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PROJECT AND THE CONVENTIONAL PROGRAM  
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PROJECT AND THE CONVENTIONAL PROGRAM  
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TO OPENNESS AND ATTITUDE FORMATION

By

Donald J. Chase

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## ABSTRACT

### A COMPARATIVE STUDY OF THE COOPERATIVE MICHIGAN STATE UNIVERSITY-LANSING SERL PROJECT AND THE CONVENTIONAL PROGRAM OF STUDENT TEACHING WITH REFERENCE TO OPENNESS AND ATTITUDE FORMATION

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#### Purpose of the Study

It was the purpose of this study to compare the Michigan State University-Lansing SERL Project with the Conventional Program of student teaching, using openness and attitude formation as dependent variables, to answer two important questions: (1) Are the SERL participants more open to experience as a result of the atmosphere and situations provided by the program? (2) Do the SERL participants have a more positive attitude toward children as pupils and teaching as a profession as a result of the program?

SERL (Secundary Education Residency Lansing) is a unique, cooperatively developed pattern for providing the student teaching experience, permitting flexibility in assignment and interaction with parents, students, and community. The student teachers participate in daily group activities designed to facilitate their acquisition of

skills of organization, classroom management, and instruction with emphasis on the unique learning needs of a wide variety of youngsters. The Conventional Program allows for the placement of a student teacher with a single cooperating teacher for classroom experiences, with group activities scheduled one-half day weekly.

There are no simple generalizations or characteristics to use in correlation with teaching success. Openness and attitude formation appear to be acceptable variables to test student teaching programs as they function in the development of teaching behavior. While no person is entirely "open" or "closed," each person, according to conditions and his perceptions, lies somewhere on the open-closed continuum. The open person would be the ideal teacher type, exhibiting properties of creativeness, originality, positiveness, sensitivity, and flexibility among others. He is susceptible to change and new experience and has a positive regard for self and others. The closed person represents the opposite end of the continuum. Studies have shown the characteristic of openness highly correlated with teaching success.

People possess attitudes, and since behavior is a function of attitude, a change in attitude should result in a modification of behavior. Attitudes can change, and the principle of consistency-inconsistency provides a

basis for several theories regarding attitude formation and change.

A review of literature has shown that openness is an ideal characteristic in teaching, student teachers have attitudes toward teaching as a profession and children as pupils, attitudes can be changed, and different programs provide varying changes in attitudes.

### Methodology

The population of the study (N=44) consisted of all participants in the SERL Project and a random selection of participants in the Conventional Program. All student teachers were placed at random in their schools according to their disciplines and the availability of supervising teachers. No other criteria were used. Each student teacher was pretested with the Teacher Problems Q-sort and the Minnesota Teacher Attitude Inventory prior to their experience and then posttested with the same instruments at the end.

Based on numerous tests of validity and reliability, the instruments used promised to be the most appropriate instruments available to test the openness and attitude variables in the design of this study.

The Multivariate Analysis of Covariance was found to be the acceptable test for the data in this study. The level of significance was arbitrarily set at  $p < .01$ .

### Findings of the Study

Student teachers in the SERL Project were found to have more positive attitudes toward children as pupils and teaching as a profession than student teachers in the Conventional Program. The SERL student teachers were more open to their experience as a result of the SERL pattern of student teaching. The SERL student teachers showed a greater positive change in both attitude and openness than the Conventional student teachers. It had been anticipated that there would be a significant positive correlation between openness and attitude, but this was not supported within the accepted level of confidence. No correlation existed and indications were that the variables might even react in opposition to each other in some instances. Sex differences seemed to have no effects on either program in testing for changes in attitude and openness.

The socialization, the interaction of the group, appears to be, as a result of the interpretation of the data and the related literature, the most significant factor in the differential results of this study. The group, along with the contributions of the clinical consultant, the cooperating teacher, the college coordinator, and the cooperation of the many individuals and agencies providing the multitudinous variety of experiences, seems

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to make the SERL Project a superior pattern for providing the student teaching experience, with reference to openness and attitude formation.

## DEDICATION

To Jeanie, my wife, whose enthusiasm, love, and encouragement made it all possible.

To Meagan and Melissa, my daughters, who became an important part of this venture with their praise and support.



## ACKNOWLEDGMENTS

The cooperation of others was an important ingredient in this undertaking. Each unique contribution was invaluable as the study progressed. The writer wishes to express his deepest gratitude to all concerned:

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To Miss Jo Lynn Cunningham and Dr. Howard Teitelbaum of the Office of Research Consultation, for their invaluable assistance in the programming and interpretation of the data;

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## CHAPTER I

### NATURE OF THE STUDY

#### Introduction

Student teaching programs have undergone some radical changes during the past twenty years. Teacher education institutions have been faced with the need to move off campus, away from the campus laboratory schools, and seek student teaching experiences in cooperating public schools. As student teaching programs progressed and matured, teacher educators have recognized the opportunities and challenges of social and technological change, and new programs are being conceived, tested, adopted, and evaluated. This study is concerned with two programs at Michigan State University.

#### The Conventional Program

The Conventional Program of student teaching, used by a majority of institutions, has been a one-to-one assignment of cooperating and student teacher. In this mentor/apprentice approach, the student teacher is exposed to students, teaching, and school experiences in what some people feel is a real life situation. In effect, the student teacher lives the life of a teacher, exposed to the

everyday problems, successes, failures, and other experiences one might expect in a career teaching role.

In the Michigan State University Conventional Program, the student teacher, cooperating teacher, and college coordinator cooperate as a triad in the laboratory experience. The cooperating teacher and the college coordinator share responsibilities of observation, evaluation, and feedback, and, in continuing conferences with the student teacher, provide all experiences the structure permits. The college coordinator meets in a group seminar weekly with the students in his charge discussing such things as planning, discipline, techniques, problems, feedback procedures, and many other topics of interest to the student teachers.

### The SERL Project

There has existed, however, a difference of opinion on the value of the Conventional experience. With this difference in mind, a joint committee of representatives from the Instructional Division of the Lansing School District and the School of Teacher Education in the College of Education at Michigan State University, met in 1966 to resolve beliefs by both parties that a special kind of student teaching program, designed to train teachers for junior high schools, was needed if significant improvement in the quality of teachers at this level were to be made.



From this meeting developed the SERL (Secondary Education Residency Lansing) Project with the expressed purpose, . . . "to identify and develop methods of preparing teachers who can organize and manage instruction with emphasis on unique learning needs of the wide variety of youngsters in the typical junior high school classroom."<sup>1</sup>

Student teachers in the SERL Project are assigned in groups of 10-12 in each building. The college coordinator, the clinical consultant, the cooperating teacher, and the student teacher work cooperatively to fulfill the purposes and objectives of the project. Student teachers in the SERL Project participate more actively and directly than usual in working with social agencies and organizations in the community, and are much more likely to spend time in student homes and community activities than is typical of student teachers. In carrying out their in-school activities, students are assigned on a much more flexible basis than in the Conventional arrangement. They group and regroup themselves for particular purposes as they identify problems of instruction and problems of learning; analyze these problems and begin to develop hypotheses about solving them; develop plans for organizing and managing instruction to solve the identified problems;

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<sup>1</sup>Lansing School District and Michigan State University Student Teaching Office, SERL Project: A Project to Improve the Preparation of Teachers, Brochure, Lansing, Michigan.

and develop evaluation techniques to determine the success of their efforts. In the process, they examine and gain practice with different methods of organizing instruction such as small groups, large groups, individualized tutoring, and team teaching.

Many teacher educators disagree as to what constitutes a competent teacher and argue for the revision of teacher education programs. Some writers, such as Conant<sup>2</sup> and Koerner,<sup>3</sup> feel changes must be made in teacher preparation in such areas as: more depth in liberal arts preparation, fewer educational courses, and higher standards of evaluation in teacher education.

However, emerging from the behavioral sciences is the concept of development of creative, mature, and productive individuals who are open to their experiences and free to grow in directions that seem most important to them. Be it Kelley's<sup>4</sup> "Fully-Functioning Self," Bill's<sup>5</sup>

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<sup>2</sup>J. B. Conant, The Education of American Teachers (New York: McGraw-Hill, 1963).

<sup>3</sup>J. D. Loerner, The Miseducation of American Teachers (New York: Houghton Mifflin, 1963).

<sup>4</sup>E. C. Kelley, Education For What Is Real (New York: Harper, 1947).

<sup>5</sup>R. E. Bills, About People and Teaching (Lexington: Bureau of School Services, University of Kentucky, 1955), p. 28.

"Open Person," Combs'<sup>6</sup> "Perceptual Self," Maslow's<sup>7</sup> "Self-Actualizing Person," Rokeach's<sup>8</sup> "Open Mind," or Rogers'<sup>9</sup> "Process Person," all are susceptible to their environment, perceive through past experiences, and develop within the climate in which they find themselves. The perceptual theory places greatest emphasis on how things are seen by the behaver. The experiences a person has affect which of his potentials will develop. The kinds of experiences a person has determine the extent to which he will use or be able to use a greater portion of his potential. Early experiences can build the kind of structure which is permissive, which cause the individual to see himself as adequate and therefore able to explore new experiences and develop more potential; or they can produce the opposite, a restrictive structure.

The earlier the experiences that will develop openness are provided, the greater the possibility of developing additional potential. If the earlier experience

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<sup>6</sup>A. W. Combs and D. Snygg, Individual Behavior (New York: Harper, 1959).

<sup>7</sup>A. H. Maslow, Toward a Psychology of Being (Princeton: D. Van Nostrand, 1962).

<sup>8</sup>M. Rokeach, The Open and Closed Mind (New York: Basic Books, 1960).

<sup>9</sup>C. Rogers, "A Theory of Therapy, Personality, and Interpersonal Relationships as Developed in the Client-Centered Framework," in Psychology: A Study of Science, ed. by Sigmund Koch (New York: McGraw-Hill, 1959), pp. 184-256.

is restrictive it builds a kind of structure that makes it less possible to expand into other areas. As a person interacts, he forms a structure of knowledge, a concept of self, a concept of other people, and a concept of the world about him. As he builds his structure of knowledge and structure of personality, he is determining by the concepts formed how extensive his future experiences can be and how much he can move in the direction of realizing his potential.

If, in his interaction with other individuals in the society, he has many positive experiences, he develops the kind of personality and knowledge structure that makes it possible for him to dare to seek new and different experiences that increase his range of understanding and skills. Positive experiences are those which bring satisfaction to the individual. Any experience that increases the individual's belief in his worth and his ability to solve problems that confront him is a positive experience.

Wiles states, "A person with sufficient positive experience develops a self concept that enables him to be more open to experience."<sup>10</sup> Bills has defined openness as a goal of teacher education and indicates, . . . "the teaching which makes the real difference in preparing

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<sup>10</sup> Kimball Wiles, Supervision For Better Schools (3rd ed.; Englewood Cliffs, New Jersey: Prentice Hall, 1967).

effective teachers is that which goes beyond knowing and vitally effects being."<sup>11</sup> ". . . this teacher is a growing, thinking, incorporating, experiencing person who continues to remain in a process of change and becoming. He is a person who is open to his experience and its meaning for him."<sup>12</sup>

Both Wiles and Bills have indicated that not all teachers are equally open to experience, but their behavior, perception of self, skills, role, and interpretations can be changed by situations that release potential, provide greater feelings of adequacy, and can be perceived as ones in which improvement is possible and valued.<sup>13</sup>

#### Purpose of the Study

This study has proposed to compare the Michigan State University Conventional Student Teaching Program with the cooperative Michigan State University-Lansing School System SERL Project as alternative patterns for the student teaching experience as means of providing an open pattern for positive experiences. Two important

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<sup>11</sup>Robert E. Bills, "The Classroom Teacher, Mental Health, and Learning," Mental Health and Teacher Education, The Association for Student Teaching, 46th Yearbook (Dubuque: Wm. C. Brown Co., 1967), pp. 1-17.

<sup>12</sup>Ibid.

<sup>13</sup>Wiles, op. cit.; Bills, "The Classroom Teacher . . ."

questions for consideration are: As compared to the Conventional Program;

1. Are the SERL participants more open to experience as a result of the atmosphere and situations provided by the program?
2. Do the SERL participants have a more positive attitude towards pupils and teaching as a profession as a result of the program?

It is the purpose of this study to compare the SERL Project with the Conventional Student Teaching Program, using openness<sup>14</sup> and attitude formation<sup>15</sup> as variables, to provide answers to the questions posed.

### Hypotheses

As a result of the questions raised and theory presented, the following hypotheses are proposed:

1. Student teachers in the SERL Project will have more positive attitudes toward children as pupils and teaching as a profession than student teachers in the Conventional Program, as a result of their laboratory experience.
2. Student teachers in the SERL Project will be more open to experience than student teachers in the Conventional Program, as a result of their laboratory experience.

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<sup>14</sup>For definition, explanation, refer to Chapter II, pp. 21-30.

<sup>15</sup>For definition, explanation, refer to Chapter II, pp. 30-41.

3. There will be a greater positive change in attitudes in the SERL group of student teachers than in the Conventional group.
4. There will be a greater positive change in openness in the SERL group of student teachers than in the Conventional group.

### Sub-Hypotheses

1. There will be a significant correlation between openness and attitude. Those people who are more open will have more positive attitudes.
2. Sex differences will have an effect on changes in openness and attitude in both the SERL and Conventional Programs.

### Definition of Terms

Some of the terms used have a variety of meanings in educational literature. The following explanations of terms give the meaning applied to each term as it has been used in this study.

Student Teacher: A college student who is acquiring practical teaching experience and skill under the guidance of a supervising teacher or other qualified person.<sup>16</sup> A student teacher at Michigan State University

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<sup>16</sup>Carter V. Good, Dictionary of Education (New York: McGraw-Hill Book Company, Inc., 1959), p. 530.

has Junior or Senior standing in the College of Education, having completed at least 105 term hours, has a 2.0 grade point average, on a 4.0 point scale, in major field, university basics, and overall college work. The student must also have a 2.0 grade point average and successful completion of each education course prerequisite to student teaching.<sup>17</sup>

Cooperating Teacher: An experienced teacher employed in the Lansing school system to work with students and selected to supervise college students during their student teaching experience.<sup>18</sup> This person is also referred to as a supervising teacher.

College Supervisor: A member of the college or university faculty who regularly visits or observes student teachers. Supervisors are sometimes identified as special supervisors when they supervise in a special field or in certain subjects or grade levels, and as general supervisors when they supervise student teachers regardless of specialties. The college supervisor usually has additional responsibilities for on-campus seminars or college courses.<sup>19</sup> Supervisors at Michigan State are

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<sup>17</sup>Michigan State University, Catalog of Courses and Academic Programs, 1970, p. 124.

