or for decrease (-) in effectiveness. The scoring task involved

²⁴Ibid.

assigning each mention of a specific change to one of the content categories, which were defined sufficiently that this did not waste any data.²⁵

The minimal categorization problems noted by Bunker,²⁶ are of yet less concern in the interviewing situation. If the interviewer is in doubt regarding categorization, he can request further clarification of meaning of the respondent. Some useful guidelines are:

1. Scoring depends upon an explicit statement of qualitative or quantitative difference. Changes may be positive or negative, reflecting increases or decreases in quantity and greater or lesser utility.
2. When the cause of the change is not clear, give the subject the benefit of the doubt and record a change. For instance, changes in the objective situation may produce changes in individual behavior. Example:
 "She had a change of job which entailed more responsibility. She has assumed more responsibility." In this case it is quite possible that the change is purely a function of the change in jobs. However, this is not altogether clear. The workshop or other

²⁵Bunker, "The Effect of Laboratory Training upon Individual Behavior," (reprint copy: Proceedings of the Sixteenth Annual Meeting, Industrial Relations Research Association, December, 1963), p. 7.

²⁶Ibid.

treatment involved might have encouraged the subject to respond to the job change more productively. In general, in cases of this sort, the respondent should be given the benefit of the doubt.

3. Several illustrations of a single change should not be taken as separate changes, but scored as a single change. Example: "He is much more approachable. More friendly; you have the feeling you can really get to him." This should be scored as a single change.
4. Changes in the group or other persons with which the subject works should not be scored as changes. Example: "She is more accepted by the group now." This is not really a change in the subject, but reflects change in the attitude of the immediate social environment toward the subject. Such a change may, of course, have been a result of a change in the subject, but coding it as such involves unjustified speculation. If the describer had continued with the above example saying, "because she listens more," then a change would be coded.
5. When a subject or describer says, "tried to" or "attempted to," score a change. This assumes that such phrases as a weaker form of the verbs "to do" or "to accomplish." In any event, the attempt is itself a change and can be seen as a preliminary

step toward further changes. Example: "He has tried to listen more to subordinates on many occasions." This indicates a clear behavioral change, even though the describer is not indicating whether the attempt has been successful.²⁷

Interview Scoring Reliability

The scoring of interview data is a relatively simple task. The interviewer scored all interviews; those which were taped were scored following the completion of all interviews; those which were not taped were scored during the interview. Two other persons, one a high school student, the other a college undergraduate, were trained to score interview data from the tapes.

Twelve interviews, 9.7 per cent of all interviews, were randomly selected. The parameters of randomness were so constructed as to get three interviews from among the experimental subjects, three control subject interviews, three describers of experimental subjects and three describers of control subjects. These tapes were not identified for the scorer so that problems of the "halo effect" would not exist. Each scorer worked independently of the others.

The opportunity to score on any of the items in an interview is a 0, 2 or 3. Three chances per fifteen items

²⁷These guidelines were developed by Bunker and scorers Eric Knowles, Ethel Hutchings and Fritz I. Steele.

per interview totals forty-five chances per interview, or 540 chances for the twelve interviews selected (Table 3.1).

Table 3.1. Comparison of scores on the interview form

Comparison of Raters	Items of Disagreement	Per Cent of Agreement	Per Cent of Disagreement
A and B	20	96.3	3.7
A and C	11	98.0	2.0
B and C	15	97.2	2.8

The scores assigned by the three raters were computed for the correlation coefficient. The interscorer relationship was found to have correlation coefficients of .98, and greater (Table 3.2). The 96.3 to 98.0 per cent agreement compares favorably with the 90 per cent plus agreement between raters reported by Bunker on the written forms. The opportunity to gain clarification during the interview seems to have aided scoring reliability.

To establish validity in using Bunker's categorization format, it is necessary to demonstrate that the interview format is congruent with the content categories as developed by Bunker.²⁸ Since the content categories are

²⁸McCormick, p. 119.

Table 3.2. Correlation coefficients of total interview scores, based on three scorers^a

Scores			
Rater A	Rater B	Rater C	
30	30	30	
20	18	25	
36	35	33	
9	15	9	
2	4	4	r (A and B) = .980
0	0	0	r (A and C) = .981
7	5	7	r (B and C) = .9996
0	0	0	
2	7	6	
0	2	0	
3	3	3	
2	4	4	

^aThe Pearson r correlation coefficient, computed from raw scores was the statistical procedure used.

defined as by Bunker, it is unnecessary to further establish congruence of category definition. Validity has been demonstrated by Bunker through the development of content categories derived from the stated aspects of change of those who participated in training laboratories and of their describers. Juries of experts who are familiar both with learning theory and training results were also used. Effective use and adequate discriminative powers have been demonstrated.²⁹

²⁹Bunker, "The Effect of Laboratory Training upon Individual Behavior," p. 7.

Validity has been enforced by agreement of those interviewed in the trial run.³⁰ Each respondent, at the close of the interview, considered the questions to be highly relevant. For the purpose of consistency, all interviewing was done by the same person.³¹

Rationale for the Perceived Small Group Seminar Atmosphere (PSGSA) Instrument

Perceptions of selves, peers and of superiors (principals) are recorded by means of the interview method due to its advantages, as previously stated, over other methodologies. [It is, however, impossible to compare the perceived changes within the small group atmosphere by interviewing students who have, in nearly all cases, not been members of these teachers' classes both previous to and following treatment.]

It was considered important to gain the perspectives of students who are the primary recipients of the educational process. There is no better way to learn how students perceive their small group seminar than to ask for their judgments.³² An "ex post facto" assessment, based on

³⁰McCormick, p. 119.

³¹Ibid., pp. 133-134.

³²H. H. Remmers and N. L. Gage, Educational Measurement and Evaluation (New York: Harper and Brothers, 1955); and Stuart C. Tiedeman, "A Study of Pupil-Teacher Relationships," Journal of Educational Research, XXXV (May, 1942), 664.

a comparison with small groups led by the carefully devised control group subjects, was the only alternative within the prescribed situation. It has the disadvantage of forcing the assumption that, due to careful selection of the control subjects, there were no significant differences previous to the treatment. The same type of instrumentation does have the advantage of not sensitizing students to a pre-post instrument.³³

Numerous methodologies and instrumentations were examined, but those which have been demonstrated to have some degree of validity and reliability were either not relevant to the purposes of this study or demanded time, energy, and resources beyond the feasible scope of the situation. An example may be the direct observation of interaction in small groups led by all experimental and control subjects.³⁴

As with other fields of study having to do with interpersonal interaction, curiosity about issues outstrips methodological resources. Often the researcher is confronted with a choice between a well-established, tested instrument which has doubtful or tangential relevance to the laboratory situation, or a tailor-made but untested new instrument. There has been a tendency to utilize established, validated

³³ Miles, p. 244.

³⁴ John Whithall, "The Development of a Technique for the Measurement of the Social-Emotional Climate in Classrooms," Journal of Experimental Education, XVII (September, 1948-June, 1949), 358.

measures rather than to rely on homemade devices whose deficiencies may become apparent only after all the data have been collected. Yet . . . instruments must be developed specifically for the social context under study.³⁵

The decision was made to devise an appropriate instrument. Although objective rating devices are ostensibly more easily completed, scored and reported statistically, the incomplete sentence blank was the selected technique.³⁶

Suehr advantageously devised an instrument based on the incomplete sentence blank methodology to measure teacher morale.³⁷ Minzey developed a similar instrument to measure the morale of students toward school in general.³⁸ Major reasons for adoption of this technique, as expressed by Rotter, are:

1. There is freedom of response. The subject may respond in any way he desires.

³⁵ Dorothy Stock, "A Survey of Research on T Groups," T Group Theory and Laboratory Method: Innovation in Re-education, eds. Leland P. Bradford, Jack R. Gibb and Kenneth D. Benne (New York: John Wiley and Sons, Inc., 1964), p. 437.

³⁶ Irving R. Weschler, Robert Tannenbaum and John H. Zenger, "Yardsticks for Human Relations Training," Adult Education, VII (Spring, 1957), 166.

³⁷ John H. Suehr, "A Study of Morale in Education" (unpublished Ed.D. dissertation, University of Colorado, 1965).

³⁸ Jack D. Minzey, "A Study of the Relationship between Teacher Morale and Student Attitudes toward Their School Environment" (unpublished Ed.D. dissertation, Michigan State University, 1967).

2. Some disguise in the purpose of the test is present. Although the subject may be aware of the general intent, what constitutes a "good" or "bad" answer is not readily apparent to most subjects.
3. Group administration is relatively efficient. Most incomplete sentences tests can be given to a group of any size without apparent loss of validity.
4. No special training is ordinarily necessary for administration. Interpretation depends on the examiner's general clinical experience, although the examiner does not need specific training in the use of this method.
5. The sentence completion method lends itself easily to objective scoring for screening or experimental purposes.
6. The time for administration tends to be shorter than for most tests and the time for scoring tends to be shorter than for most projective techniques.
7. The method is extremely flexible in that new sentence beginnings can be constructed or "tailor made" for a variety of clinical, applied and experimental purposes.³⁹

³⁹ Julian B. Rotter and Janet B. Rafferty, Manual: The Rotter Incomplete Sentences Blank, College Form (New York: The Psychological Corporation, 1950), p. 4.

Major disadvantages are:

1. Although susceptible to semi-objective scoring, it cannot be machine scored and requires general skill and knowledge of personality. . . .
2. There is not as much disguise of purpose as in other projective methods. A sophisticated subject may be able to avoid revealing that which he wishes to hide.
3. Insufficient material is obtained in some cases, particularly from illiterate, disturbed or uncooperative subjects.⁴⁰

Development of the PSGSA

Construct validity was used in the development of the sentence-stem morale forms developed by Suehr and Minzey. Bryan contends that there is no higher authority than the judgment of students regarding the validity of an instrument designed to elicit student responses.⁴¹ He does also agree that the judgment of experts is helpful in the determination of construct validity.⁴²

⁴⁰Ibid.

⁴¹Roy C. Bryan, "Pupil Rating of Secondary School Teachers," Bureau of Publications, Teachers College, Columbia University, 1937, p. 38.

⁴²H. H. Remmers, "Rating Methods in Research on Teaching," Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally and Company, 1963), p. 331; and Best, p. 252.

Two secondary school students, one high school teacher and the researcher together developed twelve sentence-stem items which were agreed upon by all as being relevant and likely to elude desired information. The original instrument was brief, for it was found by the committee that additional items tended to elicit repetitious types of responses, and may tend to require more time for completion than necessary.

The list was given to twelve secondary students, two teachers, one principal and one administrative intern. These people were given a brief explanation pertaining to the purpose of their participation and of the instrument; i.e., that it is being constructed to measure the attitudes of secondary students toward a small group seminar of which they are members. They were asked to

- A. Carefully read each item. Note whether
 1. a student member of a small group seminar would normally be able to respond to the item.
 2. the item tends to elicit the student's attitude toward the small group seminar.
 3. the item tends to elicit new information, in respect to the other items, thereby contributing to a more complete picture of the small group seminar atmosphere.
- B. Accept items which meet the above-named criteria. Reject items which do not meet any one or more of the criteria.
- C. Add any items which would render a more accurate assessment of the students' attitude toward the small group seminar.

Results were compiled. Two items were deleted because it was agreed that they repeated two comparable items also included. No additional items were suggested.

