



ABSTRACT

A STUDY OF STUDENT TEACHERS' EXPECTED AND ACTUAL OUTCOMES AND THE STUDENT TEACHING PROGRAM OF THE INDUSTRIAL ARTS EDUCATION DIVISION AT THE STATE UNIVERSITY OF NEW YORK, COLLEGE AT BUFFALO

by Leonard J. Poleszak

The basic purpose of this study was to determine and analyze the expected and actual outcomes, held by a selected group of industrial arts education student teachers, in relation to the personnel with whom they came in contact during student teaching. A comparison of these verbalized outcomes and the student teaching program objectives was made. A second purpose was to discover the relationship which existed between attitude scores, (as measured by the Minnesota Teacher Attitude Inventory), prior intent to teach, and student's verbalized outcomes.

The methodology incorporated in the study was comparative and descriptive. The population included one hundred and four (104) industrial arts education junior and/or senior students at the State University of New York, College at Buffalo, who were assigned to student teach during the second, third, and fourth quarters of the school year 1962-1963. A pre-test questionnaire, and the MTAI, were administered on the day preceding the first day of student teaching. A post-test questionnaire, and the MTAI, were administered on the day after completion of student teaching. The

questionnaires were designed to elicit expectations and satisfactions which students held in regard to: a) the supervising teacher, b) the college supervisor, c) the principal, and d) the other teachers on the staff of the cooperating school. Response categories were established and tally sheets used, to secure data for tabular and graphic representation. Analyses and interpretation of the tables and figures provided the basis upon which the major text of the study was written.

Analysis of the data provided answers to four basic questions:

- 1) What are the expected and actual outcomes of student teachers as stated by them just prior to and immediately following one student teaching experience?
- 2) Do student teachers receive the amount and kinds of help and guidance they expect from each of the following:
 - a) supervising teacher, b) college supervisor, c) principal, d) other teachers?
- 3) Do students with high positive MTAI scores verbalize different expected and actual outcomes than students with low negative MTAI scores?
- 4) Do students who say they intend to teach, prior to student teaching, possess different expected and actual outcomes than those who say they do not intend to teach?

Some of the findings indicated by the data were:

Approximately 65 per cent of total expected and actual outcomes verbalized by the students in this study were related to the student teaching program objectives of, "become acquainted with the role of the school; knowledge of methods and materials of teaching; and assuming the responsibilities of a regular classroom teacher."

Approximately 11 per cent of total expected and actual outcomes were related to the objectives of, "extend knowledge of the subject matter area; further develop a philosophy of education; and develop an experimental and creative attitude."

The number and nature of the expected and actual outcomes verbalized by the students in this study indicated that the supervising teacher was felt to be the most influential person with whom they came in contact. The college supervisor ranked second, followed by other teachers on the staff of the cooperating school. The principals did not meet the minimal expectations held for them by the students in this study.

Students with high positive MTAI scores held different expected and actual outcomes than students with low negative MTAI scores.

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Slight differences existed in the nature and number of verbalized outcomes reported by students who intended to teach as compared with those of students who were undecided, or did not intend to teach.

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CHAPTER I

INTRODUCTION

Definition of the Problem

The student teaching program of the Industrial Arts Education Division at the State University of New York, College at Buffalo, has been in existence for over sixty years. During this entire period very little systematic effort was made to analyze its effectiveness. Changes and improvements were made through the years as the need arose and as personnel responsible for the program changed. There was no systematic evaluative study with the resultant data to support changes. The time requirement in student teaching fluctuated and presently is composed of two nine-week periods of full-time off-campus teaching in different schools, with a nine-week seminar on campus between assignments. This arrangement, although felt to be beneficial by the professors in the professional sequence, created problems for the technical and academic course instructors, as well as creating scheduling problems for the students. As a result, the staff decided that in the future a time arrangement consisting of a full semester of student teaching, two assignments of nine weeks duration, each in a different

cooperating school, would be reinstated. This decision was made largely on the basis of convenience for staff and students. No analysis was made of the extent to which objectives of the student teaching program were being met.