<sup>18</sup>Good, op. cit., p. 539 (modified for use in this study).

<sup>19</sup>Ibid.



general supervisors and are also called college coordinators.

Clinical Consultant: The clinical consultant is a teacher employed jointly by the local school district and the university, working in a SERL building on a full-time basis, responsible for all student teaching assignments in the building, providing instruction to student teachers on such matters as lesson planning and discipline, planning and coordinating SERL group activities, and providing leadership in counseling, evaluation, and feedback.

Personality: A personally symbolized reality composed of the unique and dynamic (though relatively stable) meanings the individual describes to self, other people, and universe, and translated into unique and purposive behavior.<sup>20</sup>

Intelligence: A dynamic capacity for problem solving which develops and expands in the course of purposeful living.<sup>21</sup>

Meanings: The role of the organism's behavior system in mediating the relation between signs and

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<sup>20</sup>Russell R. Renz, Self Directed Learning for Educational Leadership (Lexington: Bureau of School Service, University of Kentucky, 1958), p. 6.

<sup>21</sup>Ibid.

significants which occurs in the organism whenever a sign is received (decoded) and produced (encoded).<sup>22</sup>

Experience (noun): This term is used to include all that is going on within the envelope of the organism at any given moment which is potentially available to awareness. It includes events of which the individual is unaware, as well as all the phenomena which are in consciousness. Thus it includes the psychological aspects of hunger, even though the individual may be so fascinated by his work or play that he is completely unaware of the hunger; it includes the impact of sights and sounds and smells on the organism, even though these are not in the focus of attention. It includes the influence of memory and past experience, as these are active in the moment, in restricting or broadening the meaning given to various stimuli. It includes all that is present in immediate awareness or consciousness. It does not include such events as neuron discharges, or changes in blood sugar, because these are not directly available to awareness. It is thus a psychological, not a physiological definition.<sup>23</sup>

Experience (verb): To experience means simply to receive in the organism the impact of the sensory or physiological events which are happening at the moment.

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<sup>22</sup>Charles E. Osgood, George J. Suci, and Percy H. Tannenbaum, The Measurement of Meaning (Urbana: University of Illinois Press, 1957), pp. 2-3.

<sup>23</sup>Rogers, op. cit., p. 197.

Often this process term is used in the phrase "to experience in awareness" which means to symbolize in some accurate form at the conscious level the above sensory or visceral events. Since there are varying degrees of completeness in symbolization, the phrase is often "to experience more fully in awareness," thus indicating that it is the extension of this process toward more complete and accurate symbolization to which reference is being made.<sup>24</sup>

Perception: Perception is that which comes into consciousness when stimuli, principally light or sound, impinge on the organism. When we perceive "this is a triangle," "that is a tree," "this person is my mother," it means that we are making a prediction that the objects from which the stimuli are received would, if checked in other ways, exhibit properties we have come to regard, from our past experience, as being characteristic of triangles, trees, mother.<sup>25</sup>

Openness: Characteristics of openness are best described by Bills as,

. . . problems become more central. There is a gradual owning of experience. The client even begins to feel that perhaps he has some worth, and certainly that other people have worth. He begins to own his own feelings, and internal communication becomes much more possible. He begins to see himself as responsible for the

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<sup>24</sup>Ibid., pp. 197-198.

<sup>25</sup>Ibid., p. 199.

solution of his own problems. He begins to deal more with the central aspects of problems; and becomes focused, first in the present, and later toward the future.<sup>26</sup>

Closedness: Most characteristic of this stage in therapy are things such as negative attitudes toward self and/or other people, dealing with the small and the peripheral aspects of problems, concern with the external aspects of the problems, locating the locus of responsibility for the problem outside of oneself, a concern for symptoms of the problems rather than for the problem itself, and an overconcern with the past and/or present . . .<sup>27</sup>

#### Scope and Limitations

The population of the study was composed of:

(1) 18 student teachers from the 1970 Fall Term SERL Project, and (2) 26 student teachers from the Conventional Program. The population (N=44) consisted of all participants in the SERL Project, and a random sample of the Conventional Program. No efforts were made to match grade levels, sex, or discipline. New suburban schools as well as older, inner-city type schools in Lansing were represented in both groups. Schools with innovative

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<sup>26</sup>Robert E. Bills, "Insights For Teaching From Personality Theory: Intelligence and Teaching," in The Nature of Teaching, ed. by Louise M. Berman (Milwaukee, Wisconsin: University of Wisconsin, 1962), p. 59.

<sup>27</sup>Ibid.

programs of all types for both teachers and pupils, as well as the more structured traditional programs, were equally represented in both groups tested. No efforts were made to place the more academically competent or emotionally mature students in either group. All participants, in both groups, were placed at random in the schools according to discipline and availability of cooperating teachers. In final evaluation, all student teachers were rated as successful. No attempt was made to measure level of success.

#### Delimitation

Many educators believe that teacher education institutions should provide programs to help student teachers become and/or remain more open to their experience, and that the laboratory and clinical experiences should be perceived in ways that permit openness to remain or to develop openness as a central focus of the learning process.<sup>28</sup> Positive attitudes toward children as pupils and teaching as a profession should be a prime effect of these programs that develop openness. This study is concerned only with the effects of the SERL Project and the Conventional Program on the openness and attitude formation of the student teachers. It is assumed from previous tests that the instruments used, as described in Chapter

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<sup>28</sup>Ibid.

III, are valid and measure the desired variables. No efforts were made to assess the openness of the supervising teachers or college coordinators. Freeze, in a study of openness as a change factor, found that no significant change in openness occurred during student teaching as a result of cooperating-student teacher or college coordinator-student teacher contact.<sup>29</sup> Consequently, it will be assumed that the programs, and not just the personal contacts with supervisors, will be the independent variables exerting whatever differences in effects are obtained.

McLevie, in a study of student teacher concerns, indicated women gained more from their student teaching experience than men, and that women as a group showed significantly greater development of pupil oriented concerns than did men during their student teaching.<sup>30</sup> With data available, an effort was made to differentiate the openness and attitude formation variables as a function of sex on the effectiveness of the two programs.

No attempt was made in this study to investigate other variables such as aspects of student's personality,

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<sup>29</sup>Chester R. Freeze, "A Study of Openness as a Factor in Change of Student Teachers" (unpublished Ph.D. dissertation, University of Alabama, 1963).

<sup>30</sup>John G. McLevie, "An Examination of Teaching Concerns Reported by Secondary Student Teachers" (unpublished Ph.D. dissertation, Michigan State University, 1970).

age, marital status, intelligence, and formal professional training.

### Some Basic Assumptions

Underlying the basic theoretical reference of this study are the following assumptions from perceptual theory related to the nature of man's behavior:

1. Man's behavior results from and is relevant and purposeful to his perceived situation.
2. Man's behavior always is consistent with his perception of desirable ways to maintain adequacy and enhance self.
3. Man's reality is his perceptual field in which the world of objects is void of meaning until he invests objects with meaning.
4. Man strives to maintain physical and psychological adequacy.<sup>31</sup>

### Organization of the Study

Chapter I describes the general nature of the study. The purpose, hypotheses and operational definitions are stated. The descriptions of the SERL Project and Conventional Program are included as well as the scope, basic assumptions, and organization of the study.

Chapter II is devoted to a review of the literature related to openness and attitude formation and its implications for teacher education.

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<sup>31</sup>Richard Jay Elliott, "Changes in Openness of Student Teachers as a Function of Openness of Supervising and Cooperating Teachers" (unpublished Ph.D. dissertation, University of Alabama, 1964).

Chapter III describes the design of the study. Methodology, Q-sorts, the instruments and their validity are discussed.

Chapter IV is devoted to the presentation and interpretation of the data. Statistical tests of the hypotheses are made and a presentation is made of the findings with relevance to the hypotheses. The findings are discussed.

Chapter V includes the summary and conclusions derived from the study. Recommendations for further research are also presented.



## CHAPTER II

### REVIEW OF RELATED LITERATURE

In spite of the impressive number of studies on teacher effectiveness conducted within the past decade, no simple generalizations can be drawn at present about characteristics of teachers and their behavior in the classroom.<sup>1</sup> No widely accepted measures of teacher competence correlated with teaching success have been developed and generally accepted. To some theorists, environment is the highly significant factor in development of successful teachers, while others believe the early life experiences are more fundamental. One theory may emphasize relationships existing between people, while another emphasizes the place of learning in the development of behavior. In the design of this study, an effort was made to isolate two of the more important and accepted perceptual variables commonly recognized as indicators of teaching success to test the environment as a place of learning in the development of teaching

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<sup>1</sup>T. A. Lamke, "Introduction," Review of Educational Research, Vol. 25 (June, 1955), 192.

behavior. Myers and Torrance,<sup>2</sup> Benson,<sup>3</sup> Emmerling,<sup>4</sup> Freeze,<sup>5</sup> Engle,<sup>6</sup> Bills,<sup>7</sup> Wiles,<sup>8</sup> and others believe in the concept of openness as an essential condition of successful teaching. Morsh and Wilder,<sup>9</sup> Harvey,<sup>10</sup> Jacobs,<sup>11</sup>

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<sup>2</sup>R. E. Myers and Paul E. Torrance, "Can Teachers Encourage Creative Thinking?" Educational Leadership, XIX (December, 1961), 156-159.

<sup>3</sup>Arthur J. Benson, "An Analysis of a Guidance Workshop in Terms of Certain Characteristics of its Participants" (unpublished Ph.D. dissertation, Auburn University, 1960).

<sup>4</sup>Frank C. Emmerling, "A Study of the Relationships Between Personality Characteristics of Classroom Teachers and Pupil Perceptions of These Teachers" (unpublished Ph.D. dissertation, Auburn University, 1961).

<sup>5</sup>Freeze, op. cit.

<sup>6</sup>Harry A. Engle, "A Study of Openness as a Factor in Change" (unpublished Ph.D. dissertation, Auburn University, 1961).

<sup>7</sup>Bills, "The Classroom Teacher. . . ."

<sup>8</sup>Wiles, op. cit.

<sup>9</sup>Joseph H. Morsh and Eleanor W. Wilder, "Identifying the Effective Instructor: A Review of the Quantitative Studies, 1900-1952," Research Bulletin AFPTRC-TR54:44, United States Air Force Personnel Training Research Center, San Antonio, 1954.

<sup>10</sup>P. J. Harvey, "Teacher Attitudes: Subject Matter and Human Beings," Educational Leadership, Vol. 27 (April, 1970), 686-691.

<sup>11</sup>Elmer B. Jacobs, "Attitude Change in Teacher Education: An Inquiry Into the Role of Attitudes in Changing Teacher Behavior," Journal of Teacher Education, Vol. XIX, No. 4 (Winter, 1968), 410-415.

Berelson,<sup>12</sup> Sherif,<sup>13</sup> and others make an excellent case for attitude as an important condition in perception. And if we accept behavior as a function of perception,<sup>14</sup> attitude becomes an acceptable characteristic of successful teaching. Objectively, Morsh and Wilder found that attitude towards teachers and teaching seems to bear a positive relation to teacher success measured in terms of pupil gain.<sup>15</sup> Consequently, of the multitude of variables that have been identified with successful teaching, the concepts of openness and attitude formation will be the focus of evaluation on the topical programs. The review of literature will concentrate on openness and attitudes and their implications in education and student teaching.

### Openness

What we do, the way we behave is consistent with our perceptions of our unique environment. In similar situations, our perceptions may be entirely different from

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<sup>12</sup>Bernard Berelson and G. Steiner, Human Behavior: An Inventory of Scientific Findings, Chapter 14 (New York: Harcourt, Brace and World, 1964), pp. 557-585.

<sup>13</sup>Sherif, Sherif, and Nebergall, Attitude and Attitude Change: The Social Judgement-Involvement Approach (Philadelphia: W. B. Saunders Co., 1965).

<sup>14</sup>Bills, About People and Teaching.

<sup>15</sup>Morsh and Wilder, op. cit., pp. 5-7.

another person who has different beliefs and a different point of view. Bills states, "the most important factors in determining our perceptions are the beliefs we hold about ourselves and other people which are learned in interaction with them."<sup>16</sup> Interaction with people and varied experiences with people are inevitable and our openness to these experiences seems to be of prime importance in our development as individuals and as teachers.

The concept of openness provides a frame of reference for the measurement of characteristics generally accepted as ideal for effectively working with other people. The open person represents an ideal type as we view openness vs. closedness as opposite ends of a continuum. Since people behave in varying degrees of openness or closedness as their perceptions and conditions vary, it can be stated that no person is entirely open or entirely closed. Each, however, maintains certain characteristics which reserve a place on the continuum for his unique self.

The open person is continually developing, changing, and learning. He is highly susceptible to change and has personality characteristics that allow him to work effectively with other people. He is creative and

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<sup>16</sup>Bills, About People and Teaching, p. 19.

original. He is ready and willing to accept new challenges and new experiences, and is able to evaluate his experiences in terms of evidence coming from his own senses. The open person does not rely upon authority for the solution of his problems, but uses his evaluation, and changes are made only on the basis of new evidence. Since he readily accepts change, the open person is highly receptive to new ideas and is able to find security in change.<sup>17</sup> The open person will assume responsibility for his actions. He has a positive regard for himself as he is a positive person believing in his own dignity and worth as an individual. He believes others have the same regard for him as a person. He acknowledges his limitations but is not bound by them. He accepts criticism in his stride and maintains perspective in varying degrees of success and failure.<sup>18</sup> Maslow summed up the open person's positiveness by saying:

They can accept their own human nature with all its shortcomings, with all its discrepencies from the ideal image without feeling real concern. It would convey the wrong impression to say that they are self-satisfied. What we must say further is that they can take the frailties

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<sup>17</sup>E. M. Berger, "The Relation Between Expressed Acceptance of Self and Expressed Acceptance of Others," Journal of Abnormal Social Psychology, Vol. XLVIII (October, 1952), 778-782.