The ten item sentence stem questionnaire was administered to a random sample of twenty students, grades nine through twelve, who were members of specified small group seminars in the trial run school. Following administration of the instrument (Appendix J), the students' opinions were elicited regarding each item; whether or not the item is relevant and easy to understand. There were no rejections. Upon scoring of this trial run administration, it was found that each of the remaining ten items discriminated to the degree that every item had at least one rating at either extreme of the five point scale. Satisfactory discrimination was interpreted to mean that there was a skewness no greater than to accept only one of the extreme categories without tabulations.

The PSGSA instrument was checked for reliability. There are at least three methods of computing reliability coefficients on tests. One is a test-retest method. Another is a parallel form method.⁴³ The test-retest method was inappropriate for the PSGSA which has only ten items. It would probably be remembered by subjects and thereby tend

⁴³ N. M. Downie and R. W. Heath, Basic Statistical Methods (New York: Harper and Brothers, 1959), pp. 191-193.

to affect the results. Another disadvantage is that, over a larger time lapse, the small group seminar atmosphere may, in fact, have changed, thus further invalidating results of the reliability study. The parallel form method was inappropriate for no form with comparable items has been developed. An adaptation of the split-half method was utilized.⁴⁴ The normal procedure is to split the form randomly into two halves, often on odd-even numerical bases. Since the PSGSA form consists of only ten items it was necessary to split it by logically pairing items, based on the structure of the sentence stem and the content of information requested.⁴⁵ In this case, items numbered 1, 2, 4, 6 and 7 were paired with items 3, 5, 8, 9 and 10. When the scores on one-half the test were correlated with the scores on the other half, the reliability of the half test was obtained. From this coefficient, the reliability of the entire test was estimated by the Spearman-Brown formula.⁴⁶ The reliability of the PSGSA, based on a sample of thirty forms, is .79 (Table 3.3). Since "the reliability of a test is directly related to the length of the test,"⁴⁷ the Spearman-Brown

⁴⁴Ibid.; and Travers, pp. 186-187.

⁴⁵C. C. Ross, Measurement in Today's Schools (New York: Prentice-Hall, Inc., 1947), p. 244.

⁴⁶Downie, p. 193.

⁴⁷Ibid.

Table 3.3. Reliability of the PSGSA instrument by the Spearman-Brown method^c

Scores		
Group A ^a	Group B ^b	
4	5	
14	12	
6	2	
16	10	
7	8	
10	13	
14	14	
24	15	
12	12	$r = .65$
4	7	
9	8	reliability = .79
3	7	
4	9	
9	12	
18	7	
11	12	
12	15	
7	6	
5	14	
4	3	
22	17	
16	14	
9	13	$c \ r_{tt} = \frac{Nr}{1 + (N-1)r} =$
6	6	
10	11	
18	20	$\frac{2(.79)}{1 + .79} = .88$
5	11	
13	13	
12	8	
15	19	

^aComposed of items 1, 2, 4, 6, 7.

^bComposed of items 3, 5, 8, 9, 10.

^cBased on the Spearman-Brown prophecy formula, a comparable instrument of twenty items will have a reliability of .88.

prophecy formula was developed to predict the reliability of the same test if it were extended in length. Based on this formula, should the PSGSA be lengthened ten more comparable items, its reliability will be .88 (footnote c, Table 3.3).

Administration of the PSGSA

The names of all students who had an experimental or control subject as an instructor in a small group seminar were compiled and assigned numbers. For each experimental and control subject, five students' names were selected by a table of random numbers.⁴⁸ Each of these students completed the PSGSA following a brief introduction, orientation and practice session with the researcher. Groups of from one to twenty were simultaneously accommodated. Particular efforts were made to develop a relaxed atmosphere for the student; to emphasize that his real feelings and attitudes were the desired responses; and that all responses would be treated anonymously. Students' names were not placed on the form. They were asked to fold the completed form into a blank envelope upon which they were asked to write the last name of the teacher who was instructor of the small group to which he/she was responding. This was done to identify

⁴⁸Tiedeman, p. 664; Keith C. Hudson, "Pupil Expectations of Teacher Behavior as a Possible Influence upon Pupil Ratings of Teacher Effectiveness" (unpublished Ph.D. dissertation, The Florida State University, 1964; and Bryan, p. 38.

experimental or control group responses. No time limits were set. If there were absences, these were noted and different students were randomly selected from the same instructor's small group seminar lists.

Scoring the PSGSA

Scoring an incomplete sentence blank instrument is considerably less difficult than it would first appear. Following adequate instructions and the development of a basic manual, intelligent people with teaching-learning experience should correlate highly in their scoring.⁴⁹ Both Suehr (.98) and Minzey (.99) reported high interscorer correlations on their respective teacher and student morale forms.⁵⁰

All completed PSGSA forms were placed together, identified only on the back sides so that they could again be separated following scoring. This was done in order to avoid scorer bias. The original scoring of all PSGSA forms was done by the researcher. Each item was rated according to the following scale:

- 0 - highly positive statement
- 1 - slightly positive statement
- 2 - neutral statement
- 3 - slightly negative statement
- 4 - highly negative statement.⁵¹

⁴⁹Suehr, p. 112.

⁵⁰Ibid.; and Minzey, p. 102.

⁵¹See Appendix K for more detailed instructions.

To check the reliability of the student instrument, three raters independently scored twenty-six randomly selected PSGSA instruments. Thirteen of these were completed by experimental subjects' students and thirteen by control subjects' students. The three scorers were one high school student, one undergraduate college student and one doctoral candidate in education.

Never was an item rated positive by one scorer and negative by another. Never did a rater differ by more than one interval from the other raters. On the 260 items rated by each of the three scorers, the number of items disagreed on ranged from seven to thirteen; the per cent of agreement ranged from 95.0 per cent to 97.3 per cent (Table 3.4). Correlations between scorers were .996, .997 and .998 (Table 3.5).

Table 3.4. Comparison of scores on the PSGSA instrument

Comparison of Raters	Items of Disagreement	Per Cent of Agreement	Per Cent of Disagreement
A and B	13	95.0	5.0
A and C	7	97.3	2.7
B and C	13	95.0	5.0

Table 3.5. Coefficient of correlation of three different scorers of the PSGSA instrument^a

Scores			
Rater A	Rater B	Rater C	
18	17	18	
12	12	12	
21	21	21	
13	14	13	
14	14	14	
27	27	28	
33	33	32	
0	0	0	
6	6	6	
8	8	8	
1	2	1	r (A and B) = .997
22	20	21	r (A and C) = .998
20	20	20	r (B and C) = .996
25	25	26	
16	16	16	
27	27	27	
14	13	14	
7	8	7	
18	17	17	
17	17	17	
19	19	17	
27	28	27	
4	4	4	
3	3	3	
8	9	8	
21	20	20	

^aThe Pearson r correlation coefficient formula, computed from raw scores, was used.

The Prediction of Behavioral Change

No objective instruments are known to effectively predict behavioral changes in T group laboratory subjects. None of the instruments used by Miles seemed to demonstrate reliability.⁵² He found that the most accurate single predictor was the amount of learning in the laboratory situation itself, as measured by trainer ratings.

On the last day of the laboratory session, participants were asked to predict the comparative degree of behavioral change of all members of their T group, including their own names. This was done by placing in rank order, from most positive change in the back-home situation to least change, the participants' prediction regarding each member of his group (Appendix H). Trainers completed the same form, excluding their own names (Appendix I).

Predictions shall be compared to data on perceived behavioral changes in the back-home situations. Predictions by the participants themselves shall be compared, in terms of reliability, with the predictions of the total group, and the predictions of the trainers⁵³ (Chapter IV).

⁵²Miles, "Human Relations Training: Processes and Outcomes," p. 305.

⁵³I. Chein, "The Logic of Prediction: Some Observations of Dr. Sarbin's Exposition," Psychological Review, LII (1945).

Summary

The purpose of this chapter has been to describe the design and procedures used in the study. The experimental population were randomly chosen from among small group seminar teachers in seventeen innovative secondary schools in the United States. The control population was randomly selected from the same population with equal criteria. The control group received no treatment.

Using Bunker's behavioral categorization format as a basis, a relatively unstructured interview, concluded by a structured format, was the medium devised to assess the perceived behavioral changes in the back-home situation. The persons interviewed (five to six months following treatment) relative to each laboratory training participant were: (1) the experimental subject, (2) a randomly selected co-worker, (3) the control subject, (4) a randomly selected co-worker of the control and (5) the principal in the school. The ability of principals to discuss their perceptions of four teachers was limited, therefore necessitating the placement of unique limitations upon this aspect of the study.

The lowest of three interscorer correlations on the taped interviews was .98. The percentage of agreement ranged from 96.3 to 98.0.

A ten item sentence stem questionnaire, the Perceived Small Group Seminar Atmosphere (PSGSA) instrument, was developed on the basis of construct validity. The

Spearman-Brown method measured its reliability at .79. This instrument was completed by a random selection of five seminar students of each experimental and control subject.

Twenty-six PSGSA forms were rated by three scorers. The percentage of agreement ranged from 95.0 to 97.3. Correlations were .996, .997 and .998.

Predictors of behavioral change were collected by means of relative ranking of T group members on the last day of the laboratory session. Rankings were completed by all participants and trainers. Reliability of relative predictive powers of the participant himself, of the total group and of the trainer are comparable to the perceived behavioral changes as assessed by the interview method.

CHAPTER IV

ANALYSIS OF THE DATA

The problem of assessing the influence of laboratory training upon the perceived behavioral change of secondary school seminar instructors was approached by means of four major hypotheses. For the purpose of data analysis, all hypotheses and subhypotheses were stated in the null form in contrast to the directional statements in Chapter I.

Alpha, the level of significance, is set at .025. Hypotheses 1, 2 and 3 are analyzed primarily by means of the t test.¹ The t test and rank order correlation are used for the examination of Hypothesis Four.

Hypothesis One

H_{01} The mean perceived behavioral change of the experimental group shall not differ significantly from that of the control group.

This hypothesis has been divided into four sub-hypotheses. A statement of the first of these is:

¹Donald J. Campbell and Julian C. Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally Company, 1963), p. 26.

^sH₀₁ The mean perceived behavioral change of the experimental group shall not differ from that of the control group, as reported by self descriptions.

Behavioral change, as perceived and reported in interviews with the thirty-two experimental subjects and the thirty control subjects, has been analyzed. The mean change score of the experimental group is 21.25 in contrast to a mean of 4.93 for the control group. The null hypothesis is strongly rejected on the basis of the t test; there is a significant difference between experimental and control subjects as they perceive their own behavioral change (Table 4.1).

Table 4.1. Significance of self, peer, principal and composite interview scores

Respondent	Group	Mean	N	d.f.	t.025	t	Accept Null Hypothesis?
Self (Subhyp.1)	E	21.25	32	60	2.000	9.802	No
	C	4.93	30				
Peer (Subhyp.2)	E	10.61	31	59	2.001	5.786	No
	C	1.30	30				
Principal (Subhyp.3)	E	8.08	26	50	2.008	5.281	No
	C	0.00	26				
Composite (Subhyp.4)	E	13.70	89	173	1.974	9.923	No
	C	2.17	86				

^SH_O₂ The mean perceived behavioral change of the experimental group shall not differ significantly from that of the control group, as reported by peer descriptions.

A random sample of peer teachers of the experimental and control subjects reported their perceptions of behavioral change regarding their colleagues. The results (Table 4.1) include a mean change score of 10.61 for the experimental group, and 1.30 for members of the control group. The null subhypothesis is rejected at the .025 level of significance.

^SH_O₃ The mean perceived behavioral change of the experimental shall not differ significantly from that of the control group, as reported by principal descriptions.