Much of the current literature indicates the need for prospective teachers to have earlier and more extensive contact with children in actual classroom situations. Some teacher preparation institutions have devised programs where student teachers begin active involvement during their sophomore years. Fifth-year programs are becoming commonplace, and internship programs are being developed. The STEP program at Michigan State University is an example of one method of increasing the amount of time a student spends in student teaching and also a method of causing gradual involvement with increasingly greater responsibilities being assumed by the student teachers or interns.

The degree to which the pre-student teaching phase of preparation created realistic and appropriate expectations from students regarding student teaching troubled this investigator for many years. The extent to which expectations were met as a result of student teaching created another area of concern. If prospective student teachers achieved maximum benefit from the student teaching experience, their expectations would parallel closely the objectives of the program as established by the college. Also, if the student teaching experience was meaningful and helpful to the students,

then the expectations which they held for it would have been satisfactorily met. Therefore, actual outcomes would parallel expected outcomes.

An effective pre-student teaching program would provide students with a clear picture of their duties and responsibilities during the student teaching period. The student teaching experience in like manner, would provide the student with an opportunity to equip himself for an actual teaching position.

Purpose of the Study

There were four distinct groups or individuals with whom student teachers associated and from whom they expected and received help and guidance during student teaching. They were: the supervising teacher, the college supervisor, the principal, and the other teachers on the staff of the cooperating school.

The basic purpose of this study was to determine and analyze the expectations held by a selected group of student teachers in relation to the individuals mentioned above and also to determine how well these expectations were met. A second purpose was to discover the relationship which existed between attitude scores (as measured by the Minnesota Teacher Attitude Inventory), prior intent to teach, and student's verbalized outcomes.

It was hoped that the data would suggest changes and improvements to an existing program and that a contribution

would be made in the literature thereby suggesting to other teacher preparation institutions an area of concern, which, if analyzed at their own schools, might result in more meaningful student teaching programs.

Need and Importance of the Study

Monroe's 1950 edition of the Encyclopedia of Educational Research contained the following passage related to research in student teaching:

It has been pointed out that institutions which educate teachers have tended to accept student teaching on faith because of the fact that this course has so often been rated by experienced teachers as the most meaningful experience of their pre-service programs of professional education. The result has been an attitude of complacency with respect to the evaluation of the effectiveness of student teaching. (5:1366)

Contained in the same article were additional statements concerning needed research in this area:

1. There is a need for studies which will identify and clarify the goals and over-all objectives - in terms of teaching competence - which student teaching and related aspects of teacher education are expected to serve.
2. ...studies are needed which will ascertain the relative contribution of various student teaching experiences...to the development of particular kinds of teaching effectiveness. (5:1367)

Among the statements summarizing its 1957 standards study the National Council for the Accreditation of Teacher Education included the following statement:

The relative responsibilities of college faculty supervisors and supervising teachers in the schools should be clearly defined. (6:18)

Studies also are needed to determine the manner and degree of involvement of principles in the student teaching program. (4:1477)

An investigation of the literature failed to reveal any studies involving the role of other teachers on the staffs of the cooperating schools. Yet, student teachers held some expectations from this group with whom they associated during the period of their student teaching.

Klausmeier and others reported a series of problems that occurred during student teaching. They indicated a need for studies of the role of the student teacher, cooperating teacher, and supervisor in which attention was given to the inter-active process involved in the solution of problems. (3)

The literature reviewed contained specific references to the importance of clearly defined roles of the personnel involved in programs of student teaching. The one category not appearing above, which was analyzed in the present study, was that of other teachers.

This study indicated the concerns and expectations which student teachers held for supervising teachers, college supervisors, principals, and other teachers. If expected outcomes paralleled the objectives of the student teaching program and were realistic and attainable, knowledge of them by the personnel involved would greatly

enhance the student's capability of achieving the objectives. If, on the other hand, students concerns varied considerably from the objectives, then revision of the pre-student teaching program would be indicated.

Definition of Terms

Terminology poses problems which, if not clarified, result in confusion and misinterpretation. Teacher education institutions have developed different terms to define similar factors. The following list of terms contains definitions consistent with those accepted by the Association for Student Teaching and the American Association of Colleges for Teacher Education. (2)

Professional laboratory experiences - all those contacts with children, youth, and adults (through observation, participation, and teaching), which make a direct contribution to an understanding of individuals and their guidance in the teaching-learning process.