<sup>18</sup>T. M. Pierce, "The Role of College Teaching," in Preparing College Teachers (Lexington: Bureau of School Service, University of Kentucky, 1959), pp. 92-94.

and sins, weaknesses and evils of human nature in the same unquestioning spirit that one takes or accepts the characteristics of nature. One does not complain about water because it is wet, or about rocks because they are hard, or about trees because they are green. As the child looks out upon the world with wide uncritical, innocent eyes, simply noting and observing what is the case, without either arguing the matter or demanding that it be otherwise, so does the self-actualization person look upon human nature in himself and in others.<sup>19</sup>

In addition to having a positive regard for self, open people have a positive regard for others. They believe others are of equal worth and are deserving of a chance to develop their own abilities as best they can. They believe others have the right to their own beliefs and goals and feel no compulsion to force changes to their perceptions. The open person also has a high regard for others.<sup>20</sup> He has the desire to identify with other people. Combs describes this characteristic as follows:

Because adequate persons have an extensive feeling of identification with other people, they can be counted upon to behave in ways that will not be disastrous or destructive to their fellow men. They can be counted upon to behave in responsible and effective ways because they have a deep feeling of oneness with other people. Such people are quite likely to show a great deal more compassion and truly democratic concern for their fellow man.<sup>21</sup>

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<sup>19</sup>A. H. Maslow, Motivation and Personality (New York: Harper and Company, 1954), p. 54.

<sup>20</sup>Rogers, op. cit.

<sup>21</sup>Arthur W. Combs, "Learning More About Learning" (Washington, D.C.: Association for Supervision and Curriculum Development, 1959), p. 19.

A study by Benson showed people who were more flexible in their concept of themselves and others changed their guidance programs as the result of a workshop more than people who were less flexible in their concept of themselves and others.<sup>22</sup> His study lends support to the concept that open people are considered to be more adaptable to change and new experiences. Emmerling stated that, "the open teacher is highly susceptible to change and is continually developing, learning, and changing."<sup>23</sup> Engle's study found that teachers who are more open to their experience can change more readily and thus profit more from their educational experiences.<sup>24</sup> Bills concluded that the open person represents an ideal type.<sup>25</sup>

The closed person provides the other extreme on the continuum, and the characteristics are much the opposite of the open person. According to Engle, individuals show varying degrees of openness or closedness as conditions vary.<sup>26</sup> The closed person is psychologically maladjusted, tends to deny awareness, and distorts significant experiences. He is often unable to cope with life,

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<sup>22</sup>Benson, op. cit.

<sup>23</sup>Emmerling, op. cit., p. 67.

<sup>24</sup>Engle, op. cit.

<sup>25</sup>Bills, "The Classroom Teacher. . . ."

<sup>26</sup>Engle, op. cit., p. 88.

cannot get along with others, and is inconsistent. When threatened he tends to distort grossly the data before him.<sup>27</sup> He is over-reliant on authority, is sensitive to external, irrelevant pressures, and is unable to evaluate information independent of source.<sup>28</sup> The closed person has a negative regard for himself, others, and the world in general. He is defensive, feels unwanted, unliked, and lacking in ability. He dislikes and will not seek change. His concept of self influences his concept of others, consequently he believes in the worth of no one. The less open teacher feels frustration and hostility toward educational change, and is not well equipped to understand students or to help them solve real problems.<sup>29</sup>

The open person works well with others. He perceives problems with a high degree of sensitivity while the closed person may not even be aware a problem exists. The closed person ignores a problem or pleads helplessness; an open person says, "It can be done." The open person is concerned with the central aspects of problems. He meets a problem squarely and makes adjustments. The closed person deals with problems of a peripheral nature. The open person is concerned with the self-aspect of problems; what can he do to change to solve problems?

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<sup>27</sup>Rogers, op. cit.

<sup>28</sup>Rokeach, op. cit., p. 52.

<sup>29</sup>Engle, op. cit., p. 90.



The closed person is more concerned in changing others, ideas, or things. He does not accept that his rigidity to change may result in the failure to solve a problem. The open person is internalized; responsible for his own decisions, his own actions. Conversely, the closed person views responsibility as external, totally reliant on authority and sees anyone but himself as responsible. The open person is concerned with the future rather than the past or present. The past is only a means for better understanding of the future. To the closed person the past often represents an end to be worshipped as a source of security. Rokeach gives some examples of a closed person's orientation to the time perspective of problems:

There are certain kinds of people whose narrow time perspectives are revealed in a relatively great preoccupation with the present, with little regard for the past or concern with the future. This is shown, for example, in infant's behavior, or the behavior of the highly impulsive adult. A more pathological case in point is the psychopath who typically acts in a present-oriented manner because of unrestraining superego. Another example that comes to mind is the 'beat' generation, who act as if they are literally trapped in the present. Perhaps this is so because today's youth has turned its back on the past, and at the same time feels compelled to hold off the future with rear guard action.<sup>30</sup>

Because open people are more aware of their experiences and because they do not tend to distort their perceptions, Emmerling concluded that they will be more

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<sup>30</sup> Rokeach, op. cit., p. 52.

aware of the importance of sensitive human relations with their students than will closed people. For this reason the open teacher will be likely to provide a supportive, freeing, and facilitating, learning climate.<sup>31</sup>

It is also believed that people who are more open to their experience will be likely to organize in ways which will provide the pupil with the freedom of opportunity to identify, discuss, and solve intellectual problems which are of particular importance to him.

Myers and Torrance studied the personality characteristics of teachers who were resistant to change. They identified the following characteristics: authoritarianism, defensiveness, domination by time, insensitivity to pupil's needs, low energy level, preoccupation with information giving functions, intellectual inertness, disinterest in promoting initiative in pupils, preoccupation with discipline, and unwillingness to give themselves to the teaching-learning compact.<sup>32</sup> None of these attributes are characteristic of the open person, and are not generally accepted as characteristics of the ideal teacher.

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<sup>31</sup>Emmerling, op. cit.

<sup>32</sup>Myers and Torrance, op. cit., pp. 156-159.

Openness: Implications for Education

There are a number of implications of the values an open person has for teaching in the statements and studies just cited. Bills brought these into sharper focus when he listed a number of specific implications of these characteristics for working with people and more especially for education.

1. To teach a person we must understand him and this is most easily accomplished by trying to see him and his world as he sees them.
2. Our first learnings take precedence over later ones.
3. Consistency of perception is a fundamental characteristic of people.
4. Education must start with the problems of people.
5. Since needs, values, and attitudes are such important determiners of perception, education must seek to help students to know what needs, values, and attitudes are important to them and to consider these fully and in relation to each other.
6. Personal perceptions are not readily changed through the introduction of objective evidence.
7. Personal perceptions are most readily changed through a reexamination of needs, values, attitudes and the possible meanings of previous experience.
8. The learning of adequate perceptions of self and other people is most easily accomplished in warm interaction with people.
9. People grow most rapidly in the absence of threat.

10. Physiological factors are important determiners of perceptions and schools must do what they can to help.
11. Opportunity for a variety of experiences is necessary for the formation of adequate perceptions.
12. Effective teaching aids growth and thereby paves the path for future growth.
13. Education must start where the child is and permit him to determine his own direction and pace.<sup>33</sup>

### Attitude

All people, regardless of their position in a society, possess certain expectations of the societal groups and institutions with whom they associate.<sup>34</sup> As a result of these expectations people behave in various ways during their interaction with the society or group in which they find themselves. Sherif states, "It is only from behavior that we can infer that an individual has an attitude."<sup>35</sup> An attitude cannot be observed directly. We are forced to conclude, from activities of different cultures, that attitudes are acquired and that through attitude formation, the individual relates himself, psychologically, to objects or persons about his environment. His attitudes become constituent parts of

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<sup>33</sup>Bills, About People and Teaching, pp. 31-53.

<sup>34</sup>Leon Festinger, A Theory of Cognitive Dissonance (Evanston, Illinois: Row, Peterson, 1957).

<sup>35</sup>Sherif, op. cit., p. 6.

his self (ego) system. By definition, therefore, attitudes have emotional and motivational aspects inseparably intertwined with cognitive content. Their function in the self system partially accounts for the fact that attitudes are not momentary affairs. Attitudes refer to stands the individual upholds and cherishes about objects, issues, persons, groups, or institutions. The referents of a person's attitudes may be a "way of life"; economic, political, or religious institutions; family, school, or government. Having an attitude means the individual is no longer neutral toward the referents of an attitude. He is for or against, positively inclined or negatively disposed in some degree toward them--not just momentarily, but in a lasting way, as long as the attitude in question is operative. In short, attitudes are inferred from characteristic and consistent modes of behavior toward some class of objects, persons, events, and issues over a time span.<sup>36</sup> Thus, behavior is taken to be a function of attitude, and a change in attitude should result in a modification of behavior, be it good or bad.

### Theories of Attitude Change

Cognition denotes the image or perception of the world held by the individual. How he responds to things, persons, and events are in part shaped by the way they are

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<sup>36</sup>Ibid.

perceived. These cognitions are selectively organized and integrated into a system which provides meaning and stability for the individual person as he goes about his business in the everyday world. Human cognitive reactions like perceiving, thinking, imagining, and reasoning all represent efforts after meaning. In terms of the person's cognitive system, therefore, there is a continual striving for consistency, a push toward congruous, harmonious, fitting relationships between the cognitive elements or between the thoughts, beliefs, values, and actions that make up a structure of cognitions about some object or set of events. Thus, when inconsistency occurs, some psychological tension is presumably set up in the individual, thereby motivating his behavior in the direction of reducing this inconsistency and reestablishing harmony.<sup>37</sup> Many researchers have built theoretical models, starting with the principle of consistency-inconsistency, to explain attitude formation and attitude change. Almost all deal with changes toward restoration of consistency, although each may focus on different modes and specify different theoretical determinants of resolution. Osgood and his associates developed the principle of congruity and the effects on attitude change. In their scheme, a given object is first evaluated on a scale running from good to

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<sup>37</sup>Arthur R. Cohen, Attitude Change and Social Influence (New York: Basic Books, Inc., 1964).

bad. Since a person has an infinite number of attitudes toward a variety of objects, some of his evaluations will be consistent with one another, others inconsistent.<sup>38</sup> Heider, in his balance model, explained attitude change, in terms of the push to resolve inconsistency. Its basic postulate is that if people seek balance or congruence between their beliefs and their behaviors toward objects, then their attitudes can be changed by modifying either the beliefs or the behaviors.<sup>39</sup> Studies by Rosenberg<sup>40</sup> and Carlson<sup>41</sup> seem to confirm Heider's ideas. Festinger's model for dealing with attitude change is the consonance-dissonance model. According to Festinger, cognitive dissonance is a psychological tension having motivational characteristics. The theory of cognitive dissonance concerns itself with the conditions that arouse dissonance in an individual and with the ways in which dissonance might be reduced.<sup>42</sup>

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<sup>38</sup>C. E. Osgood, "Cognitive Dynamics in the Conduct of Human Affairs," Public Opinion Quarterly, Vol. 24, 341-365.

<sup>39</sup>Fritz Heider, The Psychology of Interpersonal Relations (New York: John Wiley & Sons, 1958).

<sup>40</sup>M. J. Rosenberg, "Cognitive Structure and Attitudinal Effect," Journal of Abnormal and Social Psychology, Vol. 53 (1956), 367-372.

<sup>41</sup>E. R. Carlson, "Attitude Change Through Modification of Attitude Structure," Journal of Abnormal and Social Psychology, Vol. 52 (1956), 256-261.

<sup>42</sup>Festinger, op. cit.

All three of the models, or theories, based on inconsistency have implications for understanding a person's behavior as conditions disrupt cognitive structure and the individual seeks means to resolve the inconsistency. However, the dissonance formulation is unique in that it has special implications about individual behavior. Because of its unique emphasis on the individual's behavior in creating dissonance for himself as he engages in behavior discrepant from his cognitions, the dissonance model is uniquely equipped to explain the effects of situations where the person is induced to do or say something he does not believe in or wants to say. Thus, attitude change may be analyzed in terms of this strain toward consistency.

#### Implications for Student Teaching

A student teacher's expectations of his role as a student teacher, his perceptions of that role and his relationships in fulfilling that role will either be relatively consonant or dissonant. If the role and the perceptions are in consonance, the student teacher may make the transition from the teacher education program to the professional role with little significant conflict and attitude change. If, however, dissonance has occurred, such dissonance may result in tension reducing behavior, of which attitude change may be a distinct, definite possibility.



As an extension of the Festinger theory of cognitive dissonance, Waisanen suggests that in the interaction of the self-social systems notable pressures toward mutual stability are exerted, and that as individuals perceive less than a full measure of goal-achievement, pressures toward change may be exerted.<sup>43</sup> Waisanen notes that where dissonance occurs, one response to reduce the condition is to change one's attitude thereby reducing the dissonance. A person in conflict has three alternatives: (1) he can retreat from either his self system or his social system; (2) he can attempt to change either system; or (3) he can resign to goallessness.

A student teacher who perceives conflict, with resulting dissonance, seeks to achieve new stability. As previously stated by Waisanen, the person has three alternatives: retreat, change, or goallessness. Although it is possible for a student teacher to retreat by withdrawing from the program, this course seems likely only in extreme cases, since the student has a commitment to the required experience as the only method for gaining full certification as a teacher. Goallessness is not a probable alternative as such behavior will not be accepted by the teacher education institution. Therefore,

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<sup>43</sup>F. B. Waisanen, "Stability, Alienation, and Change," The Sociological Quarterly, Vol. IV (1963), 18-31.

the student teacher normally has but one alternative; that of changing either his attitude or the institution where he is assigned for his experience. Since he is a trainee and there for just a short time, it is unlikely the latter will occur. Becker states, "Outsiders are systematically prevented from exerting any authority over the institution's operations because they are not involved in the web of control and would be destructive to the (established) institutional organization."<sup>44</sup> Since the student teacher is an outsider to the "normal" organization, he would be expected to conform to the institution's policies, and his influence on change would be relatively minor. Consequently, attitude change seems to provide the only course for reducing dissonance, and changes should be observable as the student teacher's expectations and perceptions are altered during his laboratory experience.

It seems likely that all student teachers will experience dissonance to some extent. The perceptions and expectations of each unique individual could hardly be in consonance with the multitudinous variety of experiences that occur in student teaching programs in

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<sup>44</sup>H. S. Becker, "The Teacher in the Authority System of the Public School," in Complex Organizations, ed. by A. Etzioni (New York: Holt, Rinehart, and Winston, 1961), pp. 243-251.

the many cooperating schools. Shaplin supports this contention with these arguments:

Teaching is behavior, and as behavior is subject to analysis, change, and improvement. The purpose of practice, as with all aspects in the training of teachers, is to take the novice where he is (at induction) and work toward improved teacher behavior. . . .

Much of the habitual behavior which individuals have developed in other contexts is inappropriate for the teaching situation, since most individuals have developed consistent ways of behavior in a variety of roles, such as a member of the family, as students. . . .