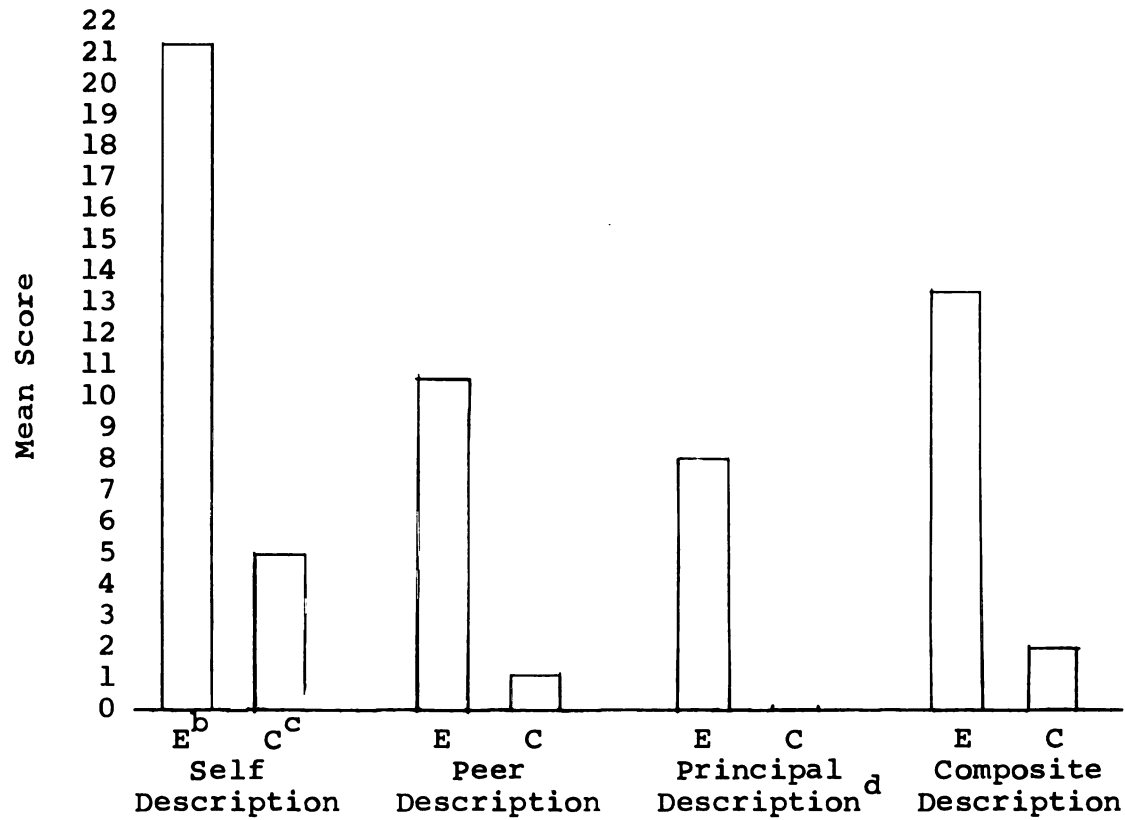
Despite the expressed limitations (see Chapter III) placed upon this portion of the data collection, it is noteworthy that principals noticed and expressed change in only experimental instructors. The null hypothesis is rejected. A mean perceived change score for experimental subjects is 8.08 in contrast to 0.00 for the control subjects (Table 4.1).

^SH₀₄ The mean perceived behavioral change of the experimental group shall not differ significantly from that of the control group, as reported by composite change descriptions.

Combining the scored perceptions of the experimental subjects and of the control subjects with their respective peer and principal describer scores, composite change scores were obtained for each group. On the basis of these data, a mean score of 13.70 was attained for the experimental group, and a mean score of 2.17 for the control subjects. The t test indicates a rejection of the null hypothesis at an extremely high level of confidence (Table 4.1). The comparative data are significant.

Results of the four subhypotheses of Hypothesis One indicate that the null form of this major hypothesis has been rejected. Laboratory training participants themselves, their peer co-teachers, and the respective principals of these same subjects indicate a highly significant change in laboratory training participants as they function in the job situation, as contrasted to untreated control subjects.

The graph on Table 4.2 visually describes the results. Note that subjects themselves perceive the greatest change, principals perceive the least and the reports of peer co-workers are intermediary. This is true of both experimental and control subjects and of their describers.

Table 4.2. Visual comparison of mean total change scores^a

^aIncludes data from Hypothesis 1, Subhypotheses 1, 2, 3, 4.

^bExperimental group.

^cControl group.

^dPrincipal descriptions are based on unstructured interview scores only. There were no responses for the control group.

Hypothesis Two

H₀₂ The mean perceived behavioral change of the experimental group shall not differ significantly from the control group on the scores of any individual categories of change, according to composite categorical ratings.

Composite categorical ratings were obtained by finding the mean score of self and peer ratings in each descriptive category. Principal ratings were not included in order to avoid the possible bias of less reliable data (Chapter III).

With Alpha set at .025, the null hypothesis is rejected in the case of fourteen of the fifteen descriptive categories (Table 4.3). The lone exception is category A-6, Self-Control. The mean score of the experimental group is 1.25 compared to .47, but the difference is not significant at the .025 level.

The levels of significant difference, according to the t test, are extremely high on:

- B-2 Sensitivity to Group Process
- B-1 Awareness of Behavior
- B-3 Sensitivity to Others
- A-1r Receiving Communication.

Placed in rank order (Table 4.4), it is noteworthy that the mean score of the lowest item (A-6) of the experimental group exceeds the highest mean score of the control group (A-5).

Table 4.3. Mean score and significance results of total change interview scores, by categories^a

N (experimental) = 32 N (control) = 30		d.f. = 60 alpha (.025) = 2.000			
Category	Group	Mean	t	Accept Null Hypothesis?	
A-1s	Sending Communi- cation	E 2.63 C .67	3.960	No	
A-1r	Receiving Commu- nication	E 2.56 C .43	5.900	No	
A-2	Relational Facil- ity	E 2.38 C .37	4.188	No	
A-3	Risk Taking	E 1.59 C .50	3.100	No	
A-4	Increased Inter- dependence	E 1.66 C -.13	4.945	No	
A-5	Functional Flex- ibility	E 2.19 C 1.13	2.725	No	
A-6	Self Control	E 1.25 C .47	1.931	Yes	
A _{total}	Overt Operational Changes	E 14.41 C 3.43	7.224	No	
B-1	Awareness of Behavior	E 3.13 C .53	6.701	No	
B-2	Sensitivity to Group Process	E 2.31 C .23	7.564	No	
B-3	Sensitivity to Others	E 2.72 C .17	6.130	No	
B-4	Acceptance of Others	E 2.06 C .37	4.194	No	
B-5	Tolerance of New Information	E 1.63 C .03	4.970	No	
B-6	Confidence	E 2.47 C .90	3.326	No	
B-7	Comfort	E 1.66 C .17	3.942	No	
B-8	Insight into Self and Role	E 2.03 C .33	4.582	No	
B _{total}	Inferred Changes in Insight and Attitudes	E 17.22 C 2.40	9.913	No	

^aTotal change score includes self and peer ratings.

Table 4.4. Rank order of total change interview scores,
by categories

Experimental			Control	
Rank	Item	Mean Score	Item	Mean Score
1	B-1	3.13	A-5	1.13
2	B-3	2.72	B-6	.90
3	A-1 _s	2.63	A-1 _s	.67
4	A-1 _r	2.56	B-1	.53
5	B-6	2.47	A-3	.50
6	A-2	2.38	A-6	.47
7	B-2	2.31	A-1 _r	.43
8	A-5	2.19	A-2	.37
9	B-4	2.06	B-4	.37
10	B-8	2.03	B-8	.33
11	B-7	1.66	B-2	.23
12	A-4	1.66	B-3	.17
13	B-5	1.63	B-7	.17
14	A-3	1.59	B-5	.03
15	A-6	1.25	A-4	-.13
1	B	17.22	A	3.43
2	A	14.41	B	2.40

Mean scores on the sum of B items exceed the mean scores on the sum of A items in the experimental group. Conversely, mean scores on the sum of A items exceed the mean scores on the sum of B items in the control group. This factor indicates that changes were noted more frequently as inferred internal behavioral changes (B) among the experimental group members, as contrasted to overt external behavioral changes (A). Of those notations of behavioral change of control group members, overt external behavior was more frequently mentioned.

The range of experimental group mean scores was 1.25 to 3.13. The control group mean scores ranged from -.13 to 1.13. The control group negative score on Increased Interdependence reflects that perceived negative changes exceeded positive changes.

An analysis of the differences (by categories and by describers) between experimental and control group proportions of subjects reported as changed reveals that the three greatest differences (Table 4.5) are:

Self Perception

B-2	Sensitivity to Group Process	(.65)
B-3	Sensitivity to Others	(.62)
B-1	Awareness of Behavior	(.61)

Peer Perception

A-1s	Sending Communication	(.44)
B-1	Awareness of Behavior	(.37)
B-3	Sensitivity to Others	(.34)

Table 4.5. Differences in proportions of subjects reported as changed, by scoring category

Cate- gory	Proportions Perceived as Changed								
	Self E	Perception C	Diff. ^a	Peer E	Perception C	Diff.	Prin. E	Perception C	Diff.
A-1s	.594	.300	.294	.469	.033	.436	.192	.000	.192
A-1r	.750	.268	.482	.375	.067	.308	.192	.000	.192
A-2	.625	.133	.492	.281	.133	.148	.115	.000	.115
A-3	.500	.133	.367	.219	.133	.086	.154	.000	.154
A-4	.500	.033	.467	.156	.100	.056	.154	.000	.154
A-5	.563	.300	.263	.469	.200	.269	.385	.000	.385
A-6	.469	.133	.336	.188	.133	.055	.154	.000	.154
B-1	.844	.233	.611	.438	.067	.371	.269	.000	.269
B-2	.719	.067	.652	.344	.033	.311	.231	.000	.231
B-3	.688	.067	.621	.406	.067	.339	.346	.000	.346
B-4	.563	.167	.396	.250	.067	.183	.077	.000	.077
B-5	.375	.033	.342	.125	.067	.058	.077	.000	.077
B-6	.688	.267	.421	.375	.100	.275	.154	.000	.154
B-7	.500	.133	.367	.156	.067	.089	.039	.000	.039
B-8	.563	.133	.430	.344	.067	.277	.154	.000	.154
	N = 32			N = 30			N = 26		

^aDiff. = difference, derived by subtracting the proportion of control perceived changes from experimental perceived changes.

Principal Perception

B-3	Sensitivity to Others	(.35)
B-1	Awareness of Behavior	(.27)
B-2	Sensitivity to Group Process	(.23)

There is a high degree of agreement that items B-1, B-2 and B-3 differentiate between the experimental and the control groups most in terms of number of subjects perceived as changed. Item A-1s, an improvement in the ability to send meaningful communication, was most frequently differentiated between experimental and control subjects by peer describers (.44).

Negative notations of perceived behavioral change were subtracted from total positive scores in the itemization of total change scores. These scores do not, however, indicate the amount of perceived negative change as compared to positive change. Nine mentions of negative change were scored for experimental group subjects. Fifteen such notations were made for control subjects (Table 4.6). Of all mentions of change within specific categories, the range for the experimental group was from .00 to .08; the range for the control group was from .00 to .75. Item A-4, Increased Interdependence, was mentioned as having changed for only four control group members. Three of these were perceptions of negative changes. Experimental group total negative change proportions are .02; control group total negative change proportions are .13.