Professional sequence - the series of required courses for Industrial Arts Education students at Buffalo related to the methodology and principles of industrial arts education teaching, human growth and development, and the student teaching experience.

Student teaching - a part of the total program of professional laboratory experiences in which the student accepts increased responsibility for work with a group of learners over a period of consecutive weeks.

Student teaching program - that portion of the professional sequence during which the student is assigned to a cooperating school and a supervising teacher, under whose guidance, with the help of a college supervisor, he assumes the role of a teacher by practicing and performing the tasks required.

Internship - an advanced level of student teaching, the intern teaches a major portion or all of the day, is a college graduate, is paid by the school district, and is supervised by college personnel.

Laboratory school - any school, public or private, utilized for professional laboratory experiences. A college controlled school, located on or near the campus, organized for the specific purposes of preparing teachers, with staff and facilities designed to serve this purpose.

Cooperating school - a school not under the legal jurisdiction of the college, used by the college to provide professional laboratory experience.

Supervising teacher - a regular teacher in a cooperating school under whose guidance students observe, participate, or do student teaching.

College supervisor - an individual employed by the teacher education institution to work cooperatively with supervising teachers and to assist the student teacher in deriving the greatest possible values from experiences.

Expected outcomes - expectations - these two terms are thought to be synonymous and were used interchangeably throughout the study. They are defined as items of concern and of genuine interest, indicative of anticipation of the occurrence of certain events; more specifically, the responses of prospective student teachers to the question, "What do you hope to learn from...?"

Actual outcomes - satisfactions - these two terms are thought to be synonymous and were used interchangeably throughout this study. They are defined as fulfillment of previously anticipated goals, wants or desires; that which actually occurred; the responses of student teachers to the question, "What are the things which you learned from...?"

Attitude scores - the score attained by each of the students on the Minnesota Teacher Attitude Inventory (MTAI).

"This instrument is designed to measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships, and indirectly, how well he will be satisfied with teaching as a vocation." (1:3)

Basic Assumptions of the Study

The following assumptions were made in this study:

1. Industrial Arts students at the State University of New York, College at Buffalo, who were about to begin their student teaching experience, were able to verbalize the expectations which they held for it. As they projected ahead and thought about specific persons with whom they would associate they were able to list specific learnings which they hoped would accrue to them through these associations.

2. Industrial Arts students at the State University of New York, College at Buffalo, who had just completed a student teaching assignment, were able to verbalize the satisfactions which they gained from it. As they reflected back and thought about specific persons with whom they had associated, they were able to list specific learnings which had accrued to them through these associations.

3. An analysis of students' verbalized expectations and satisfactions is a useful method of determining factors relative to improvement of existing conditions within a student teaching program.

4. The existing student teaching program in the Industrial Arts Education Division of the State University of New York, College at Buffalo could be improved and made more meaningful through effective utilization of the findings of the present study.

Delimitations of the Study

This study was delimited in the following ways:

1. Subjects of this study were, for the most part, native residents of the communities in and around the city of Buffalo, New York. A small percentage came from rural communities or distances greater than commuting distance from the college.

2. All of the subjects of the study were enrolled as majors in the Industrial Arts Education Division of the College at Buffalo and had attained either junior or senior standing. The data accumulated and the conclusions drawn applied to this group of individuals and no attempt was made to generalize the findings to all student teachers and/or all student teaching programs.

3. The most serious delimitation of the study was in the researcher's interpretation of the data supplied by the subjects.

Where responses fit neatly into a given category the problems were minimal. There were occasions where classification was extremely difficult and in these instances the researcher's experience and judgment were used as objectively as possible.

Methodology

The methodology incorporated in this study was comparative and descriptive. Percentages were used as the primary statistic.

Procedure

Two questionnaire forms (Appendix A and B) were developed for use in gathering data for the study. A major portion of the instruments involved open-end questions designed to elicit the expectations held by prospective student teachers and the satisfactions held by them after completing the student teaching assignment.