Basic attitudes and orientations toward people developed in these contexts are frequently in direct conflict with the specialized role expectations to be developed in teaching. . . .

The assumption is made that practice conditions provide the kind of analysis of teaching which will enable the (student) teacher to learn to control his behavior.<sup>45</sup>

Charters also stated that,

the teacher's participation in the system of social relationships which comprise the student teaching experience are of particular significance in that these relationships shape the teacher's role conceptions and his attitudes and values concerning himself, his colleagues, his clients, and the teaching-learning process.<sup>46</sup>

The student teaching experience provides the student teacher with his first extended opportunity to examine the

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<sup>45</sup>J. T. Shaplin, "Practice in Teaching," The Harvard Educational Review, XXXI (Winter, 1961), 33-59.

<sup>46</sup>W. W. Charters, in Handbook of Research on Teaching, ed. by N. L. Gage (Chicago: Rand McNally, 1963), pp. 749-752.

applicability of previously formed attitudes and perceptions about teaching. And, as has been suggested, if the conceptual expectations of the student teacher are not in consonance with these perceptions and attitudes once he begins his experience, then his most likely alternative is to change his attitude.

### Attitude and Teacher Education Programs

One of the more important factors for the development of student teacher fulfillment is the kind of setting, social and physical, in which he finds himself. Many facets of the structured environment of the program help or hinder the individualization of learning and the development of self as an open person. Proper climate is chiefly established by attitudes which are to the way the student teacher perceives self and others, and to the way both perceive the learning situation. The limitations and privations of these attitudes or, conversely, the expansion and adequacy of these attitudes, greatly influence the development of the student teacher. The quality of teacher attitudes is crucial, for if attitudes are negative towards self and others, then the climate shall be negative for growth as a teacher. Climate is not an objective, external phenomena, but a subjective, internal phenomena that either frees or limits. A student teacher who works well with people is able to

establish satisfactory rapport with pupils, staff, and parents, and this rapport is closely related to the student teacher's ability to establish classroom climate and manage instruction.<sup>47</sup>

Jacobs states,

One of the purposes of teacher education is to effect a change in the behavior of students so that they can become successful in-service teachers. Since attitudes show an inclination or predisposition to act in certain ways in given situations, it should be the purpose of a teacher education program to mold attitudes that will equip the prospective teacher to deal with the teaching role in a way that will bring the greatest benefit to his students in terms of their individual growth toward living in a free and democratic society.<sup>48</sup>

His study into attitude change in teacher education found that significant changes in attitude did occur in both initial professional education courses and during student teaching. The type of program was a significant factor in the attitude change that took place in his study. He states in his conclusions, "Alternative programs to counteract the reversal of attitudes in student teaching should be considered."<sup>49</sup> Horowitz<sup>50</sup> and Courtney<sup>51</sup>

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<sup>47</sup>W. V. Hicks and F. H. Blackington, Introduction to Education (Columbus, Ohio: Charles E. Merrill Books, Inc., 1965), pp. 38-56.

<sup>48</sup>Jacobs, op. cit., pp. 410-415. <sup>49</sup>Ibid.

<sup>50</sup>Myer Horowitz, "Student-Teaching Experiences and Attitudes of Student Teachers," Journal of Teacher Education, Vol. XIX, No. 3 (Fall, 1968), 317-324.

<sup>51</sup>E. W. Courtney, Attitudinal Changes in the Student Teacher: A Further Analysis (Menomonie, Wisconsin: Stout State University, 1965), mimeographed.

declared in separate studies that their findings did not permit them to claim that the cooperating teacher was influential in bringing about the changes in attitude toward teaching on the part of the student teacher, while Popham<sup>52</sup> found there was a significant difference in changed behavior for student teachers who completed a planned, preferred program over those who did not.

There is indicated a greater effect on attitude for those student teachers who work in groups, or in programs which emphasize activities in groups. Sherif sums it up as follows:

The properties of groups, compared with other more transitory forms of human association, are created by individuals acting in concert over a period of time. Thus, individuals are parts of the group patterns and are also affected by these patterns and by their particular places in them. Among the minimum properties of any human group are the following:

There are common problems, reflected in the motivations of the individuals, which are conducive to prolonged interaction among them.

The members develop and adopt a variety of practices, customs, traditions, and definitions that mark off latitudes for acceptable attitudes and behavior and for objectionable attitudes and behavior among members in various matters of consequence to the group.

The stability of a person's attitudes, his involvement in a stand, and his susceptibility to change are related to the norms and to his

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<sup>52</sup>W. James Popham, "An Experimental Attempt to Modify the Instructional Behavior of Student Teachers," Journal of Teacher Education, Vol. XVI, No. 4 (December, 1965), 461-465.

position (status and role) in groups with whom he shares self identification, or with whom he devoutly wishes to share.<sup>53</sup>

The review of literature offers support to the hypotheses in this study confirming openness and attitude formation as valid test variables in the comparative programs.

### Summary

There are no simple generalizations or characteristics to use in correlation with teacher success. Openness and attitude formation seem to be acceptable variables to test the environment as a place of learning in the development of teaching behavior.

While no person is entirely open or closed, each person, according to conditions and his perceptions, lies somewhere on the open-closed continuum. The open person would be the ideal teacher type exhibiting properties of creativeness, originality, positiveness, sensitivity, and flexibility. He is susceptible to change and new experience and has a positive regard for self and others along with other characteristics. The closed person represents the opposite end of the continuum. Studies by Emmerling,<sup>54</sup> Freeze,<sup>55</sup> Benson,<sup>56</sup> Engle,<sup>57</sup> Bills,<sup>58</sup>

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<sup>53</sup> Sherif, op. cit., p. 206.

<sup>54</sup> Emmerling, op. cit.

<sup>55</sup> Freeze, op. cit.

<sup>56</sup> Benson, op. cit.

<sup>57</sup> Engle, op. cit.

<sup>58</sup> Bills, "The Classroom Teacher. . . ."

and others have shown the characteristic of openness highly correlated with teaching success.

All people possess attitudes, and since behavior is a function of attitude, a change in attitude should result in a modification of behavior. Attitude can change, and the principle of consistency-inconsistency provides a basis for several theories regarding attitude formation and change. Osgood,<sup>59</sup> Heider,<sup>60</sup> and Festinger<sup>61</sup> explained attitude change using that principle. Festinger's dissonance theory seems especially pertinent in explaining attitude change during student teaching. If dissonance occurs during student teaching, dissonance may induce a strain toward conflict-reducing behavior of which attitude change may be a distinct, definite possibility.

Student teacher's attitudes can be changed by teacher education programs. Jacobs,<sup>62</sup> Horowitz,<sup>63</sup> Courtney,<sup>64</sup> and Popham<sup>65</sup> discovered in separate studies varying effects of different programs on attitude change in student teaching. Sherif<sup>66</sup> indicated a greater effect on attitudes of those effected by groups.

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<sup>59</sup>Osgood, op. cit.

<sup>61</sup>Festinger, op. cit.

<sup>63</sup>Horowitz, op. cit.

<sup>65</sup>Popham, op. cit.

<sup>60</sup>Heider, op. cit.

<sup>62</sup>Jacobs, op. cit.

<sup>64</sup>Courtney, op. cit.

<sup>66</sup>Sherif, op. cit.



In final summarization, openness is an ideal characteristic of good teaching, student teachers have attitudes towards teaching and towards pupils, attitudes can be changed, and different programs provide varying changes in attitudes. Thus, the literature provides support for the testing of the hypotheses as stated in Chapter I.

## CHAPTER III

### DESIGN OF THE STUDY

The purpose of this chapter is to describe the design of the study, the data-gathering instruments, and to present data relative to the validation of the instruments. To introduce the Teacher Problems Q-sort, a brief background on Q-methodology is also presented.

#### Methodology

The population of this investigation was composed of: (1) 18 student teachers from the 1970 Fall Term SERL Project, and (2) 26 student teachers from the Conventional Program. The population (N=44) consisted of all participants in the SERL Project, and a random sample of the Conventional Program. No efforts were made to match the respondents as to grade level, sex, or discipline. New suburban schools as well as older, inner-city type schools were represented in both groups. Schools with innovative programs of all types for both teachers and pupils, as well as the more structured, traditional programs, were equally represented in both groups tested. No efforts were made to place the more academically competent, as indicated by grade point average, or more emotionally

mature students in either group. All participants, in both groups, were placed at random in the schools according to their major and/or minor discipline and availability of cooperating teachers.

Each student teacher completed the Teacher Problems Q-sort and the Minnesota Teacher Attitude Inventory at the beginning of their experience. During the 10th week of an 11 week period of student teaching, each student teacher was posttested with the same instruments. The independent variable was the type of student teaching program each had experienced.

#### The Teacher Problems Q-sort

People who are theoretically arranged along an openness-closedness continuum are distinguishable by the kind of concerns they have.<sup>1</sup> The Problems Q-sort has been developed as a way of identifying these concerns, and from these expressed concerns the qualities of openness and closedness may be discerned.

Q-methodology, devised by William Stephenson,<sup>2</sup> is a method of making verbal descriptions objective. To make such descriptions, the respondent is asked to sort or arrange a group of descriptive statements in a quasi-normal

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<sup>1</sup>Rogers, op. cit.

<sup>2</sup>William Stephenson, The Study of Behavior (Chicago: University of Chicago Press, 1953).

distribution from "most pressing" to "least pressing." The objective results are then available for statistical analysis.

Q-methodology proposes that the study of self-observations may begin from the standpoint of what a person says about himself, or deeply believes what he is like. It presumes an internal frame of reference and suggests that people can offer some kind of description of what their personality is like in traits according to Q-technique. Often what the individual thinks of himself may be quite opposed to what others think he is like. However, all such beliefs or attitudes can be reduced to direct operations in Q-technique. Stephenson's view is:

It will be supposed by many, of course, that all such self-descriptions must be biased and therefore unreliable and unworthy of scientific regard. We can accept the premise, but not the conclusions. On the contrary, precisely because we cannot believe what X says about himself, is something worthy of our scientific regard. We surmise that the study of such self-descriptions will provide evidence of many facets of conduct and that we shall discover X in the act of rationalizing, defending himself, identifying the social setting, imitation, functional penetration, negativism, and much else of the kind can be reached by way of these innocent-looking self-descriptions.<sup>3</sup>

One of the advantages of Q-methodology is that it is a way to study individual behavior rather than just what happens "on the average."<sup>4</sup> Stephenson points out

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<sup>3</sup>Ibid.

<sup>4</sup>Ibid.

that the person carries about with him, "conceptual roles" which are stable characteristics and about which predictions of behavior can be made. A student may conceive of himself as a scholar, or as having a flair for the fair sex; and each of us may have several such roles that we play in appropriate behavioral settings.<sup>5</sup>

The Teacher Problems Q-sort used in this study was devised by Robert E. Bills.<sup>6</sup> The population of statements for the instrument was developed from the expressed problems of 500 teachers who were polled while enrolled in graduate field laboratory courses conducted primarily in Alabama by Auburn University. These teachers were asked to describe briefly their most pressing problems. The resulting array of problems was examined by three psychologists who made overall judgments about the positive or negative, the central or peripheral, the future or past, the self or non-self aspects of the problems. These factors were consistent with the theoretical concept of openness.

#### Validity of Teacher Problems Q-sort

To check the validity of the Teacher Problems Q-sort as a valid measure of openness, staff members of

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<sup>5</sup>Ibid.

<sup>6</sup>Robert E. Bills, Professor of Educational Psychology, University of Alabama, University, Alabama.

two elementary and one secondary school in the same system were asked to sort the problems. The superintendent and the principals of the schools were asked to estimate the success of the teachers by dividing each faculty into two groups; the more successful and the less successful. Double dichotomous Chi-squares were completed between ratings and success and openness scores, the openness scores of each faculty member being divided at the median of the openness scores for each group. The obtained Chi-squares were associated with the probability levels of .01, .001, and .02.<sup>7</sup> Although based on subjective evidence provided by the administrators, there was reason to conclude that a significant relationship existed between openness as shown by the Q-sort descriptions and the ratings of success given the teachers by their administrative officers.

Emmerling validated the Teacher Problems Q-sort<sup>8</sup> by identifying from a group of 57 teachers, 10 who were most open and 10 who were least open. These were determined by the 10 having the highest scores and the 10 having the lowest scores. A random sample, selected by use of a table of random numbers, of 30 of each teacher's students was then selected to participate in the study. To determine if there was a significant difference

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<sup>7</sup>Emmerling, op. cit.

<sup>8</sup>Ibid.

between the way the two groups of pupils saw their teachers and the manner in which they believed they were seen by their teachers, the pupils were tested with the Relationship Inventory and the Schuman Student-Centeredness Scale.

Emmerling found the two groups of teachers to be very much alike in terms of age, subject matter taught, and tenure of teaching experience. Yet, the Q-sort scores revealed definite differences in terms of the way the teachers perceived their problems and what could be inferred about their openness from these problems.<sup>9</sup> The students' results showed that pupils perceived the teachers who were identified as more open as having significantly more open characteristics than teachers who were identified as less open. The open teachers were perceived by their pupils to be significantly different in the five variables tested: (1) level of regard, (2) empathic understanding, (3) congruence, (4) unconditionality of regard, and (5) student centeredness than the less open teachers. The evidence from the five variables indicated that the teachers who were identified by the Problems Q-sort as having more open characteristics were creating a more free and facilitating atmosphere than the teachers who were less open, and were

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<sup>9</sup>Ibid.

exhibiting these as characteristics and qualities of "good" teaching. Freeze<sup>10</sup> and Elliott<sup>11</sup> added further validation in their studies.

#### Scoring the Teacher Problems Q-sort

Scoring of the Q-sort problems is plus or minus according to the five dimensions established by the psychologists in the initial validation. Thus, a subject is given a plus 1 or a minus 1 depending upon the description the subject gives to the problem as most pressing or least pressing. Hence a scoring range of plus or minus quantity is possible, ranging from -38 to +38.<sup>12</sup>

#### The Minnesota Teacher Attitude Inventory

The Minnesota Teacher Attitude Inventory is by far the most popular instrument for the measurement of teacher attitudes.<sup>13</sup> Developed at the University of Minnesota by Cook, Leeds, and Callis the manual, published in 1951, states:

Investigations carried on by the authors over the past ten years indicate that the attitudes of teachers toward children and school work can be measured with high reliability, and that they

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<sup>10</sup>Freeze, op. cit.

<sup>11</sup>Elliott, op. cit.

<sup>12</sup>Scoring procedures can be obtained from Robert E. Bills, University of Alabama, University, Alabama.