Table 4.6. Mentions of negative change as a proportion of all mentions, by categories

Category	Total Change Mentions		Negative Mentions		Proportion Negative	
	E	C	E	C	E	C
A-1s	39	10	1	1	.03	.10
A-1r	41	10	0	2	.00	.20
A-2	33	8	2	2	.06	.25
A-3	27	8	1	0	.04	.00
A-4	25	4	0	3	.00	.75
A-5	43	15	0	0	.00	.00
A-6	25	8	2	1	.08	.13
B-1	48	9	0	1	.00	.11
B-2	40	3	0	0	.00	.00
B-3	44	4	1	1	.02	.25
B-4	28	7	0	1	.00	.14
B-5	18	3	0	1	.00	.33
B-6	38	11	2	0	.05	.00
B-7	22	6	0	2	.00	.33
B-8	<u>33</u>	<u>6</u>	<u>0</u>	<u>0</u>	<u>.00</u>	<u>.00</u>
Total	504	112	9	15	.02	.13

Since the interview technique utilized both unstructured and structured interview sections, it is interesting to note that 42 per cent of all experimental group notations were obtained by means of the unstructured methodology, whereas this was true of 31 per cent of all control group notations of Change (Table 4.7). Seven of the fifteen categories equaled or exceeded 50 per cent of all change notations as being unstructured, unprompted responses regarding members of the experimental group. This was true of three of the fifteen categories regarding control group subjects. The experimental group range extended from 12 per cent unstructured responses to 66 per cent. Control group unstructured responses ranged from 10 to 60 per cent.

Not only was there a larger number of total responses (236) regarding experimental subjects' behavioral changes, but there was a higher proportion of "spontaneous" mentions of specific changes.

In response to Hypothesis Two, the data overwhelmingly demonstrate that it is necessary to reject the null hypothesis at the .025 level on each of the fifteen categories, except one. Category A-6, Self-Control, does not reject the possibility that the differentiated data are due to chance.

Table 4.7. Mentions of unstructured change as a proportion of all mentions, by categories

Category	Total Change Mentions		Unstructured Mentions		Proportion Unstructured	
	E	C	E	C	E	C
A-1s	34	10	20	6	.59*	.60*
A-1r	36	10	10	1	.28	.10
A-2	30	8	19	2	.63*	.25
A-3	23	8	9	1	.39	.13
A-4	21	4	11	2	.52*	.50*
A-5	33	15	4	4	.12	.27
A-6	<u>21</u>	<u>8</u>	<u>6</u>	<u>2</u>	<u>.29</u>	<u>.25</u>
A	198	63	79	18	.40	.28
B-1	41	9	22	2	.54*	.22
B-2	34	3	6	1	.18	.33
B-3	35	4	23	1	.66*	.25
B-4	26	7	13	3	.50*	.43
B-5	16	3	5	1	.31	.33
B-6	34	11	16	5	.47	.45
B-7	21	6	11	3	.52*	.50*
B-8	<u>29</u>	<u>6</u>	<u>7</u>	<u>1</u>	<u>.24</u>	<u>.17</u>
B	<u>236</u>	<u>49</u>	<u>103</u>	<u>17</u>	<u>.44</u>	<u>.35</u>
A + B	434	112	182	35	.42	.31

*50 per cent or more of total responses were recorded during the unstructured portion of the interview.

Hypothesis Three

H₀₃ The small group seminar atmosphere, as perceived by experimental group instructors' students, shall not differ significantly from the small group seminar atmosphere perceived by students of the control group instructors.

On the ten item Perceived Small Group Seminar Atmosphere instrument 135 students of experimental instructors and 127 students of control instructors scored, respectively, means of 13.82 and 17.93. Scores on each item ranged from 0, the highest score, to 4, the lowest score. The null hypothesis of no difference between groups is rejected at alpha .025 with a high degree of confidence (Table 4.8).

Analysis of experimental and control mean scores on the PSGSA reveals that the difference between the scores on separate items is significant at the .025 level on items 3, 4, 5, 6, 7, 8, 9 and 10. Although mean scores of the experimental group are lower (more favorable) on items 1 and 2 (Table 4.8) than are scores of the control group, the differences are not significant at .025. Since the first and second stems,

1. This class _____.
2. The things I learn _____.

Table 4.8. Mean score and t test results of the PSGSA^a administration, by individual items

Item	Group	Mean ^b	t.025	t	Accept Null Hypothesis?
1. This class....	E C	1.38 1.54	1.970	1.019	Yes
2. The things I learn....	E C	1.27 1.57	1.970	1.961	Yes
3. The teacher thinks I am....	E C	1.59 1.86	1.970	2.160	No
4. To get along well in this group, you have to....	E C	1.26 1.85	1.970	4.683	No
5. The amount of trust our teacher show us....	E C	.99 1.59	1.970	4.000	No
6. Working with others in this class is....	E C	.93 1.36	1.970	2.774	No
7. If only our teacher....	E C	1.92 2.28	1.970	2.748	No
8. We are expected to....	E C	1.43 1.86	1.970	3.839	No
9. The other students in this class....	E C	1.31 1.93	1.970	4.429	No
10. I don't....	E C	1.73 2.09	1.970	2.553	No
Total	E C	13.82 17.93	1.970	4.509	No

d.f. = 260

N = 135 Experimentals, 127 Controls

^aPerceived Small Group Seminar Atmosphere instrument.

^bThe lower mean is the more positive score.

may easily steer the student toward a more cognitive orientation than the next several which force the student into an affective orientation,

3. The teacher thinks I am _____.
4. To get along well in this group, you
have to _____.
5. The amount of trust our teacher shows
us _____.

it would be interesting to use the same instrument with items 1 and 2 placed in different positions.

Items of significance at alpha .025 with the highest level of confidence were:

4. To get along well in this group, you
have to _____.
9. The other students in this class _____.
5. The amount of trust our teacher shows
us _____.

This is an indication that seminar students of experimental instructors had a particularly favorable attitude toward interaction with other students. They tended to have a feeling of "groupness," of belongingness. They also perceived a far greater amount of trust toward themselves by the experimental teachers.

The placement of items into rank order by mean scores reveals that there is more agreement than disagreement

between experimental and control instructors' students regarding areas which they perceive as being positive and negative in their small group seminar atmosphere (Table 4.9). In both cases item 6 was ranked highest and item 7 lowest. Mean scores ranged from 0.93 to 1.92 on the experimental responses, and 1.36 to 2.28 on the control responses.

Table 4.9. Rank order of PSGSA response items

Rank	Experimental Instructors' Student Responses		Control Instructors' Student Responses	
	Item	Mean Score	Item	Mean Score
1	6	0.93	6	1.36
2	5	0.99	1	1.54
3	4	1.26	2	1.57
4	2	1.27	5	1.59
5	9	1.31	4	1.85
6	1	1.38	3	1.86
7	8	1.43	8	1.86
8	3	1.59	9	1.93
9	10	1.73	10	2.09
10	7	1.92	7	2.28

The Perceived Small Group Seminar instrument does significantly differentiate between responses of experimental and control instructors' students. Item analysis by t test shows that the first two items do not differentiate at alpha .025, but items 3 through 10 do so differentiate.

Hypothesis Four

H₀₄ There is no significant difference between the predictive power of the participant, of the total T group and of the trainer of the T group as measured by means of rank order predictions of positive change correlated with rank order of composite change scores.

By placing the total change scores of each experimental participant into rank order relative to other participants in his sensitivity training group, it was possible to examine the rank order of predicted changes with the actual perceived behavioral changes of the participants.

A mean rank order correlation of .45 indicates that the participant himself has some idea of the degree to which he will change in the back-home situation as compared to other members of his group (Table 4.10).

The total group, as a unit, had a slightly higher mean correlation of .55. The mean rank correlation of .03 indicates that the trainer is least capable of accurately

Table 4.10. Predictive power of individual participants, of total groups and of trainers

	Change Score	Self Prediction	Group Prediction	Trainer Prediction
Group I	6	5	5	7
	1	2	2	4
	5	4	6	6
	7	8	8	8
	2	7	3	2
	4	2	1	3
	3	4	4	1
	8	7	7	5
p =		.5655	.8095	.6905
Group II	1	6	8	7
	6	1	2	2
	7	5	7	5
	8	4	6	3
	4.5	3	3	6
	3	1	1	8
	4.5	6	5	4
	2	1	4	1
p =		.0536	.0536	-.4821
Group III	5	5	6	5
	2	1	2	6
	7	7	7	7
	4	1	1	1
	1	2	3.5	3
	3	6	3.5	2
	6	5	5	4
p =		.6250	.6875	.3929
Group IV	7	7	7	5
	3	6	1.5	6
	1	3	4	4
	4	3	1.5	2
	2	3	3	7
	5	6	6	1
	6	3	5	3
p =		.5536	.6339	-.4821
4 groups' Sum (p)		1.7978	2.1845	.1192
Mean (p)		.4495	.5461	.0298
Mean (p)		.45	.55	.03

predicting the relative back-home change of participants in his group.

An analysis of separate groups shows that two trainers' predictions had a negative correlation with scored behavioral changes (Groups II and IV) whereas the other two trainers had positive but differing correlation scores (Group I, .6905 and Group III, .3929). Further analysis of Table 4.10 reveals that predictions of Group II members have a consistently low correlation (self-rating = .0536; group rating = .0536; and trainer rating = $-.4821$). The major reasons for such particularly low correlations are that the reported behavioral changes of two individuals in the group differ extremely from all predictions of relative change.

A test of the significance of the difference between correlations determines whether or not the null hypothesis is rejected. Alpha is set at .025, the N being 30 in all cases (Table 4.11).

Table 4.11. Significance of the difference between three prediction rank order correlations

Predictors	r	N	d.f.	Z.025	Z	Accept Null Hypothesis?
Self	.45	30	58	2.002	.4890	Yes
Group	.55	30				
Self	.45	30	58	2.002	1.6728	Yes
Trainer	.03	30				
Group	.55	30	58	2.002	2.1618	No
Trainer	.03	30				

The null hypothesis is not rejected in two of the three possible cases. There is no significant difference between the predictive power of individual participants themselves and of the groups. Nor is there a significant difference between the individual predictive power of the participants themselves and of the trainers of the groups, despite the correlational differences.

The null hypothesis is rejected in the third case. There is a significant difference between the predictive power of the groups and of the trainers.

Answering the Core Questions:
A Perspective

As was specified in Chapter I, two core questions should be answerable following the collection and analysis of data obtained by the testing of the specified hypotheses. The basic questions are:

1. In view of the data, have the perceived behavioral changes, if any, improved seminar instruction in the participants' classes? In which ways and to what degree?
2. In view of the data, have the perceived behavioral changes, if any, influenced the relationships of the participants with their fellow educators, and thereby positively affected the potential and/or actual instructional behavior of these fellow educators? In which ways and to what degree?

In addition to data resulting from the tested hypotheses of this study it is necessary to arrive at some tentative conclusions regarding the question of the nature of good small group seminar classes. These conclusions regarding "goodness" objectives are necessary so that one can determine if instructors are, indeed, moving nearer this goal of effectiveness, or whether they are remaining static or decreasing in effectiveness.

The ultimate conclusions to the two core questions can, at the present time, only be drawn by each separate reader, according to his own values pertaining to effective small group seminar leadership and interaction, and to his judgment regarding effective means of influencing other people. However, the author intends, through the remainder of this chapter, to present a perspective based on literature relevant to the stated value questions (reviewed in Chapter II), which shall then be compared to the results of the tested hypotheses in this study. Finally, based on this data, the author shall draw some tentative conclusions.

Data from relevant literature tells us:

1. Any productive learning session is a rejection of ideas which exist for their own sake only. It involves exploration for new meanings.²

²Alfred North Whitehead, The Aims of Education and Other Essays (New York: Macmillan Company, 1929), p. 13.

2. Learning involves the alteration of perceptions and attitudes. For these changes to be of consequence it is necessary for behavioral change to result.³
3. Classroom atmosphere resulting in low productivity has these characteristics:
 - a. Strong emphasis on academic competition.⁴
 - b. Increase in the anxiety of the perceivers.⁵
 - c. Defensiveness of the instructor and/or students.⁶
4. A permissive group's morale and job satisfaction is far higher than that of a restrictive group.⁷
5. To the degree that the needs of the individual in each group are met, to that degree is the individual

³Ronald Lippitt, "The Use of Social Research to Improve Social Practice," American Journal of Orthopsychiatry, XXXV (July, 1965), 666.

⁴Jane Warters, Group Guidance (New York: McGraw-Hill Book Company, Inc., 1960), p. 239.

⁵Glen Mellinger, "Interpersonal Trust as a Factor in Communication," Journal of Abnormal and Social Psychology, III (May, 1956), 308.

⁶Jack R. Gibb, "Defensive Communication," Journal of Communication, XI (September, 1961), 148.

⁷Robert Tannenbaum, Irving R. Weschler and Fred Massarick, Leadership and Organization: A Behavioral Science Approach (New York: McGraw-Hill Book Company, Inc., 1961), p. 336; and Kurt Lewin, Ronald Lippitt and R. K. White, "Patterns of Aggressive Behavior in Experimentally Created Social Climates," Journal of Social Psychology, X (1939), 297-298.

committed to the functions and goals of the group.⁸
Consequently learning will increase proportionately.⁹

6. The small group is the environment in which the individual acquires and maintains his identity. It provides personal interaction and feedback, as well as to provide for social and emotional needs of the individual.¹⁰ The small group seminar can be, within the context of "formal learning," the means most conducive to meet these needs of the student.¹¹
7. If the teacher sets himself up as the "knower of answers" and as a high prestige figure, students will aim to say and do those things which will please the teacher rather than to direct their own

⁸C. Gratton Kemp, Perspectives on the Small Group Process (Boston: Houghton Mifflin Company, 1964), p. 137; O. F. Peterson, "Leadership and Group Behavior," Leadership in Action (Washington, D.C.: National Training Laboratories, National Education Association, 1961), p. 29; Herbert Thelen, "Educational Dynamics: Theory and Research," Journal of Social Issues, VI (1950), 30; and Herbert Thelen, Dynamics of Groups at Work (Chicago: University of Chicago Press, 1962), pp. 46-53.

⁹David Jenkins, "Interdependence in the Classroom," unpublished paper presented at a symposium sponsored by the Educational Psychology Division of the American Psychological Association, September 7, 1950.

¹⁰Kemp, p. 103.

¹¹D. W. Taylor and W. L. Faust, "Twenty Questions: Efficiency in Problem Solving as a Function of Size of Group," Journal of Experimental Psychology, XLIV (1952), 336-368.

activities on the basis of whatever is relevant and significant.¹²

8. The teacher's influence is a major force in determining the group climate which is, concomitantly reflected in his individual and group relations with students and co-workers. His influence is a strong determiner not only of social and emotional need-meeting. In turn, he strongly influences the quantity and quality of significant learning.¹³
9. To be effective as a change agent or small group leader (the role of an instructor), he should be, do and provide:
 - a. real acceptance and emotional support.¹⁴
 - b. trust and security; mutual confidence and respect; a genuine desire to understand the

¹²Peterson, p. 29; Gordon L. Lippitt, Leadership in Action (Washington, D.C.: National Training Laboratories, National Education Association, 1961), pp. 29-30; and Carl R. Rogers, On Becoming a Person (Boston: Houghton-Mifflin Company, 1961), pp. 276-277.

¹³Chester W. Harris (ed.), Encyclopedia of Educational Research (New York: Macmillan Company, 1960), p. 848; and Kurt Lewin and Ronald Lippitt, "An Experimental Approach to the Study of Autocracy and Democracy: A Preliminary Note," Sociometry, I (1938), 653-657.

¹⁴Kemp, p. 136.

views of others and respect their right to have these views.¹⁵

- c. sensitive to the feelings of self and others; foster flexibility, openness and empathy.¹⁶
- d. listen well and communicate directly and honestly; freely allow open disagreement, expression of ideas and feelings.¹⁷
- e. understand the strengths, weaknesses, needs and desires of himself and others.¹⁸
- f. view students as co-learners with himself.¹⁹

Data resulting from analyses of the four major hypotheses of this study reveal that:

¹⁵Peterson, p. 29; Warters, p. 236; Rogers, pp. 276-277; and Nathaniel Cantor, "A Way of Thinking about Learning," Adult Leadership, I (1953), 11.

¹⁶Stephen Corey, Helping Other People Change. (Columbus, Ohio: The Ohio State University Press, 1963), p. 73; and John B. Hough, "Changing the Teacher's Instructional Behavior," Michigan Journal of Secondary Education, VII (Winter, 1966), 32.

¹⁷Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, Inc., 1960), pp. 232-235.

¹⁸J. E. Nations, "The Teacher as a Person," Educational Leadership, XX (November, 1962), 103; and Joseph Luft, Group Processes: An Introduction to Group Dynamics (Palo Alto, California: The National Press, 1963), p. 45.

¹⁹Hough, p. 33.

1. The laboratory training participants perceived themselves as having changed significantly in a positive direction (H_1 , S_{H_1}).
2. The peer co-workers perceived the participants as having changed significantly in a positive direction (H_1 , S_{H_2}).
3. The principals perceived the participants as having changed significantly in a positive direction (H_1 , S_{H_3}).
4. On a composite score (self and others' descriptions), the participants were perceived to have changed significantly on dimensions, as listed. (For a more detailed description of these categorical dimensions, see Appendix D.)
 - a. sending communication
 - b. receiving communication
 - c. relational facility
 - d. risk taking
 - e. increased interdependence
 - f. functional flexibility
 - g. awareness of behavior
 - h. sensitivity to group process
 - i. sensitivity to others
 - j. acceptance of others
 - k. tolerance of new information
 - l. confidence

- m. comfort
 - n. insight into self and role (H_2).²⁰
5. Self-control (checks feelings more carefully, more self-discipline, less quick with his judgments, better able to control his emotion) is the only dimension which was not rejected by the hypothesis of no difference between experimental and control group results (H_2).
 6. The areas with the highest significant rejections of the null hypotheses were:
 - a. sensitivity to group process
 - b. awareness of behavior
 - c. sensitivity to others
 - d. receiving communication (H_2).
 7. Students of instructors who had participated in the laboratory workshop had significantly more favorable responses regarding the small group atmosphere in their seminars than did students of control group instructors. Differences between the groups were most significant, from students' perspectives, in the feelings of belongingness to the group by students of experimental instructors. These same

²⁰ A comparison of these perceived behavioral change dimensions with the behavioral requirements for an effective instructor reveals that the dimensions discussed under both are equivalent. Therefore the dimensions of perceived change are in the direction of effective leadership behaviors.

students also highly rated the amount of trust shown them by their instructors (H_3).

8. Due to the fact that there was no significant difference between the experimental and control group student responses on only the first two items of the PSGSA, it may indicate that there is no perceived significant difference in cognitive learning, as contrasted to affective learning. This aspect should be further examined.

Influential personal relationships are multi-dimensional between students and teachers, between students and students, and between teachers and teachers. To the degree that communication is open along these lines, to that degree will learning goals be facilitated.²¹

The small group seminar in which one teacher and a number of students interact is not the only means by which an effective teacher brings about change. By means of the same positive quality which he expresses in the small group seminar, the teacher also influences his fellow educators.

Students responded positively to the seminar atmosphere which they perceived. Co-educators; i.e., fellow

²¹Ronald Lippitt, "The Learner and the Classroom Group," Forces in Learning (Washington, D.C.: National Training Laboratories, National Education Association, 1961), pp. 32-33.

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teachers and administrators noticed, as the evidence overwhelmingly indicates, that the seminar instructors who had participated in the laboratory workshop changed a great deal in the directions specified by relevant research and literature as being effective interpersonal and small group leadership behavior.

Based on this evidence, it is the conclusion of the author that seminar instruction did improve in participants' classes on numerous valuable dimensions. An open question remains whether these participants' small group seminars have helped students gain formal cognitive learning goals beyond those of the control group, in addition to the necessary social and emotional need-meeting goals which have been gained.

Since the defined behavioral changes were so readily recognized by fellow educator-describers, it is apparent that positive impact was made by the participants upon these teachers. Teachers, too, interact in small groups, and influence one another as do students in seminars. Desirable behaviors including sensitivity to the feelings of others, understanding of self and others, flexibility and openness to change, and the remainder of the change categories noted, pervade important aspects of meaningful human interaction.

Summary and Discussion

Key findings are:

1. Perceived behavioral change scores of laboratory participants significantly exceeded the total change scores of their controls on the basis of their own self perceptions, the perceptions of their peer co-workers and their principals' perceptions.

These results of generalized change of behavior following laboratory training agree with the instrumented results of the FIRO-B ratings which reported some self change descriptions in 83 per cent of the participant respondents.²² The studies by Miles²³ and Bunker²⁴ also concur, although the impact measured by written forms is not as decisive as are the results of this study.

2. Within fourteen of the fifteen categorized dimensions of change, the laboratory participants' scores significantly exceeded the scores of the control subjects. Self-control is the lone category not rejected by the null hypothesis.

²²William C. Schutz and Vernon L. Allen, "The Effects of a T-Group Laboratory on Interpersonal Behavior," Journal of Applied Behavioral Science, II (July, August, September, 1966), 282.

²³Matthew B. Miles, "Human Relations Training: Processes and Outcomes," Journal of Counseling Psychology, VII (Winter, 1960), 301-306.

²⁴Douglas R. Bunker, "Individual Applications of Laboratory Training," Journal of Applied Behavioral Science, I (April, May, June, 1965), 142.

Findings reported by Wedel report no change in laboratory training participants' amount of insight, as based on a sociometric test of social perception.²⁵ This aspect of her research disagrees with the findings of this study. Studies of a less intense or more limited scope do reinforce the findings of the second hypothesis.²⁶ Bunker, using a different design, methodology and population but the same categorization system used in this study found change to have been significant at the .05 level in eleven of the fifteen categories.²⁷

3. Small group seminar students of the laboratory participants perceived the group atmosphere to be significantly more positive than did the counterpart students of control subjects.

Results reinforce the findings of Hypotheses One and Two, indicating that students also significantly

²⁵Cynthia C. Wedel, "A Study of Measurement in Group Dynamics Laboratories" (unpublished Ph.D. dissertation, George Washington University, 1957), Lewis E. Durham and Jack R. Gibb, compilers, An Annotated Bibliography of Research: National Training Laboratories, 1947-1960 (Washington, D.C.: National Training Laboratories, 1960).

²⁶Arthur H. Kuriloff and Stuart Atkins, "T-Group for a Work-Team," Journal of Applied Behavioral Science, II (January, February, March, 1966), 63-93; John R. P. French, Jr., John R. Sherwood and David L. Bradford, "Change in Self-Identity in a Management Training Conference," Journal of Applied Behavioral Science, II (April, May, June, 1966), 210-218; and Miles, pp. 301-306.