<sup>13</sup>J. W. Getzels and P. W. Jackson, "The Teacher's Personality and Characteristics," in Handbook of Research on Teaching, ed. by N. L. Gage (Chicago: Rand McNally and Co., 1963), p. 508.



are significantly correlated with the teacher-pupil relations found in the teacher's classrooms. The MTAI has emerged from these researches. It is designed to measure those attitudes of a teacher which will predict how well he will get along with pupils in interpersonal relationships, and indirectly how well satisfied he will be with teaching as a vocation.<sup>14</sup>

The validity of the experimental forms and the final edition, Form A, is based on three assumptions:

(1) Pupil's attitudes toward the teacher and their school work are a reflection of the attitudes of the teacher towards them and toward teaching procedures. There should be a positive relationship between the attitudes of teachers and their pupils.

(2) A competent and experienced principal can detect the emotional relationship between teacher and pupil and can discriminate those who have good rapport with pupils and those with poor rapport.

(3) Using objective measures, an expert in teacher-pupil relations can visit a classroom and reliably assess the social climate.

The construction of items for the preliminary try-out of the MTAI involved the canvassing of five areas of socio-educational literature about children. This was done to obtain an adequate sampling of attitudes. According to the manual, the five areas were:

(1) Moral status of children in the opinion of adults, especially as concerns their adherence to adult-imposed standards, moral or otherwise. Example: "Children should be seen and not heard."

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<sup>14</sup>W. W. Cook, C. H. Leeds, and R. Callis, The Minnesota Teacher Attitude Inventory (New York: The Psychological Corporation, 1951), p. 3.

(2) Discipline and problems of conduct in the classroom and elsewhere, and methods employed in dealing with such problems. Example: "Pupils found writing notes should be severely punished."

(3) Principles of child development and behavior related to ability, achievement, learning, motivation, and personality development. Example: "The boastful child is usually overconfident of his ability."

(4) Principles of education related to philosophy, curriculum, and administration. Example: "Pupils should be required to do more studying at home."

(5) Personal reactions of the teacher, likes and dislikes, sources of irritation, etc. Example: "Without children life would be dull."

Originally 756 items were written to discriminate between teachers who have desired and those with undesired types of teacher-pupil relations. Principals of 70 schools were asked to designate one or two teachers who seemed to be effective and were liked by pupils. They were also asked to name one or two teachers who rated low in this respect. Criterion groups of 100 superior teachers and 100 inferior teachers in grades 1-12 were then created. Each teacher completed Tryout Forms A and B and using Chi-square it was found that 115 of the 756 items discriminated at the .05 level and 188 items at the .10 level.

From these items, 164 of the most discriminating items became the first experimental form and was administered to a random selection of 100 teachers in grades 406. Their scores were correlated with three outside criteria of teacher pupil rapport:

(1) The Pupil-Teacher Rating Scale was administered to at least 25 pupils of each of the 100 teachers and reliability was .93.

(2) The Principal-Teacher Rating Scale was completed by the principals of the 100 teachers and reliability was .87.

(3) The Rating Scale of the Teacher's Personal Effectiveness was completed for each teacher by an expert in teacher-pupil relationships and reliability was .92.

The reliability of the three outside criteria for the random group of 100 4-6 grade teachers using the Spearman-Bowman split-half procedure was found to be .89.

The MTAI, Form A, is the form in current use. In the selection of the 150 items used for Form A, six factors were considered: (1) the discriminating power of the item, (2) the extent to which item responses are influenced by professional education courses, (3) the extent to which the item responses are influenced by teaching experience, (4) the extent to which the content of the item duplicates that of another item, (5) the clearness of the statement, and (6) the consistency of the response patterns of the superior and inferior teachers.<sup>15</sup> Three measures of discriminatory power were considered for the items: (1) Chi-square, indicating the power of each item to discriminate between the original 100 superior and 100 inferior teachers, (2) the significance of the difference between the per cent of responses of the superior and inferior

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<sup>15</sup>Ibid.

teachers for each of the five categories of each item, and (3) an internal consistency measure of discrimination based on the upper and lower 20 per cent of the random group of the 4-6 grade teachers.

A further check of validity was undertaken by two studies in South Carolina and Missouri. These followed the original validation in schools in northwestern Pennsylvania and northeastern Ohio. In both cases validity and reliability correlated significantly with all other checks. Studies by Gittler,<sup>16</sup> Munro,<sup>17</sup> and Popham and Baker<sup>18</sup> all validated the significance of the MTAI. Popham and Baker stated, "other than the Minnesota Teacher Attitude Inventory, there are few carefully studies attitudinal measures which have explicit relevance to teaching."<sup>19</sup>

There is evidence that the MTAI is only slightly susceptible to "faking good." Three testing sequences

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<sup>16</sup>Steven Gittler, "Professional Characteristics of Elementary School Teachers: Undergraduate Programs Versus Intensive Teacher Training Program," Journal of Teacher Education, XIV (December, 1963), 399-401.

<sup>17</sup>Barry S. Munro, "The MTAI as a Predictor of Teaching Success," The Journal of Teacher Education, LVIII, No. 3 (November, 1964), 138.

<sup>18</sup>W. James Popham and Eva L. Baker, "Measuring Teachers' Attitudes Toward Behavioral Objectives," The Journal of Educational Research, LX, No. 10 (July-August, 1967), 453.

<sup>19</sup>Ibid.

were arranged by the MTAI authors. Group 1 took the same test twice and sufficient insight was gained to increase the average score 4.2 points. Group 2 took the test twice and were told on the second try to get as high a score as possible. The gain was 9.6 points, a little less than one-half a standard deviation. Group 3 took the test twice but were told from the beginning to try to get as high a score as possible. The average raise in score for this group was 1.8 points. The results of these three testing sequences seem to support the author's contention that the instrument is only slightly susceptible to "faking good."<sup>20</sup>

#### Scoring the MTAI

The MTAI consists of 150 items. There are no right answers, but rather levels of agreement or disagreement. Agreements have a value of plus one and disagreements a value of minus one. Therefore, the possible range of scores for the test is from plus 150 to minus 150.

#### Summary

The population of the study (N=44) consisted of all participants in the SERL Project and a random selection of participants in the Conventional Program of

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<sup>20</sup>Cook, op. cit.

Student Teaching. All student teachers were placed at random in their schools according to their disciplines and the availability of cooperating teachers. No other criteria were used. Each student teacher was pretested with the Teacher Problems Q-sort and the Minnesota Teacher Attitude Inventory prior to their experience and then posttested with the same instruments at the end.

Based on numerous tests of validity and reliability, the Teacher Problems Q-sort and the Minnesota Teacher Attitude Inventory promised to be the most appropriate instruments available to test the openness and attitude variables in the design of this study.

## CHAPTER IV

### PRESENTATION AND ANALYSIS OF THE DATA

In the design of this study, considerations were given to the preservation of the integrity of the data. Efforts were made to reduce the student teachers' feelings of intimidation, recognizing they were "captive" participants. At the very beginning of their experience, explanations were made to the student teachers that the department was interested in their feelings about student teaching, children as pupils, and teaching as a profession, and they were asked if they would attempt to report their feelings through the instruments chosen. For whatever reasons, no one refused to participate. In order to offer and maintain assurances that the tests in no way represented an evaluation of their individual performances during student teaching, and consequently there were no reasons for "faking good," the instruments were administered by the experimenter and not by their cooperating teachers, clinical consultants, or college coordinators.

At the first session, each respondent was given four IBM answer sheets. Two of the answer sheets were for the Minnesota Teacher Attitude Inventory (MTAI), and two were for the Teacher Problems Q-sort (Q-sort). The

student teachers were asked to label each answer sheet, as instructed, with the following information:

1. The dates; (9-70) for the pretest, (11-70) for the posttest.

2. A personal symbol or logo, known only to themselves, for later identification of the posttest answer sheet, and for the subsequent matching of pretest and posttest results for comparison.

3. A four digit number assigned by the investigator according to the pattern (a) the first digit indicated the program with 1 for SERL, 2 for Conventional, (b) the second digit indicated the sex with 1 for male, 2 for female, and (c) the third and fourth digits established a number for order and were given at random from 01 to 44.

TABLE 4.1.--Cell identification and frequencies.

Cell	Program*	Sex N	
SERL Male	1	10	
SERL Female	1	8	
Conv. Male	2	9	
Conv. Female	2	16	N=44

\*Program identification: 1-SERL, 2-Conventional



In no apparent order or pattern, the student teachers were assigned their numbers at the pretest, numbers such as 1104, 2143, or 1217. The numbers did not identify individuals in any way. No names were used. Most of the student teachers had forgotten their numbers, but all remembered their logos, by posttest time. One of each type of answer sheet, dated (11-70), was returned to the investigator for use at the posttest.

#### Method of Statistical Analysis

The statistical test used in this study was the Multivariate Analysis of Covariance. The groups, especially the SERL, must be studied as composed. The students were not matched, but assigned at random to the program with only limited matched characteristics. The Analysis of Covariance appears to be the acceptable statistical test for this type of research data. It analyzes the total variance of a set of measures into systematic and error variances to the analysis of covariance. Analysis of covariance tests the significance of the differences between means of final experimental data by taking into account and adjusting initial differences in the data. The accepted level of significance for this study was arbitrarily set at  $p < .01$ . The Teacher Problems Q-sort was hand scored using an answer key. All other data were scored, compared, and tested for

significance by the Control Data Corporation 3600 computer at the Michigan State University Computer Center.

Establishing the Need  
for Covariates

In using the Multivariate Analysis of Covariance, it was necessary to establish statistically a need for the covariates. This was established after a series of tests and comparisons of the data. As illustrated in Table 4.2, cell means were determined by the four variables and the four factors of the design. The table shows the mean gain by the SERL male and female in both the MTAI and the Q-sort, as measured by the difference in the pretest and posttest, compared to the mean loss by the Conventional group male and female participants. SERL male respondents

TABLE 4.2.--Cell means.

	MTAI Posttest	Q-sort Posttest	MTAI Pretest	Q-sort Pretest
SERL Male	50.60	15.30	16.80	10.00
SERL Female	44.37	17.87	19.25	14.12
Conv. Male	4.44	3.55	19.33	9.00
Conv. Female	35.29	8.58	48.41	13.64

gained a mean of 33.80 on the MTAI, as compared to the Conventional male change of -14.89. SERL female respondents showed a mean gain of 25.12 on the MTAI, while the Conventional female produced a mean negative change of -13.12. On the Q-sort, the SERL male respondents showed a Q-sort mean gain of 5.30, while the Conventional male group showed a mean negative change of -5.45. The SERL female group produced a mean gain of 3.65 on the Q-sort, while the Conventional females finished with a mean negative change of -5.06. Raw score data, then, indicated the SERL group to be more positive in their attitudes toward children and teaching, and more open to experience. At this point, however, the changes in attitude and openness could not be attributed to the effects of the programs. The groups contained a considerable number of differences and, since it was impossible to account for and control all of the variables, the Multivariate Analysis of Covariance was needed to adjust the initial differences so the posttest scores would accurately reflect differences in the groups' performances.

#### Pretest and Posttest Correlation

A sample correlation matrix within cells was run to see if a correlation existed between the pretest and posttest. In Table 4.3, a high correlation exists between the dependent variables (the posttests) and the

covariates (the pretests) within the accepted range of .6 to .8, and indicates it is a candidate for covariate analysis.

TABLE 4.3.--Sample correlation matrix before adjustment to covariance.

	MTAI Posttest	Q-sort Posttest	MTAI Pretest	Q-sort Pretest
MTAI Posttest	1.00			
Q-sort Posttest	-0.06	1.00		
MTAI Pretest	0.72	0.04	1.00	
Q-sort Pretest	0.14	0.69	0.24	1.00

#### Establishing the Need for Both Covariates

Table 4.4 gives the data for the regression analysis with the 2 covariates. The Chi-square for the test of the hypothesis of no association between dependent and independent variables shows a level of significance of  $p < .01$  and demands a definite need for the covariables. Tests were then run in a step-wise regression to analyze the contribution of each independent variable to determine whether one or both covariables were needed in the analysis of covariance. Table 4.5 presents the data representing

TABLE 4.4.--Statistics for regression analysis with 2 co-  
variates.

Variable	Square Mult R	Mult R	F	P
MTAI Posttest	0.52	0.72	20.68	$p < .01$
Q-sort Posttest	0.49	0.70	18.71	$p < .01$
Degrees of Freedom for Hypotheses = 2				
Degrees of Freedom for Error = 38				
Chi Square for Test of Hypothesis of No Association between Dependent and Independent Variables = 53.86				
D.F. = 4 $p < .01$				

TABLE 4.5.--Step-wise regression to analyze the contribu-  
tion of each independent variable.

Adding Covariate 1 (pretest-MTAI) Through 1 (Pretest- MTAI) to the Regression Equation		
Chi Square = 28.45    D.F. = 2 $p < .01$		
<u>Variable</u>	<u>Univariate F</u>	<u>P</u>
MTAI Posttest	42.26	$p < .01$
Q-sort Posttest	0.06	$p > .01$
D.F. = 1 and 39		
Adding Covariate 2 (Pretest Q-sort) Through 2 (Pretest Q-sort) to the Regression Equation		
Chi Square = 25.43    D.F. = 2 $p < .01$		
<u>Variable</u>	<u>Univariate F</u>	<u>P</u>
MTAI Posttest	0.09	$p > .01$
Q-sort Posttest	37.30	$p < .01$
D.F. = 1 and 38		

the adding of covariate 1 (Pretest-MTAI) through 1 (Pretest-MTAI) to the regression equation, and the adding of covariate 2 (Pretest-Q-sort) through 2 (Pretest-Q-sort) to the regression equation. In both tests the data indicated, at  $p < .01$ , the need for both covariates in the analysis. It was found necessary to pretest for both of the dependent variables.

Correlation of Attitude  
and Openness

With the two covariates eliminated, a sample correlation matrix, Table 4.6, indicated a low correlation between measures. This suggests the measures of attitude

TABLE 4.6.--Sample correlation matrix after adjustment for covariates.

	MTAI Posttest	Q-sort Posttest
MTAI Posttest	1.00	
Q-sort Posttest	-0.13	1.00
<u>Variable</u>	<u>Variance</u>	<u>Standard Deviation</u>
MTAI Posttest	581.38	24.11
Q-sort Posttest	58.75	7.66
(2 Covariates Have Been Eliminated)		

and openness may be thought of an independent of one another, that the variables of attitude and openness are distinct and separate, and (as indicated by the negative sign) one increases as the other decreases. The correlation after adjusting for covariance is not significant. This implies that in the population the correlation is zero, which in turn implies knowledge of one variable does not aid us in predicting what the other variable may do.