²⁷Bunker, p. 142.

perceived the transference of laboratory learning in participants. As Bryan²⁸ has demonstrated, students are extremely perceptive of teacher and classroom behavior and climate.

4. Rank order correlations between the predictors of change and actual perceived behavioral change six months following treatment were as follows:

group predictor,	$r = .55$
self predictor,	$r = .45$
trainer predictor,	$r = .03$

Based on t tests, the null hypothesis of no difference ($\alpha = .025$) was not rejected in a comparison of group and self predictors, and of self and trainer predictors. The null hypothesis was rejected on the group versus trainer comparison.

These results are totally incongruent with those reported by Miles. He found that the trainer predictions correlated .55, but that self predictors had no reliability more significant than total randomness.²⁹ Further study is recommended in relationship to these dissonant findings.

Data of relevant literature and data presented in this chapter are the basis of the author's conclusion that

²⁸Roy C. Bryan, Pupil Rating of Secondary School Teachers (New York: Bureau of Publications, Teachers College, Columbia University, 1937), p. 38.

²⁹Miles, p. 305.

the two core questions of the study are answerable in the affirmative. The perceived behavioral changes of the laboratory workshop participants have resulted in improved instruction in their seminar classes. These instructors have also made an impact on their co-workers, teachers and principals, thereby having beneficially affected the potential and/or actual small group instructional behavior of these co-workers. It is noted, however, that the reader must make his own interpretations and develop his own conclusions regarding these core questions.

CHAPTER V

RETROSPECT AND PROSPECT

Summary

It was the purpose of this study to determine the types and degrees of on-the-job perceived behavioral changes which result from the laboratory method of learning, as reflected in a group of secondary seminar instructors.

The study was designed to help determine whether and, if so, in which ways the laboratory method of learning can aid in the process of educating teachers to be more effective small group seminar leaders; also the aim was to determine whether and, if so, the laboratory workshop participants help teachers to be more effective in their interaction with fellow educators. A subsidiary aspect of the study was to isolate three potential predictors of behavioral change following a training laboratory, and to determine the ability of these to predict perceived change six months following the training sessions.

Within the parameters of this study, the following conclusions are presented:

Conclusions

1. Laboratory training participants themselves, their peer co-teachers and the respective principals of these same subjects indicate a highly significant perceived behavioral change as the participants function in the on-the-job situation six months following the workshop.

2. Participants are more willing to share information, are more concerned with putting their ideas across, and find it easier to provide truthful feedback and to express their feelings more.

3. Participants make an increased effort to listen better and with more understanding.

4. Participants are less irritating to others, are easier to deal and talk with; they are more tactful, less commanding and more cooperative.

5. Participants are more willing to take a stand on issues, to experiment and try more new ideas.

6. Participants in laboratory training sessions involve others in group decision-making, let others do more thinking and experimenting and are less likely to dominate a discussion.

7. The behavior of participants is more flexible; they more easily take group roles and make helpful contributions to a group.

8. Participants have increased intellectual understanding of human behavior. They are more analytical of

behavior and have a clearer perception of the people with whom they interact.

9. Consciousness of group process, of subcurrents and hidden group agendas and of ability to perceive group roles has increased in participants.

10. Participants are more conscious of and sensitive to the feelings, needs and reactions of others.

11. Participants are more able to tolerate shortcomings of others. They are more considerate of individual differences, more understanding of others' problems.

12. Participants are more willing to accept suggestions; they are less defensive and less arbitrary about their "knowledge" and information.

13. Self-confidence, poise and confidence in leading discussions are factors of increase perceived in participants.

14. Ability to be more at ease and comfortable in groups, to feel more inner security are characteristics of the participants.

15. Participants have greater insight into themselves and into their own roles in groups. They are improved in their adjustment to their jobs and are less conflicted about authority figures.

16. Participants did not significantly increase their ability to maintain self-discipline, nor to check and control their own feelings and emotions more carefully.

The failure of this category to differentiate significantly may not be an altogether negative factor since the indication is that laboratory participants tended to express their feelings more openly thereby evidencing "less self control" but greater willingness to communicate straightforwardly and honestly.

17. Student members of small group seminars instructed by laboratory training participants expressed increased satisfaction with the atmosphere in their small groups.

18. No highly reliable predictors of individual behavioral change were isolated. The predictor with the highest correlation to actual perceived change was the composite prediction of the sensitivity training group members (.55).

Based upon relevant literature and the findings of this study, it was the conclusion of the author that the perceived behavioral changes of the laboratory workshop participants have improved instruction in their seminar classes. These instructors have also made an impact on their co-workers, teachers and principals, thereby having beneficially affected the potential and/or actual small group instructional behavior of these co-workers. The reader must, however, make his own interpretations and develop his own conclusions regarding these core aspects of the original purposes of the study.

Implications

The following implications are a direct result of the findings of this study, and are reinforced by the learnings of the author by means of personal interaction with all subjects involved, experimental and control.

1. The interview technique is a valuable method of gaining intensive, honest feedback on feelings of people regarding their own and others' behavior as they perceive it. The unstructured interview is a more valuable method for eliciting real affective feelings. The structured technique tends to restrict interaction and elicits more cognitive reactions.

2. The small group seminar is a media by which valuable social and emotional in addition to cognitive learnings can be acquired due, partially, to its potential flexibility toward individual learning through group interaction and development.

3. Laboratory training results evidence desirable outcomes toward the improvement of small group utilization, leadership and development by instructors. Development of an atmosphere of openness to experience, and of effectively allowing instructors to utilize themselves so that learning which is significant to unique groups composed of unique individuals can be facilitated.

4. Laboratory training results indicate numerous outcomes which are beneficial to the participant in his personal functioning.

5. Laboratory training is beneficial in the improvement of interpersonal relationships.

6. Improved methods of teacher selection and placement for specific teaching assignments, dependent on their degree of interpersonal effectiveness, may result by use of applicable predictors. The training group in which he participates, as is shown in this study, may be such a predictor.

7. Laboratory training results indicate that participants communicate more effectively. Effective communication is a necessary prerequisite to interpersonal understanding, and to the teaching-learning situation.

8. Laboratory training may be one effective method for the improvement of teacher-training in group leadership and interpersonal interaction. It is more than the acquisition of cognitive "subject matter."

9. Laboratory training may be an effective method for in-service teacher learning and development. Teachers must be flexible and capable enough to utilize their ever-changing educational environment; they must be aware and capable of recognizing the uniqueness of every group and the individuality of every student.

Questions for Further Study

Laboratory Training

1. How lasting are laboratory training results? Do they increase or decrease over time?
2. Is there a definable cycle or pattern of experiences following participants' involvement in laboratory training?
3. Which factors allow an individual instructor to gain most from laboratory learning?
4. What environmental characteristics in the back-home situation facilitate the implementation of laboratory learning? What are inhibiting factors?
5. Which differential factors determine the various dimensions of behavioral change which take place in individuals who participate in the same laboratory setting?
6. Do laboratory learning trainers tend to forget the realities of the back-home environment of the participants when they predict a relative degree of change? Do personal needs of trainers, such as a desire to see those participants who "need to change most," interfere with objective predictions?
7. What are the comparative problems and results of laboratory learning sessions for teachers which also include a cross-section of administrators, parents and students versus groups of teachers only?

8. What are the comparative problems and results of laboratory training sessions for teachers, which include personnel from one organizational setting (such as personnel from one high school) versus participation of teachers who come from numerous organizations?

Small Group Seminar

9. Is there a difference between significant cognitive learning and personal affective learning?

10. What are the relationships between task accomplishment and student satisfaction in the small group seminar?

11. Would students' responses on the first two items of the Perceived Small Group Seminar Atmosphere instrument be of a different nature if they were placed in altered sequence in relation to the other items?

12. What is the relationship between student satisfaction with a small group seminar, and the satisfaction of the instructor?

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APPENDICES

APPENDIX A

INTERVIEW PROCEDURE - OUTLINE

- A. Preparation of physical arrangements
 - 1. Appointment time verified
 - 2. Designated room free from interruption
- B. Meet and informally discuss:
 - 1. Things
 - 2. Selves and roles
- C. Discuss the purposes of this interview
 - 1. Define
 - 2. Guarantee anonymity
 - 3. Explain use of tape recorder and give option of refusing its usage
 - 4. Freedom to ask that recorder be turned off at any time
- D. Lead into the subject of the interview
 - 1. People do change their behavior over time and due to various kinds of experiences: change may be great or little - good, bad or indifferent - in some areas but not in others. . . .
 - 2. But there are more stability factors about a person at any one time than there are change or flux factors. To the degree that a person is "known," to that degree can his behavior be predicted in specified situations (stability).
 - 3. (Leave the discussion open-ended.) Take a look at self a year ago in comparison to the present. Look at the kinds of things which seem to have been (1) changing, in good or bad ways or (2) things which have been stable about self, whether liked or disliked. (Subject take it from here.)
- E. Unstructured portion of interview - interviewer role
 - 1. Answer questions
 - 2. Support and respond; redirect pointless deviation.
 - 3. Request clarification of vague or confused statements to facilitate ease of assessing category.
 - 4. Direct particular instances of noted behavior to interaction of subject with others in the school environment.

F. Structured portion of interview

1. When respondent has "run out" of relevant discussion, redirect individual to respond to the categories presented; whether he has changed or has been stable on this dimension; state of the stability (seen as positive or negative) or direction of change. Related examples are encouraged. If the category seems irrelevant, just request that it be skipped.

G. Concluding

1. Hand the respondent a printed statement of the altered "Open End--Perceived Change" measure together with stamped self-addressed envelope. If he so desires he may add to the contents of the interview and mail it.
2. Respondent is welcome to a summary report of the study upon its completion.
3. Thanks and farewell.

APPENDIX B

INTERVIEW CHECKLIST FORM

Subject of the Interview _____

Respondent: Peer _____ Principal _____ Self _____

CHECKLIST

Category	Perceived Change	
	Non-Structured	Structured
A. OVERT OPERATIONAL CHANGES - DESCRIPTION		
A-1s Sending Communication		
A-1r Receiving Communication		
A-2 Relational Facility		
A-3 Risk Taking		
A-4 Increased Interdependence		
A-5 Functional Flexibility		
A-6 Self-Control		
B. INFERRED CHANGES IN INSIGHT AND ATTITUDES		
B-1 Awareness of Behavior		
B-2 Sensitivity to Group Process		
B-3 Sensitivity to Others		
B-4 Acceptance of Others		
B-5 Tolerance of New Information		
B-6 Confidence		
B-7 Comfort		
B-8 Insight into Self and Role		

APPENDIX C

INDUCTIVELY DERIVED CATEGORIES

FOR CONTENT ANALYSIS^a

A. Overt Operational Changes - Description

1. Communication

Sending - shares information, expresses feelings, puts ideas across

Receiving - more effort to understand, attentive listening, understands.

2. Relational Facility - cooperative, tactful, less irritating, easier to deal with, able to negotiate

3. Risk-Taking - willing to take stand, less inhibited, experiments more

4. Increased Interdependence - encourages participation, involves others, greater leeway to subordinated, less dominating, lets others think

5. Functional Flexibility - more flexible, takes group roles more easily, goes out of way, contributions more helpful, less rigid.

6. Self-Control - more self-discipline, less quick with judgment, checks temper

B. Inferred Changes in Insight and Attitudes

1. Awareness of Human Behavior (intellectual comprehension) more conscious of why people act, more analytic of others actions, clear perceptions of people

^aDouglas Bunker, "Individual Applications of Laboratory Training," Journal of Applied Behavioral Science, I (April, May, June, 1965), 139.

*Scoring depends upon an explicit statement of qualitative or quantitative difference. Changes may be positive or negative reflecting increases or decreases in quantity and greater or lesser utility. Precise category fit according to scoring conventions is required for sets of categories A and B.

2. Sensitivity to Group Behavior - more conscious of group process, aware of subcurrents in groups
3. Sensitivity to Others' Feelings - more capacity for understanding feelings, more sensitive to needs of others
4. Acceptance of Other People - able to tolerate shortcomings, considerate of individual differences, patient
5. Tolerance of New Information - willing to accept suggestions, considers new points of view, less dogmatic, less arbitrary
6. Self-Confidence
7. Comfort - relaxed, at ease (must be specific as to setting or activity)
8. Insight into Self and Role - understands job demands, more aware of own behavior, better adjusted to job.

APPENDIX D

INDUCTIVELY DERIVED CATEGORIES FOR CONTENT ANALYSIS

(DETAIL FORM FOR SCORERS)^a

A list of mentioned changes taken from respondent questionnaires have been classified under the following content categories. The resultant categories and examples are used as a reference for the scoring of questionnaires.

A. INTERPERSONAL OPERATIONAL CHANGES - ACTIONAL

1. Communication

- s. Sending - More willing to share information, more concerned with putting his ideas across, easier to provide truthful feedback, keeps us better informed, expresses feelings more.
- r. Receiving - Listens with understanding more, increased effort to listen better.

2. Relational Facility

Irritates co-workers less, easier to deal with, more tactfulness and sense of humor in meetings, better able to get along with people, increased ability to negotiate and work with people, more pleasant and sociable, easier to talk with, more cooperative in relations with others, more gracious and less commanding. More tactful in dealing with others.

3. Risk-Taking

More willing to take stand on issues, more willing to be opposed, more willing to try new ideas, experiment more, more assertive, more creative solutions to problems, less inhibited about relationships, more courage to extend himself.

^aThis content analysis was sent separately to the researcher by Dr. Bunker. The author thanks him for permission for its use in the study.

4. Increased Interdependence

Encourages participation in decision making, involves others more, greater use of group decision-making, gives greater leeway to subordinates, lets others do more thinking and experimenting, less likely to dominate a discussion, strives more for democracy. Less dogmatic with others.

5. Functional Flexibility

Takes group roles more easily, gives help, contributions in group more helpful, more flexible behavior, goes more out of her way to make contacts and be helpful. Less rigid.

6. Self-Control

Checks feelings more carefully, more self-discipline, less quick with his judgments, better able to control his emotion.

B. PERSONAL INSIGHTFUL CHANGES - ATTITUDINAL

1. Awareness of Human Behavior (Intellectual understanding of human behavior)

More insight into reasons for others behavior, more analytical of others actions, more aware of people's needs, more conscious of why people act, more aware of individual's behavior in groups, more inclined to analyze behavior, clearer perception of people he works with.

2. Sensitivity to Group Behavior

More conscious of group process, better able to perceive needed roles, more analytical of group process, more aware of subcurrents in group.

3. Sensitivity to Others' Feelings

More conscious of feelings of others, more sensitive to reactions of others, more capacity for understanding feelings, more sensitive to needs of others.

4. Acceptance of Other People

More able to tolerate shortcomings, more accepting of other people, more considerate of individual differences, less frustrated when people move slower than I expect, more patient with groups, more tolerant, more patient, understanding others' problems.

5. Tolerance of New Information

Tries to understand others' opinions more, more willing to accept suggestions, more considerate of others' points of view, taking your viewpoint into consideration more. Reduced screening, less defensive to views of others, less dogmatic, less arbitrary.

6. Self-Confidence

Additional self-confidence, more poised and confident, more confidence in leading discussion.

7. Comfort

More relaxed, seems more at ease in group, more comfortable in meetings, more calm, can view things more calmly than before, more inner-security, more secure in his situation.

8. Insight into Self and Role

Better acceptance of job challenge, more aware of role in group, closer identification with leadership role, more respect for task-oriented jobs, knows self better, sensitivity to own feelings, better adjustment to the job, more aware of situations confronting him, less conflicted about authority figures.

APPENDIX E

ANALYSIS AND CRITIQUE OF THE INDUCTIVELY DERIVED CONTENT CATEGORIES^a

A. OVERT BEHAVIORAL CHANGES

A-1 Communication

Under the heading of "communication" there can be three kinds of changes: sending, receiving and an unspecified change encompassing both. To qualify for a change in this category, a change mention by a describer must specify a change in the quantity and/or quality of the subject's behavior as a sender or as a receiver (or both) of communication. Wherever possible, a differentiation is made between sending or receiving as opposed to an unspecified change statement.

Statements concerning the subject's "sending" behavior are usually fairly explicit in that the subject is usually perceived as communicating something to someone in an improved manner; he is seen as expressing himself oftener or better. Similarly, changes in receiving communication are explicit in that they involve quantitative or qualitative changes in how the subject listens to or perceives messages. A rather difficult distinction must be made between this category sub-heading and that of B-5, "Tolerance of New Information." described below. The latter category deals more directly with what the subject listens to, i.e., his evaluation or selection of what he will "hear," rather than how he receives the communication, which is the act of listening. Nevertheless, since they are so inextricably related, we would expect a significant correlation between the two.

The "unspecified" statement of change in communication is one which does not explicitly discern between sending and receiving, and may, in fact, comprehend both. An example of a response falling into this subcategory would be, "He communicates better with his subordinates." Here

^aTaken from Michael Ian Valiquet, "Contribution to the Evaluation of a Management Training Program" (unpublished Master's dissertation, Sloan School of Industrial Management, 1964).

we cannot readily ascertain in which of the two aspects the subject has improved. If, however, both are mentioned, they are scored separately.

Certain statements relating to communication, however, carry more than "improved communication" as their intended message, especially when read within their full context. For example, the statement: "His contributions are more helpful in our work group," implies more than ameliorated communication on the part of the subject; it implies that his "contributions" fulfill a specific function in the group, and that they stem from a diagnosis of the situation. Such statements are therefore more correctly categorized under "Functional Flexibility." (See category A-5 below.)

A-2. Relational Facility

Changes in the subject's behavior which make him easier to get along with, evidence that he has improved his relations with others are scored as "relational facility." Evidence of relational facility may be found in such statements as "irritates co-workers less," "increased ability to work with people," "more pleasant and sociable," "easier to talk with," "more cooperative in relations with others," and so on. While the actions here described seem fairly straightforward, some difficult distinctions must be made to distinguish them from closely allied categories. For example, statements which refer to self control or deliberate control of emotions are coded under A-6, "Self-Control," even though they make the subject easier to get along with.

One of the more onerous distinctions to be made is between Relational Facility and Tolerance of New Information. Thus a statement such as "more open to the opinions of others," seems equally acceptable as an expression of improved relationships or as evidence of an attitude toward others' opinions. How, then, should it be classified? The distinction must be made on the basis of whether the change is "attitudinal" or "actional." Is the statement about something the subject is, or something he does? "More open to the opinions of others," while certainly facilitating relationships, expresses attitudinal rather than operational change, and is therefore more reasonably classified under B-5, "Tolerance of New Information."

Teneral statements referring to deliberate control of emotions, or self-control, are coded under category A-6, Self-Control, even though this quality may be readily construed as making the subject easier to get along with.

A-3 Risk-Taking

This variable pertains to changes in the subject's overt behavior which indicate that where he was formerly passive or protective, he now seems more willing to expose himself to uncertainty or opposition.¹ Statements falling into this category would be: "more willing to take a stand on issues"; "more willing to be opposed"; "more willing to try new ideas"; "experiments more"; "more assertive"; "more creative solutions to problems"; etc. These statements carry as their main theme the extension of one's self, experimentation of the freedom to act in new areas. While a high correlation between this variable and "Self-Confidence" (B-6 below) might be expected. "Risk-Taking" is the operational or actional demonstration of the attitude of confidence. Again, where a describer's response is specifically related to the concept of adaptability, of action as a result of diagnosis, or of action as the result of a perceived need, it implies more than mere risk-taking and is consequently coded as "Functional Flexibility." (See A-5 below.)

A-4 Increased Interdependence

Statements falling in this category are those which express or imply an increased effort on the part of the subject to create a democratic environment, i.e., to encourage the sharing of responsibility and the participation of subordinates in decision-making processes. As with the other variables in Category "A," the statement must express an action on the part of the subject, rather than an attitude. Examples of such statements are: "encourages participation in decision-making"; "lets others do more thinking and experimenting"; "involves others more"; "gives greater leeway to subordinates"; "less autocratic"; "less likely to dominate a discussion."

Because of the comparative ease with which responses can be fitted into this category, care must be taken that certain statements are correctly placed. For example, "more willing to share information" seems intuitively to allude to the sharing of responsibility or participation in decisions.

¹It should be emphasized that for this variable, as well as for all others which were evaluated, the direction of change need not be positive; the scoring system accounted for negative change in the criterion variables as well.

However, its main theme is "Communication" and for this reason would be scored in the more relevant category. For a statement to qualify as "increased Interdependence" it must have as its central theme encouraging participation, the sharing of responsibility, or the improvement of democratic action and involvement in work situations.

A-5 Functional Flexibility

This category comprehends statements specifically related to the concept of adaptability, i.e., action as the result of diagnosis. Both aspects of the concept must be present: the diagnosis, which may be implied (in terms of perceived needs of individuals, groups, or situations), and the action, which must be explicit, to alter or fulfill the perceived needs. The major criterion for admission of a statement to this category is evidence that a subject is better able to change his behavior to suit a changed situation, that is, he shows a flexibility and adaptability in his interactions with his environment. The distinguishing features is the subject's ability to perceive or diagnose a situation, and respond to it on the basis of such perception or diagnosis. Examples are "more helpful to team members"; "finds it easier to accept change, and is more flexible in groups"; "takes group roles more easily"; "gives more help to his staff with personal and work problems"; "contributions in group more helpful."

A-6 Self-Control

Unlike "Risk-Taking" which implies the release of checks and stops, where the latter have been perceived as dysfunctional, "Self-Control" implies an increase in these controls in such a way that the subject becomes more functional and improves his relations with others. Statements expressing behavior changes which imply a former excessive expression of emotion, judgments or ideas, and indicate that the subject is presently controlling these to better advantage, are placed in this category. Examples are: "checks feelings more carefully"; "less quick with his judgment"; "more self-discipline."

Several difficult and, perhaps, tenuous distinctions are made with respect to this variable. Firstly, many statements may seem to imply controls without actually mentioning them, as in "he irritates co-workers less" or "seems more tactful in meetings." These statements, however, do not refer to specific acts of self-control; they describe other actions which merely suggest certain controls may be in operation, and are therefore scored in more immediately obvious categories.

Another problem arises with such words as "patient" and "calm," which are often used in ways implying actions of self-control but, in fact, are referring to an attitude toward others. Thus, the statement "more patient with others" carries a strong implication of control, but is more correctly classified as an attitude, "Acceptance of Others" (B-4 below). Similarly, "more calm" implies some measure of self-control, but again seems more reasonable viewed as an attitudinal change rather than an actional one, and so fits more accurately into category B-7, "Comfort." On the other hand, a statement such as "progress in developing the ability to remain calm" seems to emphasize the action which a subject takes to maintain a "calm" attitude and would consequently be scored as "Self-Control" rather than "Comfort."