Program Effect--SERL  
vs. Conventional

With covariates adjusted, tests of hypotheses were made with least square estimates on effects x variables. Table 4.7 shows that Group 1, the SERL group, did better than Group 2, the Conventional group. A test using

TABLE 4.7.--Least square estimates adjusted for covariates--effects x variables.

	MTAI Posttest	Q-sort Posttest
Grand Mean	14.71	2.92
Male vs. Female	-0.44	-0.92
SERL vs. Conventional	40.19	9.18
Sex x Program Interaction	16.15	3.24

standard error of adjusted estimates, was conducted by multiplying 1.96 times the standard error, and adding or subtracting the score and relating to zero. If zero is in the range of the test, the comparison is not significant. If zero is not in the range, the comparison is significant. For example: (1) the MTAI posttest for program effect was 40.19. The standard error was 7.85. 1.96 times 7.85 is equal to 15.38. At  $15.38 \pm 40.19$ , zero is not in the range, and according to the test, the program is significant. (2) The Q-sort posttest for sex effect was -0.92. The standard error was 2.52. 1.96 times 2.52 equals 4.93. At  $4.93 \pm -0.92$ , zero is in the range, and according to the test, the sex effect is not significant. In the test for program effect, the fact that 40.19 is positive indicates SERL did better than Conventional. In the test for sex effect, the findings show that sex had no effect on either programs or

TABLE 4.8.--Standard errors of adjusted estimates--effects x variables.

	MTAI Posttest	Q-sort Posttest
1	6.43	2.04
2	7.93	2.52
3	7.85	2.49
4	15.50	4.92



dependent variables. When tested by the above procedure, there is indication that no interaction between sex and programs existed.

Table 4.9 presents the data for the F-test for the multivariate test of equality for program effects with two covariates eliminated. With initial differences adjusted, the effect of the programs on both attitude and openness changes were proven to be significant at  $p < .01$ . This indicates that both openness and attitude can be effected by a planned program, and as already shown in Table 4.7, the SERL pattern, as a planned program, was superior in effecting change than the Conventional pattern in this study.

TABLE 4.9.--Program effect.

F-Ratio for Multivariate Test of Equality of Mean Vectors = 21.51    D.F. = 2 and 37.00 $p < .01$			
Variable	Between Means Sq.	Univariate F	p
MTAI Posttest	14753.84	25.37	$p < .01$
Q-sort Posttest	772.90	13.15	$p < .01$
Degrees of Freedom for Hypothesis = 1 Degrees of Freedom for Error = 38			

#### Sex Effect

The F-Ratio for multivariate test of equality on sex effects, as shown in Table 4.10, with 2 covariates

TABLE 4.10.--Sex effect.

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F-Ratio for Multivariate Test of Equality of Mean Vectors = 0.13    D.F. = 2 and 37.00 $p > .01$			
Variable	Between Mean Sq.	Univariate F	
<hr/>			
MTAI Posttest	22.94	0.03	$p > .01$
Q-sort Posttest	12.38	0.21	$p > .01$
Degrees of Freedom for Hypothesis = 1 Degrees of Freedom for Error = 38			

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eliminated, shows the effect of sex on the effectiveness of the two programs was not significant at the  $p > .01$  level for both attitude and openness. Indications are the SERL program need not be concerned with the makeup or balance of male and/or female participants. Both sexes performed similarly in their response to the effects of the program in producing changes in attitude and openness.

#### Test for Interaction of Variables

Table 4.11 presents the data for the F-ratio for multivariate test of equality for interaction of the programs. The data shows that interaction effects are not significant at the  $p > .01$  level of confidence. Conclusions are that there are no variables within the programs that seem to be affecting the quality of the data, and that it can be determined with reasonable certainty that

TABLE 4.11.--Interaction.

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F-Ratio for Multivariate Test of Equality of Mean Vectors = 0.84    D.F. = 2 and 37.00    p > .01			
Variable	Between Mean Sq.	Univariate F	
<hr/>			
MTAI Posttest	631.40	1.08	p > .01
Q-sort Posttest	25.49	0.43	p > .01

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the variables of attitude and openness were tested, and that interaction of the variables did not cause the results to be altered. With tested significance, it can be said that the MTAI tested for attitudes, the Q-sort tested for openness and, within the selected programs, produced the results of only that program tested. Both the SERL Project and the Conventional Program were successfully tested for their effects on attitude and openness with no interfering effects from other undetermined variables or from an interaction of the dependent variables. With the interaction effect not significant, strength is added to the significant effect of the programs on the dependent variables and to the conclusions that the SERL Project is superior in producing positive changes in the attitude and openness of student teachers.

### Testing the Null Hypotheses

The format to be used in testing the hypotheses will be one of stating each hypothesis in null form, and then either accepting or rejecting the null hypothesis, with reference to the data presented.

#### Hypothesis 1

No differences will be found in attitudes toward children as pupils and teaching as a profession between student teachers in the SERL Project and student teachers in the Conventional Program as a result of their laboratory experience.

It was indicated in Table 4.7, that in this study, the SERL Project did better than the Conventional Program in producing positive changes in attitudes of student teachers. Table 4.9 reports, at  $p < .01$ , the SERL project caused the difference in scores. The sex of the respondents apparently had no effect ( $p > .01$ , Table 4.10), and there were no other variables in interaction ( $p > .01$ , Table 4.11) to cause the change. The null hypothesis is therefore rejected, and the hypothesis is accepted at the  $p < .01$  level of confidence.

#### Hypothesis 2

No difference will be found in openness between student teachers in the SERL Project and student teachers

in the Conventional Program as a result of their laboratory experience.

The results of Table 4.7 indicate that the student teachers in the SERL Project did better than the student teachers in the Conventional Program in producing positive changes in openness. It was shown, at a level of confidence of  $p < .01$ , that the SERL Project pattern was responsible for the gain in scores indicative of attitude and openness. Tables 4.10 and 4.11, respectively, report at  $p > .01$ , that sex and the interaction of variables had no effects on the changes that took place. The null hypothesis is rejected. The hypothesis is accepted at the  $p < .01$  level of confidence.

### Hypothesis 3

Greater positive changes in attitude will not be observed in the SERL group of student teachers than in the Conventional group.

SERL males and females showed greater positive gains in attitude as indicated by mean scores on the MTAI and the Q-sort. Table 4.2 reports negative changes for both male and female participants in the Conventional group. The null hypothesis is rejected and the hypothesis accepted.

#### Hypothesis 4

Greater positive gains in openness will not be observed for the SERL group of student teachers than in the Conventional group.

SERL males and females showed greater positive gains in openness as indicated by mean scores on the MTAI and the Q-sort. Table 4.2 reports positive gains for openness for male and female respondents in the SERL group, and negative results for male and female respondents in the Conventional group. The null hypothesis is rejected and the hypothesis accepted.

#### Sub-Hypothesis 1

A correlation will not exist between openness and attitude. Those people who are more open will not have more positive attitudes.

Table 4.6 shows that a correlation after adjusting for covariance is not significant. This implies that in the population the correlation is zero, which in turn implies knowledge of one variable does not aid us in predicting what the other variable may do. Consequently, it can be concluded that those people who are more open are not necessarily those who have the more positive attitudes. The null hypothesis cannot be rejected.

### Sub-Hypothesis 2

Sex differences will have no effect on changes in openness and attitude in both the SERL Project and the Conventional Program.

Table 4.7 shows no effect of sex on the results of tests for openness and attitude in the two programs. The F-Ratio test, Table 4.10, indicates at  $p > .01$  for both the MTAI and the Q-sort, that there was no sex effect on the results obtained in testing the dependent variables. The null hypothesis cannot be rejected.

### Discussion of the Findings

#### SERL vs. Conventional

The data have indicated, quite conclusively, that the SERL Project pattern of student teaching is a superior pattern for producing positive changes in attitude and openness. In reviewing the purposes and objectives of the SERL Project, and examining more closely the details of SERL activities, some insight might be gained in the attempt to isolate the factors, or combination of factors, that contributed to the positive changes in the dependent variables.

Student teachers in the SERL Project are assigned in groups of 10-12 in each SERL building. The student teachers are originally assigned to a clinical consultant who is responsible for their assignments to cooperating teachers, and the organization and coordination of their

activities. The clinical consultant is available to each student teacher at any time and for any reason. The consultants are employed jointly by the Lansing School System and Michigan State University. They are released half-time from their regular duties to provide group activities for the student teachers, and their salaries are reimbursed for this time by the university.

Student teachers in the SERL Project are expected to participate at a much higher level than usual in working with social agencies and organizations in the community. They are much more likely to spend time in student's homes and community activities than is typical of Conventional student teachers. In carrying out their in-school activities, students are assigned on a much more flexible basis than in the Conventional arrangement. They group and regroup themselves for particular purposes as they identify problems of instruction and problems of learning; analyze these problems and begin to develop hypotheses about solving them; develop plans for organizing and managing instruction to solve the identified problems; and develop evaluation techniques to determine the success of their efforts. In the process, they examine and gain practice with different methods of organizing instruction such as small groups, large groups, individualized instruction, and team teaching.



The SERL participants teach an average of 3-4 classes per day. They may or may not work in their major areas as they shift responsibilities in search of a multitude of experiences in instructional techniques. A student teacher with an English major also has the opportunity to teach in his minor area, as well as visit, aid, or tutor in all types of teaching situations from gifted, to handicapped, to disadvantaged. A SERL student teacher regularly participates in classroom activities from 8:00 A.M. until 12:30 P.M. At approximately 1:00 P.M. each day, the student teachers group for a variety of experiences. Typical experiences would be: (1) discussion with the school social worker, (2) a trip to the juvenile court, (3) a week-long audio-visual workshop with overlays, films, video-tape, slides, etc., (4) a trip to the Black, Mexican-American, or other culturally oriented areas in the district and the city, (5) working with the administration and counseling areas of the school, (6) group discussions of common problems and concerns, successful and unsuccessful techniques discovered in the classroom, planning, and discipline, (7) a visit to the county jail, (8) a joint meeting with the SERL group from the other building, (9) seminar discussions with the college coordinator concerning philosophies, educational foundations and relating theory into practice, (10) visiting the vocational departments and

special programs offered by the system, (11) working in class for a full day, (12) viewing films, articles, and other current literature of interest to their educational growth, (13) talking with students, parents, and other members of the community in their homes and in the school, about concerns and viewpoints on problems and opportunities for the child as a pupil, and (14) endless other growth-oriented activities.

Purposely, a common denominator of the SERL project is the group as it interacts to solve problems and seek opportunities for growth through experience and exposure. Each participant has an opportunity to perceive as an individual, but the group reinforces that perception through interaction and exchanges of experiences. Each person, as a member of the group, is exposed to a planned pattern of experiences designed to promote openness to all kinds of ideas, cultures, and peoples. The SERL pattern allows the student teacher, through interaction, to build a backlog of knowledge and positive concept of self and other people. The individual's perceptions are exposed to the group's perceptions as they interact daily. The individual is given the opportunity, as a result of the SERL pattern, to test ideas, concepts, and potential for future experiences, and to receive effective feedback and evaluation. The SERL participants

purposely have many positive experiences.<sup>1</sup> Visits to community service and social organizations exhibit the many opportunities available to aid pupil and teacher. Efforts are made to aid the student teacher in building the necessary knowledge and personality to cope with future experiences, and which dare him to accept future experiences as a means for developing potentialities to the fullest. Through the previously cited planned experiences, the SERL group develops understanding, insight into other's problems, and problem solving skills. As a group, SERL members seek ways of helping others develop their own abilities and goals.

Attitudes of the SERL participants appeared especially susceptible to change. All 18 members of the SERL Project had positive gains in attitude as a result of their experience. The Conventional student teachers had quite an opposite effect with 5 positive changes, 2 no changes, and 19 negative changes. Festinger has stated that all people possess certain expectations of the societal group and institutions with whom they associate.<sup>2</sup> It is typical for beginning student teachers to be rather idealistic and theoretical in their approach to education, teaching, and children as pupils. As a result of

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<sup>1</sup>Refer to Chapter I, page 6, for definition of positive experience.

<sup>2</sup>Festinger, op. cit.

prerequisite experiences in university courses prior to student teaching, each has developed rather definite attitudes. Each has developed a position on techniques, children, opportunities, and other issues involved in education. Each person reacts or behaves as a function of his attitude as he begins the student teaching experience. Previous studies have shown that a typical reaction after student teaching is a negative change in attitude as a result of the contacts and experience.<sup>3</sup>

During the student teaching experience, the student teacher encounters many experiences which result in cognitive dissonance. Many expect to have free class situations, eager pupil participation, and instant mutual respect of the children. Many encounter extreme dissonance as the mental model fails to materialize. As problems mount, as the structure of the school inhibits, dissonance grows, and as explained in Chapter II, attitude change becomes the most likely means of reducing that dissonance. The student teacher in the Conventional Program is normally alone in his quest to resolve the dissonance. He hesitates to talk with the cooperating teacher or the college coordinator because of the effect it might have on his evaluation. There are fewer alternatives for him in seeking resolution. Attitude change

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<sup>3</sup>Jacobs, op. cit.

takes place with little chance to reinforce his basic beliefs. The SERL participant, on the other hand, has the clinical consultant and the group to influence his decisions on resolving dissonance. The pattern of the SERL Project seems to provide the climate for positive growth of attitude and development of those characteristics generally associated with "good" teachers. The individual, as a part of the group, is affected by the group's ideas and motivations. He recognizes problems, not as individual problems, but as common problems, shared by all, to be discussed by the group. The interaction of the group reinforces the group's opinions and ideas, and aids in maintaining the individual's initial attitudes. The group provides the individual with a certain norm, status, and role. The individual shares identification with the group and wishes to share and become an accepted member of the group. The customs, traditions, and practices of the group affect the individual. Those with entering positive attitudes are influenced to maintain those attitudes. Those with entering negative attitudes soon are affected by group pressures, concerns, interactions, and discussions to change their attitudes. Since each individual perceives differently and enters at a different level of attitude and perception, differences in change occur. It is not expected that all people who were initially negative will necessarily end as positive.

However, each member of the SERL group experienced positive change from his entering level, as measured by the MTAI.

The clinical consultant, along with the college coordinator, plays an important role in building and maintaining positive attitudes within the group. The availability of a qualified person for immediate consultation to reinforce, correct, and/or redirect the student teacher, as he seeks guidance through his experience, may stay the development of dissonance and a resulting change in attitude. Immediate action or assurance often eliminates the brewing of dissatisfaction and the feelings of inadequacy many student teachers experience.