While the distinction is perhaps tenuous statements scored in this category are often distinguishable by being negative, either in their grammatical form or in their message, i.e., the subject improves through the negation of some undesirable characteristic.

B. INFERRED ATTITUDINAL CHANGES

B-1 Awareness of Human Behavior

Statements falling into this category concern the subject's intellectual understanding of other people's behavior. In contrast to what is referred to as "sensitivity" in various other categories below, "awareness" implies only the conscious understanding and detached intellectual digestion of behavior, as opposed to the subjective involvement connoted by sensitivity. This concept is usually triggered by such words as "aware," "appreciate," "conscious," "analytic" and "insight." To be so scored, both the process (the intellectualization, awareness, analysis or insight) and the object of the process (human beings - their behavior, actions or needs) must be present in the statement. Also included in this category are statements in which the awareness pertains ostensibly to only specific individuals or groups of individuals, as in "more insight into reasons for his subordinates' actions" and "more aware of individual behavior in groups."

B-2 Sensitivity to Group Behavior

This category comprises increased understanding or perception of the group as an entity - its behavior, roles, and needs. The key word is "group"; without it the statement must be classified elsewhere. If mention or strong implication is made of awareness of individual behavior, it

is classified under B-1 above. Some illustrative statements of increased sensitivity to group behavior are: "more analytical of group processes"; "better able to perceive needed roles in the group"; "more aware of subcurrents in the group"; "more conscious of group processes."

B-3 Sensitivity to Others' Feelings

This variable implies an attitude of greater empathy with or compassion for other people, as in "more sensitive to others' feelings," "more sensitive to the needs of others," "more capacity for understanding feelings," "more conscious of the problems of others." For scoring purposes a distinction is made between this category and B-1, "Awareness of Human Behavior," with respect to the process involved in each. The point has already been made above, but bears repeating. If a detached intellectual understanding is implied, the statement is scored under B-1. If, on the other hand, the needs or feelings of others are "sensed" sympathetically, i.e., the subject seems personally involved, then the statement is scored here.

B-4 Acceptance of Other People

Included in this category are mentions of increased consideration of people as individuals, acceptance of them as they are. Not included are statements of any action displaying this attitude. Thus, a response such as "he gives his subordinates more responsibility" can certainly be seen as characteristic of greater acceptance of individual differences, but it is concerned primarily with action, with an outward display of the attitude, rather than with the attitude per se. It would therefore be scored as A-4, Increased Interdependence. On the other hand, statements such as "more able to tolerate shortcomings" and "more considerate of individual differences" are concerned with the attitude of the subject, rather than the action he takes, and so are scored in this category.

B-5 Tolerance of New Information

This variable deals with the subject's attitude toward the ideas and opinions of others. Two types of statements are generally anticipated. The first is one that states directly that the subject is better able to accept the opinions of others, e.g., "more able to see the other person's point of view"; "more willing to accept the recommendations of others"; "takes our ideas into consideration more." The other type of statement assigned to this category, admittedly, for lack of a better fit elsewhere, is the

one in which the openness to new information is merely implied. Thus, the statement, "I have tried to think more objectively and dispassionately," which at first seems unsuitable for this category, upon further analysis yields a different conclusion. The first part of the sentence ("have tried to think . . .") indicates that the change is attitudinal rather than action. The latter portion ("... more objectively and dispassionately"), or its equivalent form, "less subjectively and emotionally," implies a reaction to something-specifically, the views and opinions of others.

The crucial distinction between "action" and "attitude" so frequently made in the scoring of other variables applies equally here. The operational act of "listening" must be differentiated from the closely related attitude which supports better listening; a statement such as "increased effort to listen better" must not be confused with "tries to understand others' opinions more." The former deals with the act of listening (A-1r Communication), while the latter is concerned more with the attendant attitude, i.e., increased tolerance and admittance of others' views. Statements apparently encompassing both concepts must be studied with care; for example, "listens with greater understanding," while perhaps descriptive of the subject's attitude, would be scored as Communication on the basis of the governing theme "listens."

B-6 Self Confidence

Included here are all specific references to the confidence or security of the subject, e.g., "more poised and confident"; "leads discussions more confidently"; "more sure of himself," "feels more secure in his position," etc.

B-7 Comfort

This variable is concerned with apparent anxiety reduction in the subject; that is, where he was once nervous or insecure in specific situations, he is now seen as coping with them. Such statements as "more relaxed," "more calm," "more comfortable in meetings," "stands up to pressure better," "not as tense as he used to be," all indicate decreases in anxiety, insecurity or tension and are correctly placed in this category.

D-8 Insight into Self and Role

This category deals with the way the subject perceives himself and/or his job. It is therefore considered one of the more important criteria of the program, impinging as it does so directly on the individual's work effectiveness. Indications of improved insight into either self or role would be: "better acceptance of job challenge"; "shows more respect for task-oriented jobs"; "more aware of his own assets and limitations"; "better grasp of his place in the organization"; "closer identification with the leadership role"; "has left his drawing board and started to manage"; "seems more aware of the increased scope of our operation"; and so on.

APPENDIX F

EXPLANATORY LETTER

(for subjects)

Dear teacher:

As a part of a Michigan State University Research Project designed to increase understanding of seminar teacher training and its consequences, we are conducting some inquiries to get accurate descriptions of the ways people actually behave on the job. We believe that this research can be of great help in evaluating such laboratory workshops and in making plans for future programs.

You are a subject in this study. You have answered various questions about the way you work with people in an on-the-job situation. We are not concerned with your name or personal evaluation as such, but are interested in how groups of these evaluations compare to others. Your evaluation combined with many others is a way of forming this comparison. Your name is requested on the questionnaire so that we can ascribe the comments to the appropriate group. We hope that, if you have any further information which you feel is relevant to our previous discussion, you will forward it to us in the stamped self-addressed envelope.

We are thankful for your cooperation with us in making this study a success.

Appreciatively,

Larry Krafft
Research Assistant

BEHAVIOR DESCRIPTION QUESTIONNAIRE^a

(OPTIONAL FORM)

Complete and return this form only if you feel that there is anything which you would care to add since our discussion.

To review the basic question:

Over a period of time, people may change in the ways they work with other people. Since the end of last school year, in what specific ways do you believe that you have changed your behavior in working with students, teachers, or others in the school environment, as compared with the previous year?

The name of the person I am describing is _____
(will remain anonymous).

^aMatthew B. Miles, "Research Notes from Here and There, Human Relations Training: Processes and Outcomes," Journal of Counseling Psychology, VII (1960), 302.

APPENDIX G

EXPLANATORY LETTER

(for describers)

Dear teacher:

As part of a Michigan State University Research Project designed to increase understanding of seminar teacher training and its consequences, we are conducting some inquiries to get accurate descriptions of the ways people actually behave on the job. We believe that this research can be of great help in evaluating such laboratory workshops and in making plans for future programs.

The subject has answered various questions about the way he works with people in an on-the-job situation. In the interest of research, you and several other of his co-workers have been selected as people qualified to evaluate his on-the-job behavior. We are not concerned with your personal evaluation as such, but we are interested in how groups of these evaluations compare to others. Your evaluation combined with many others is a way of forming this comparison. The subject's name appears on the questionnaire so that we can group the descriptions of the several people who will be evaluating him. We hope that, if you have any further information which you feel is relevant to our previous discussion, you will forward it to us in the stamped self-addressed envelope.

In the analysis of these questionnaires, there will be no mention of names. You will notice that there is no place for your name on the questionnaire; this is so that your response will remain anonymous.

We are thankful for your cooperation with us in making this study a success.

Appreciatively,

Larry Krafft
Research Assistant

BEHAVIOR DESCRIPTION QUESTIONNAIRE^a

(OPTIONAL FORM)

Complete and return this form only if you feel that there is anything which you would care to add since our discussion.

To review the basic question:

Over a period of time, people may change in the ways they work with other people. Since the end of last school year, in what specific ways, do you believe the person you are describing has changed his/her behavior in working with students, teachers, or others in the school environment, as compared with the previous year?

The name of the person I am describing is _____

^aMatthew B. Miles, "Research Notes from Here and There, Human Relations Training: Processes and Outcomes," Journal of Counseling Psychology, VII (1960), 302.

APPENDIX H

PARTICIPANT RANKING FORM - PREDICTION

All of us are in a process of change throughout our lives. Yet, at certain times, some people change more than others as a result of particular experiences. This laboratory experience may affect our back-home behavior in relationship to students and faculty members with whom we work.

Which members of your T group, do you think, will change most in positive directions, and which will change least in their back-home teaching situation? Place in rank order, from most changing (number 1) to least changing, the names of all members of your group. Include your own name in the ranking.

Greatest Positive Change	1.
	2.
	3.
	4.
	5.
	6.
	7.
	8.
	9.
	10.
	11.
Least Positive Change	12.

Name of rater _____

APPENDIX I

TRAINER RANKING FORM - PREDICTION

To trainers:

Which members of your T group, do you think, will change most in positive directions, and which will change least in their back-home teaching situation? Place in rank order, from most changing (number 1) to least changing, the names of all members in your group, with the exception of your own name.

Greatest Positive Change 1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

Least Positive Change 12.

Name of rater _____

APPENDIX J

PERCEIVED SMALL GROUP SEMINAR ATMOSPHERE (PSGSA)

INTRODUCTION^a AND INSTRUMENT

Dear Student:

On the lines below are some sentences that are started but not finished. Complete each sentence to tell how you really feel. Let's try an example. Suppose the sentence reads this way:

A. Today I want to _____

To complete this sentence you might write "play basketball," "get a good grade," "finish my work early so I can go to a show," or many, many other things, depending on what you really want. Here's a harder one:

B. Compared with most years, this one _____

To finish this sentence you might write "didn't have as much rain," "was more interesting for me," or many other things to tell how you feel this year was like or different from most years.

Now start with the first sentence below, telling how you really feel about things in this class. Do every one. Be sure to make a whole sentence. There are no right or wrong answers. Each person will end up with a different sentence.

^aFormat taken from Robert Fox, Margaret B. Luszki and Richard Schmuck, Diagnosing Classroom Learning Environments (Chicago: Science Research Associates, 1966), pp. 105-106.

Hand in your paper as soon as you have finished. No student or teacher in this school will see your answers.

Note: All statements are directed at this class only.

1. This class _____.
2. The things I learn _____.
3. The teacher thinks I am _____.
4. To get along well in this group, you have to _____.
5. The amount of trust our teacher shows us _____.
6. Working with others in this class is _____.
7. If only our teacher _____.
8. We are expected to _____.
9. The other students in this class _____.
10. I don't _____.

APPENDIX K

INSTRUCTIONS FOR SCORING THE PSGSA

1. Read each statement carefully.
2. Assign each statement a point value based on the scale below.
 - 0 - Highly positive statement.
 - 1 - Slightly positive statement.
 - 2 - Neutral statement.
 - 3 - Slightly negative statement.
 - 4 - Highly negative statement.
3. If a statement is both positive and negative, weight the two, and decide if one is stronger than the other. If one does not predominate, score the statement as neutral.
4. Score blanks as neutral.
5. Negatively oriented sentence stems (Items 7 and 10) are to be scored as shown:
 - 0 - Negative sentence stem has been turned into a positive statement
 - 1 - No significant fault is recognized.
 - 2 - Slightly negative statement.
 - 3 - Moderately negative statement.
 - 4 - Extremely negative statement.

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