In the Conventional Program, student teachers are normally assigned individually in many different buildings and departments. Their activities with other student teachers are often times only accidental and unorganized. Their contacts are limited to their cooperating teacher and a few friendly faculty. They often become the apprentice as the cooperating teacher claims full control of the student teacher's time and exposure to experience. A seminar is scheduled for one afternoon a week with the college coordinator, but the schedule is often times necessarily inflexible, and time is insufficient to cover the great variety of activities that could be experienced. Teaching a full schedule of classes,

all day, every day, does not leave extra time for the important extracurricular activities and relationships the SERL people experience. As problems mount, the student teacher, often the only one in the building, is expected to confer with the cooperating teacher and/or the college coordinator. Some do, but many hesitate to express their true feelings of inadequacy because of their concerns for evaluation. They have fewer opportunities for group support than do the SERL student teachers. They have opportunities for community, student, and parental interaction only after school hours, and because of their own personal commitments, many cannot participate. Many of their experiences are negative and this appears to affect their growth toward openness and positive attitude formation, as indicated by this study.

#### Correlation of the Dependent Variables

Expectations were that a significant correlation would exist between openness and attitude, and that those student teachers who were more positive in their attitudes would be more open. It was anticipated that those student teachers who experienced positive changes in attitude would also experience positive changes in openness. The hypothesis was not supported within the accepted level of confidence. The correlation was low and indications were that the variables might even react in opposition to each

other in some instances. As a result of this study, it appears that no predictions can be made about the relationship of the variables in either the SERL or Conventional Program.

It was mentioned previously that most student teachers approach their experience with rather definite attitudes concerning education and techniques. It would appear that as dissonance occurs, and consonance is sought and achieved, there are differing effects on the openness of the individual. Some SERL student teachers, who achieved positive changes in attitude were able to gain enough support from the group to be open enough to recognize, attempt, and seek new experiences. Others, be they positive or negative in attitude, reacted in different ways. Their attitudes may have been so positive and fixed with convictions that they were correct in their educational beliefs and teaching techniques that they closed their minds to new experiences. They so believed in the free, unstructured classroom atmosphere, they refused to believe some students could learn by controlled, structured means. A highly positive attitude may possibly result in negative openness. A student teacher who is open and highly susceptible to change, and unsuccessfully experiences new methods and ideas, may seek consonance by changing his attitude negatively. One characteristic of an open person is the ability to perceive



realistically without distortion. The student teacher may, regardless of program pattern, realistically perceive conditions completely contrary to expectations, and then undergo a negative change in attitude towards children as pupils and teaching as a profession. A student teacher, very open to experience, may have many new ideas and techniques to try, but when stymied by administrative policy, may react with a negative attitude change. A student teacher, either negative or neutral in attitude, may become open to experience as he searches for any technique or solution that may solve his problems. Each person has a place on the openness-closedness continuum, and it appears as each perceives differently, the reactions occur differently, and as this study indicates, no predictions can be made with significant accuracy and reliability on how the individual participant may react.

#### Sex Effect

McLevie<sup>4</sup> had indicated, in his study of student teacher concerns, that females derived more benefits from student teaching than males. Accepting this finding would indicate that special programs would need to be developed to prepare males to overcome those deficiencies resulting from standard programs, or give serious reconsideration to the male's role in public education. This

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<sup>4</sup>McLevie, op. cit.

study indicated that sex effect was not significant in affecting the dependent variables. It appears that no special efforts need be made in the SERL Project or Conventional Program to compensate for male deficiencies. The male participants were able to benefit from the advantages of the SERL pattern of providing experiences with the same efficiency as the females. Both males and females exhibited the qualities of openness and positive attitudes. Both males and females were affected by changes in attitude and openness, and the changes were attributed to the programs. Neither program was significantly more successful in producing changes in the dependent variables, with reference to the sex of the participant.

#### Factors Contributing to Change

The socialization, the interaction of the group appears to be, as a result of the interpretation of the data and related literature, the most significant contributing factor in the differential results of this study. As described in the design of this study, the participants in the SERL Project were assigned at random by the Lansing School System. Consequently, the group was formed as a "work unit," not as a volunteer unit. A number of studies on such situations support the findings of this study as pertaining to and offering evidence for the results

obtained in changes of attitude and openness. Studies have shown how unrelated individuals can form into a cohesive group of interacting, performing members of a group. Schacter<sup>5</sup> reported that subjects under high anxiety and affiliation need preferred to spend a waiting period with others to waiting alone, preferred associating with involved others to associated with uninvolved others, and preferred being with other subjects to being left alone. Byrne<sup>6</sup> concluded from studies in which attitude similarity was varied with respect to affiliation need that

. . . when strangers' attitudes are identical, the response is a positive one, regardless of affiliation need; when there is a moderate degree of attitude dissimilarity, affiliation need is positively related to attraction; and when attitudes are consistently dissimilar, affiliation need and attraction are inversely related.

Student teachers commonly find themselves in high anxiety situations as they begin the laboratory experience. Evidence indicates they prefer the affiliation and association with the group. The propinquity hypothesis states that the frequency of interaction and probability of friendship increases with greater communicative

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<sup>5</sup>S. Schachter, The Psychology of Affiliation (Stanford, California: Stanford University Press, 1959).

<sup>6</sup>D. Byrne, "Interpersonal Attraction as a Function of Affiliation Need and Attitude Similarity," Human Relations, Vol. 14 (1961), 283-289.

accessibility. The members of the SERL group become friends because of their propinquity and their communicative abilities increase as they meet regularly.

Settings which provoke ambiguous, inconsistent, or threatening perceptions of self, object, or other are likely to intensify the need to engage in interpersonal communication. Affiliation with others, then, provides a means of anxiety reduction, of self evaluation and comparison, and of achieving cognitive clarity. Both Radloff<sup>7</sup> and Schacter<sup>8</sup> found the need to affiliate related to the desire for self confirmation. Pepitone<sup>9</sup> supported the idea that interpersonal attraction is prompted by the desire to develop and maintain reliable valuations of self and others. Homans,<sup>10</sup> in examining the impact of various group structures upon the people in them, has hypothesized that the act of communicating itself produces positive feelings between the parties. The daily meetings of the SERL group lead to regular communication, and communication leads to similarity of

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<sup>7</sup>R. Radloff, "Opinion Evaluation and Affiliation," Journal of Abnormal and Social Psychology, Vol. 62 (1961), 578-583.

<sup>8</sup>Schacter, op. cit.

<sup>9</sup>A. Pepitone, Attraction and Hostility (New York: Atherton Press, 1964).

<sup>10</sup>G. Homans, The Human Group (New York: Harcourt, Brace, 1950).

information, of attitude, of value among communicants; and this kind of similarity is personally satisfying.<sup>11</sup> An important ingredient of the meetings is the daily, regular schedule. Homans<sup>12</sup> found that increasing interaction more or less automatically leads to greater attraction.

Newcomb<sup>13</sup> added to this by stating that this is true only if homogeneity of attitude prevails or develops. It seems logical, then, that the regular daily group meeting of the SERL student teachers provides a means for self confirmation, satisfies the personal need for valuation of others, produces positive feelings, and leads to development of similarity of attitudes and values. This study has indicated that this is the case.

The group, along with the contributions of the clinical consultant, the cooperating teacher, the college coordinator, and the cooperation of the many agencies providing the multitudinous variety of experiences, seems to make the SERL Project a superior pattern of providing the student teaching experience, with reference to openness and attitude formation.

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<sup>11</sup>D. Barnlund, Interpersonal Communication: Survey and Studies (Boston: Houghton Mifflin, 1968).

<sup>12</sup>Homans, op. cit.

<sup>13</sup>T. Newcomb, "Stabilities Underlying Changes in Interpersonal Attraction," Journal of Abnormal and Social Psychology, Vol. 66 (1963), 376-386.

### Summary

Many considerations were given to preserve the integrity of the data collected by disassociating the tests from personal evaluation, cooperating teachers, clinical consultants, college coordinators, and by keeping scores anonymous.

The Multivariate Analysis of Covariance was found to be the acceptable test for the data in this study. The level of significance was arbitrarily set  $p < .01$ .

Tests were made of the null hypotheses of the study, and were accepted or rejected on the basis of the data collected at the level of significance. As a result of these tests, a restatement of the hypotheses is now made, followed by a statement of support or non-support.

#### Hypothesis 1

Student teachers in the SERL Project will have more positive attitudes toward children as pupils and teaching as a profession than student teachers in the Conventional Program as a result of their laboratory experience.

The hypothesis was supported.

#### Hypothesis 2

Student teachers in the SERL Project will be more open to experience than student teachers in the

Conventional Program as a result of their laboratory experience.

The hypothesis was supported.

### Hypothesis 3

There will be a greater positive change in attitudes in the SERL group of student teachers than in the Conventional group.

The hypothesis was supported.

### Hypothesis 4

There will be a greater positive change in openness in the SERL group of student teachers than in the Conventional group.

The hypothesis was supported.

### Sub-Hypothesis 1

There will be a significant correlation between openness and attitude. Those people who are more open will have more positive attitudes.

The hypothesis was not supported.

### Sub-Hypothesis 2

Sex differences will have an effect on changes in openness and attitude in both the SERL Project and the Conventional Program.

The hypothesis was not supported.

The socialization, the interaction of the group appears to be, as a result of the interpretation of the data and related literature, the most significant contributing factor in the differential results of this study. The group, along with the contributions of the clinical consultant, the supervising teacher, the college coordinator, and the cooperation of the many individuals and agencies providing the multitudinous variety of experiences, seems to make the SERL Project a superior pattern of providing the student teaching experience, with reference to openness and attitude formation.



## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to compare the cooperative Michigan State University-Lansing SERL Project with the Conventional Program of student teaching, using openness and attitude formation as dependent variables. Answers were sought for some basic questions:

- (1) Do the SERL participants have a more positive attitude towards children as pupils and teaching as a profession as a result of that pattern of student teaching?
- (2) Are the SERL participants more open to experience as a result of the atmosphere and activities provided by the SERL Project?
- (3) Will the SERL student teachers change more in their attitudes toward children as pupils and teaching as a profession as a result of their experience in the project?
- (4) Will the SERL student teachers change more in openness as a result of their experience in the SERL Project?
- (5) Will there be a correlation between openness and the stated attitude, as dependent variables, in the student teachers?
- (6) Will the sex of the student teachers have an effect on the perceptions and experiences gained in student teaching, with reference to attitude and openness?

As a result of these questions it was hypothesized that: (1) Student teachers in the SERL Project will have more positive attitudes toward children as pupils and teaching as a profession than student teachers in the Conventional Program, as a result of their laboratory experience. (2) Student teachers in the SERL Project will be more open to experience than student teachers in the Conventional Program, as a result of their laboratory experience. (3) There will be a greater positive gain in attitude in the SERL group of student teachers than in the Conventional group. (4) There will be a greater positive change in openness in the SERL group of student teachers than in the Conventional group. (5) There will be a significant correlation between openness and attitude. Those people who are more open will have more positive attitudes. (6) Sex differences will have an effect on changes in openness and attitude in both the SERL and Conventional Programs.

To study the hypotheses of this study, all of the student teachers assigned to the SERL Project (18) were tested and compared with a random sample of student teachers assigned to the Conventional Program (26). The population of the study (N=44) completed pretests, before student teaching, and posttests, during the 10th week of their experience, of the Minnesota Teacher Attitude Inventory and the Teacher Problems Q-sort. Both

instruments have proven validity and reliability to test attitude and openness, respectively.

The Multivariate Analysis of Covariance was found to be the acceptable test for the data in this study. The level of significance was arbitrarily set at  $p < .01$ .

No widely accepted measures of teacher competence correlated with teaching success have been developed. To some theorists environment is the highly significant factor in the development of successful teachers, while others believe the early life experiences, the perceptual approach, are more fundamental. In the design of this study, an effort was made to isolate two of the more important perceptual variables, openness and attitude, to test the environment as a place of learning in the development of teaching behavior. The review of the literature offered support and confirmation for openness and attitude formation as acceptable dependent variables. While no one person is entirely open or closed, each person, according to conditions and his perceptions, lies somewhere on the open-closed continuum. The open person would be the ideal teacher type exhibiting properties of creativeness, originality, positiveness, sensitivity, and flexibility. To the open person, problems become more central and there is a gradual owning of experience. The open person believes in his own worth and the worth of others. He sees himself as responsible for the solutions

of his own problems. He deals with the central aspect of problems and becomes focused first in the present and later in the future, building on the past. He is susceptible to change and accepts new challenges and opportunities. The closed person represents the opposite end of the continuum. Many studies have shown the characteristics of openness to be highly correlated with teaching success.

People possess attitudes, and since behavior is a function of attitude, a change in attitude should result in a modification of behavior. The literature shows that: (1) student teachers do have rather definite attitudes toward children as pupils and teaching as a profession, (2) attitudes can and do change, and (3) different programs provide varying changes in attitudes.

Tests were made of the null hypotheses of the study and were accepted or rejected on the basis of the data collected at the predetermined level of significance. As a result of these tests, a statement of support or non-support of the hypotheses was determined.

#### Hypothesis 1

Student teachers in the SERL Project will have more positive attitudes toward children as pupils and teaching as a profession than student teachers in the

Conventional Program, as a result of their laboratory experience.

The hypothesis was supported.

#### Hypothesis 2

Student teachers in the SERL Project will be more open to experience than student teachers in the Conventional Program, as a result of their laboratory experience.

The hypothesis was supported.

#### Hypothesis 3

There will be a greater positive change in attitudes in the SERL group of student teachers than in the Conventional group.

The hypothesis was supported.

#### Hypothesis 4

There will be a greater positive change in openness in the SERL group of student teachers than in the Conventional group.

The hypothesis was supported.

#### Sub-Hypothesis 1

There will be a significant correlation between openness and attitude. Those people who are more open will have more positive attitudes.

The hypothesis was not supported.

### Sub-Hypothesis 2

Sex differences will have an effect on changes in openness and attitude in both the SERL Project and Conventional Program.

The hypothesis was not supported.

### Conclusions

Student teachers in the SERL Project showed more positive gains in both attitude and openness as a result of their exposure to the activities of the project, and finished at a higher level of openness and attitude than the Conventional student teachers. As a result of their group activities, in interaction with pupils, parents, and individuals from community service organizations, the SERL student teachers should be better prepared to meet their obligations as first-year teachers. The SERL participants have had greater opportunities to develop techniques and to recognize and use opportunities from a wide variety of sources. The socialization, the interaction of the group, appeared to be the most significant contributing factor to the differential results of the study. The group, along with the clinical consultant, the cooperating teacher, the college coordinator, and the cooperation of the many individuals and agencies providing the multitudinous variety of experiences, make the SERL Project a superior pattern for providing the student teaching experience, with reference to openness and attitude formation.

No longer is the professional teacher limited to the classroom in his efforts to provide a relevant education for children, and so no longer can the student teacher be limited to only classroom activities in his pursuit of excellence in his chosen career. No longer can this pursuit of positive relevant experiences be left to chance. A planned program, such as the SERL Project, must guarantee to each student teacher the opportunity to attempt the accepted responsibilities a career teacher encounters. Planned, even staged, activities and resulting strategies must be discovered and experienced during the limited duration of the laboratory experience. With new teaching programs, techniques, and innovations continually arising, the "teacher of the future" must be skilled in group dynamics, group interaction, and communication. With team teaching, differentiated staffing, and other multi-teacher activities, the ability to work effectively in the group situation becomes more and more important as a functional teaching characteristic. More efficient, effective use must be made of the student teacher's time in acquiring the characteristics and skills of the "good" teacher. Programs such as the SERL Project can provide these opportunities.

#### Recommendations for Further Research

The findings of one dissertation cannot hope to prove conclusively the merits, validity, and reliability

of a pattern of student teaching such as the SERL Project. This particular study was limited to the variables of openness and attitude formation, and to student teachers in the Lansing School System. Suggestions for further research include:

1. . . . testing the SERL pattern with other acceptable variables such as personality characteristics, performance with reference to intelligence, age, marital status, etc.

2. . . . patterns of student teaching, similar to SERL, tested in a replication of this study, in other schools, and in other districts throughout the state.

3. . . . examination of existing successful cooperative programs between universities, colleges, and school districts to determine common elements that might lead to more successful interrelationships. A common outlook and fusing of the domains of the practical reality of the public schools and the theoretical considerations of the universities might be realized if common elements do exist, are recognized, and used. New structures for cooperation might be more effectively devised to facilitate the required partnership, develop operational levels of decision making, and encourage an effective link between the participating units in each local situation.

4. . . . relating openness and attitude formation with level of success as a student teacher. The design of



this study required anonymity of participant's scores, but another design might relate the highly successful, average, and below average student teacher to openness and attitude formation, as a result of the student teaching program.

5. . . . differences in planned group activities, within the SERL pattern, studied to determine the effect of those differences on attitude, openness, or other variables during student teaching. What kinds of activities can be planned for the most effective, efficient use of the student teaching period to provide the changes expected?

6. . . . a follow-up study to determine if the participants in the SERL Project are more successful career teachers than the Conventional Program participants. The study might determine if the SERL Project pattern was successful in eliminating or reducing some of the problems of the beginning teacher, and if gains in attitude and openness prevailed during and after the first year of teaching.

7. . . . the role of the clinical consultant studied to determine the definition, qualifications, effectiveness, preparation, and selection for maximum returns of time, effort, and money expended. Who should be selected, for how long, and for what reasons?

8. . . . a study of student teacher, cooperating teacher, clinical consultant, and college coordinator

interaction in planning the student teacher's experience. A study could help determine the effectiveness of each participant's role, and conclusions made on how each could be more effectively employed in determining strategies for planned change.

9. . . . attitude studies. Along with this study, attitude studies indicate student teachers do undergo a change in attitude during student teaching. When do these changes take place? Is there a more or less effective time span for the student teaching experience, with reference to attitude formation?

10. . . . determination and definition of innovativeness such as team teaching patterns, differentiated staffing, in-service teacher preparation programs and their effects on student teaching patterns, such as SERL, in producing positive changes in student teachers.

11. . . . determination of effectiveness of classroom teaching time on successful preparation of student teachers. SERL student teachers teach an average of 3 to 4 classes per day. Is this enough to provide the necessary experience for the preparation of career teachers? Should student teachers spend more or less time in the classroom? How do their performances compare with student teachers who teach more or fewer classes?

12. . . . testing an elementary program as well as the secondary program tested in this study. Are there

characteristics of the elementary experience that would produce different results?

Many of the questions raised may be incorporated into the design of one study, but all seem relevant to the search for methods of providing more efficient, effective strategies and patterns of student teaching.

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## **APPENDICES**

**APPENDIX A**

**MINNESOTA TEACHER ATTITUDE INVENTORY**

**PLEASE NOTE:**

**Pages 111-118, Appendix A:  
"Minnesota Teacher Attitude  
Inventory, Form A", © 1951  
by The Psychological  
Corporation not microfilmed  
at request of author.  
Available for consultation  
at Michigan State University  
Library.**

**UNIVERSITY MICROFILMS.**

**APPENDIX B**

**MTAI RAW SCORES**

SERL  
RAW SCORES  
MTAI

<u>Participant</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Change</u>
1101	53	74	+ 21
1102	24	34	+ 10
1103	7	79	+ 72
1104	23	27	+ 4
1205	- 1	50	+ 51
1206	34	60	+ 26
1207	7	24	+ 17
1108	-41	-14	+ 27
1109	8	26	+ 18
1210	48	79	+ 31
1111	56	108	+ 52
1212	22	34	+ 12
1213	22	25	+ 3
1114	24	44	+ 20
1115	-22	84	+108
1216	68	74	+ 6
1117	36	44	+ 8
1218	-46	9	+ 55

## CONVENTIONAL

## RAW SCORES

## MTAI

<u>Participant</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Change</u>
2219	65	42	-23
2220	88	59	-29
2221	13	- 1	-14
2222	14	-37	-51
2223	27	8	-19
2224	5	3	- 2
2225	46	-27	-73
2226	42	34	- 8
2227	64	49	-15
2228	67	45	-22
2129	-47	-36	+11
2130	-38	-37	+ 1
2131	38	33	- 5
2132	21	- 2	-23
2233	49	49	0
2134	24	19	- 5
2235	68	83	+15
2236	74	67	- 7
2237	33	33	0
2238	87	97	+10
2139	42	2	-40
2240	43	28	-15



<u>Participant</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Change</u>
2141	53	48	- 5
2242	48	64	+16
2143	15	-17	-32
2144	66	30	-36

**APPENDIX C**

**TEACHER PROBLEMS Q-SORT**

**INSTRUCTION SHEET**

## INSTRUCTIONS

### Teacher Problems Q-Sort

You have been given a packet containing 80 problems. Each slip in the packet contains one problem which may be of concern to you as a teacher. All 80 problems have been suggested by other teachers. We would like you to use these statements to describe the most pressing problems you experience as a teacher.

You have also been given an IBM answer sheet for recording your responses. If you will, please follow the verbal instructions for identification. The name is not important for identification.

In making marks on the answer sheet, please use the pencil provided. Please be careful to make your mark heavy and black, and as long as the pair of lines. If you change your mind, or make an error, please erase your first mark COMPLETELY. Please be careful to make no stray marks anywhere on the page.

To describe the problems you experience as a teacher, the 80 statements are sorted as indicated below.

	Least Pressing						Most Pressing		
Pile number:	1	2	3	4	5	6	7	8	9
Number of cards:	2	6	10	14	16	14	10	6	2

In sorting the cards you must place two and only two cards in pile number 9. These are the two problems which are most pressing for you. Pile #8 will contain six (and only six) next most pressing problems for you. Pile #7 will contain the next 10 most pressing problems, etc.

The easiest way to make the sort is to begin by dividing the 80 statements into three piles: "most pressing," "least pressing," and a third pile between the two. The three piles may then be subdivided into the final 9 piles.

After you have completed the sort, please record your responses on the IBM sheet. You will notice that each card has a number on it. This number corresponds to the large line numbers on the answer sheet. The pile numbers are one thru nine. Match the number on the card to the line on the answer sheet, and record which pile it is in. For instance: If card 3 is in pile number 8, find line 3 and blacken the lines indicating 8.

Please start sorting the cards. Please do not hesitate to raise your hand if you have any questions.

THANK YOU

**APPENDIX D**

**THE TEACHER PROBLEMS Q-SORT**

1. How to make the subject matter interesting and meaningful to all pupils of varying ability.
2. Teaching children who lack the desire to learn.
3. Student's lack of knowledge of the fundamentals.
4. How to keep children busy and to encourage them to use their time wisely.
5. Working with parents in such a way that they have an opportunity to help define the school program.
6. Trying to get students to apply the knowledge they have.
7. Students wanting to be on an equal with teachers.
8. How to become the most positive educational influence in the lives of my students that I can be.
9. How to constantly change curricular practices to adjust to the latest ideas and research findings.
10. Lack of concern of students in developing high standards.
11. Lack of time to do what you think should be done in a particular subject.
12. Lack of parents participating in PTA.
13. How to develop responsibility of pupils for their behavior.
14. Learning new ways of reaching the slow and fast learner.
15. Immaturity of today's children.
16. Getting children to put forth the necessary effort to accomplish the task assigned.
17. How to decide how much time to spend in creative pursuits.
18. Trying to teach children who do not have the ability to even follow directions.

19. Developing a school spirit.
20. Children's lack of a sense of responsibility for their materials.
21. I expect too much from my pupils. I am too anxious and ambitious for them.
22. How, in spite of the many handicaps that face me, can I be the best possible teacher I can be.
23. Finding time to use the added materials which we are receiving.
24. I need to inspire the children to take more initiative.
25. What to do with "bright" pupils to prevent their wasting time.
26. Trying to teach a class with abilities that spread over four or five grade levels.
27. Getting children to realize the importance of an education, and being willing to spend the necessary time and effort to achieve it.
28. Lack of interest shown by students.
29. How to give homework that will strengthen the subject matter presented in classroom instruction.
30. Students who are not able to do the work required for their grade.
31. Lack of interest among many parents whose children need parental guidance.
32. Motivating children to want to do more than just pass.
33. How to secure the cooperation of parents in carrying good habits over to the home.
34. Lack of professional attitude on the part of other teachers.
35. Lack of cooperation of other teachers and sometimes the administration in discipline problems.
36. Communicating to parents the value of present-day teaching procedures.

- |  |   |
|--|---|
| 37. Helping children to learn to think for themselves and to be independent. | 38. Students who are satisfied with only a passing grade when they have the ability to do so much better.                             |
| 39. Adequate space for creative efforts.                                     | 40. The mastery of more and better diagnostic techniques in the classroom for the better instruction of pupils.                       |
| 41. Inability on part of children to think for themselves.                   | 42. Finding time to do needed individual work with pupils.  |
| 43. Too much emphasis on sports.   | 44. Putting the subject matter over in a way that students can get the most out of it.  |
| 45. Teaching pupils when "A" and "F" pupils are dumped into the same class.  | 46. Not enough uniformity in what is expected of children from different teachers.  |
| 47. Too many dropouts.   | 48. Parents who feel that your job is to see that their child passes even though classes are much too large for individual attention. |
| 49. Getting quiet children to enter into class discussions.                  | 50. How can we maintain better parent-teacher relationships.  |
| 51. Too much absenteeism.  | 52. Getting all children to do assigned homework.   |
| 53. Knowing how to motivate children to want to learn what is important.     | 54. Learning new ways of helping children develop their maximal potentials through school work.                                       |



- |   |   |
|---|---|
| 55. Lack of materials to work with so that every child will have a chance to develop at his top level individually. | 56. Lack of appreciation of the job of the teacher in the community.  |
| 57. Carrying out the policies formulated by others such as the principal or the superintendent.                     | 58. Parents whose emphasis is on the grading system rather than on the development of the individual child. |
| 59. Getting students to use wisely the abilities and talents they possess.  | 60. Insufficient library materials for student-centered teaching.   |
| 61. Lack of set standards for judging progress or promotion.  | 62. Changing teaching practices to fit the needs of individual students.                                    |
| 63. Getting the children to listen.   | 64. Lack of sufficient funds to accomplish what I'd like to accomplish.                                     |
| 65. Children who cannot read or understand what they have read.   | 66. Finding better and newer ways of relating subject matter to daily living.                               |
| 67. Sufficient time for teaching subject matter.  | 68. Problems from socially promoted children.   |
| 69. Not enough time to accomplish all I'd like to accomplish.   | 70. Helping pupils express individual needs and interests.  |
| 71. Inability of some students to have a spark of ambition.   | 72. Children who are not interested in any type of homework or study at home.                               |
| 73. Learning better ways of evaluating pupil progress.  | 74. Children who fail to give attention in class--poor attitudes.   |

- 75. Teaching pupils who are not adequately prepared by the teachers before us.
- 76. Some students feel they are different and think they should be treated as teachers are.
- 77. Continuing to develop new and better ways of getting students to participate and enter classwork with their fullest attention.
- 78. Inability of some students to learn, and the fact that they retard or slow down the most intelligent ones in some instances.
- 79. How to continue to improve my teaching in a fast-changing world.
- 80. Although class work is all planned by the class, interest beings to fall away if any real obstacles arrive in working on our problems. I need to rethink my methods of work to prevent this.

**APPENDIX E**

**Q-SORT RAW SCORES**

SERL  
RAW SCORES  
Q-SORT

<u>Participant</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Change</u>
1101	19	20	+ 1
1102	13	20	+ 7
1103	7	19	+12
1104	20	21	+ 1
1205	21	23	+ 2
1206	19	25	+ 6
1207	17	17	0
1108	- 2	7	+ 9
1109	20	17	- 3
1210	19	22	+ 3
1111	20	26	+ 6
1212	17	17	0
1213	12	15	+ 3
1114	- 3	11	+14
1115	1	2	+ 1
1216	11	12	+ 1
1117	5	10	+ 5
1218	- 3	12	+15

## CONVENTIONAL

## RAW SCORES

## Q-SORT

<u>Participant</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Change</u>
2219	-23	-25	- 2
2220	18	7	-11
2221	27	22	- 5
2222	12	10	- 2
2223	13	10	- 3
2224	16	15	- 1
2225	10	6	- 4
2226	19	21	+ 2
2227	12	14	+ 2
2228	20	17	- 3
2129	12	3	- 9
2130	- 4	-12	- 8
2131	7	- 1	- 8
2132	7	2	- 5
2233	14	7	- 7
2134	12	- 1	-13
2235	12	0	-12
2236	19	-22	-41
2237	10	10	0
2238	20	14	- 6
2139	18	19	+ 1

<u>Participant</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Change</u>
2240	16	25	+ 9
2141	- 2	- 3	- 1
2242	17	15	- 2
2143	13	18	+ 5
2144	18	7	-11