The instruments were tested by administering them to forty-six first-quarter student teachers in the Industrial Arts Education Division of the State University of New York, College at Buffalo. Revisions were made and an additional section containing structured response items was added. The Minnesota Teacher Attitude Inventory (MTAI) was selected as the instrument to be used in establishing categories of student teachers for a comparison of attitudes and outcomes.

The second, third, and fourth quarter student teachers comprised the population about which the study revolved. There were one hundred and twelve student teachers. Due to several factors, among them illness, failure to complete the student teaching assignment, failure to complete both pre and post test forms, only one hundred and four (104) students were used in the study.

The pre-test questionnaire, Form A, and the MTAI were administered to each group of student teachers at a seminar session held on the day preceding their first day of student teaching. The post-test questionnaire, Form B, and the MTAI were administered to each group of student teachers at a seminar session held on the day after their last day of student teaching. Information was given concerning the nature of the study and assurances provided, concerning professional treatment of the data.

Responses to open-end questions from the questionnaire forms were transferred to a combined information sheet to facilitate handling of the data.

Categorical and quantified information was inserted on Royal McBee Keysort Cards so that a simplified procedure for referral to appropriate combined information sheets would be available.

Categories of responses, expected and actual, were established, and individual outcomes verbalized by the subjects, were recorded on a tally sheet. Student responses

varied from specific to general, creating a classification problem. The decision was made to classify the specific expected and actual outcomes in categories separate from the general ones. Therefore, some of the tables in Chapters IV, V, and VI appear to have summary items contained in them.

After completion of the tables and graphic representations, the researcher was faced with the task of analysis and interpretation. This resulted in the descriptive sections following each table and/or figure. The conclusions and recommendations were drawn from these descriptive portions.

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CHAPTER II

RELATED RESEARCH:

PART I, PROGRAMS AND OBJECTIVES

Rationale for Student Teaching Programs

One must learn by doing the thing;
For though you think you know it
You have no certainty until you try.

Sophocles - 400 BC

The above quotation, written more than two thousand years ago, is appropriate today within the context of a justification for programs of student teaching. Recognizing the fact that student teaching experiences are not the real thing, they are, however, a normal and necessary step prospective teachers should take enroute to the goal of becoming teachers. The academic background provided for and acquired by undergraduate students in teacher preparation institutions prior to the student teaching phase should serve adequately to prepare them for student teaching.

Helen T. Suchara, writing in the 41st Yearbook of the Association for Student Teaching said:

Student teaching is the integrating experience in teacher education and must be of sufficient duration and differentiation to provide the student with adequate opportunity to recognize the problems, identify and prescribe courses of

action, make professional decisions, take action, appraise the action taken, and evolve guides for next steps. To help students experience the major responsibilities of teaching and become self-directive in the process, student teaching needs to begin early enough to allow for gradual involvement in guided teaching and eventual conclusion with full-time assignment, in which the prospective teacher has the opportunity to carry responsibility for a group of learners for a continuing period of time. (21:137)

There are a number of people who believe that practice in teaching is unnecessary and that an intelligent, liberally educated individual, well grounded in a subject field, is capable of teaching effectively without a period of practice under guidance. Available research does not support this position. Beery's study of two groups of beginning teachers; one which had student teaching experience and the other which did not; analyzed the teaching effectiveness of each group during the first year of teaching. He concluded that the teachers whose background included student teaching were rated as more effective than those whose background did not include this experience. (3)

Further support for the necessity and importance of student teaching may be secured through examination of the annual yearbooks of the Association for Student Teaching and a closer look at the quantity, nature and quality of the research being done.

A rationale for the justification of practice in teaching developed by Shaplin included the following assumptions:

1. Teaching is behavior, and as behavior is subject to analysis, change and improvement. The assumption here is that practice conditions can be established which will provide the kind of analysis of teaching which will enable the teacher to learn to control his behavior.
2. Much of the habitual behavior which individuals have developed in other contexts is inappropriate for the teaching situation. Practice provides an opportunity to learn the role expectations of teaching with a minimum of trauma, and an opportunity is provided for the analysis of recurrent patterns of behavior.
3. Under present conditions, much of teaching is conducted under stress conditions. Habitual reactions to stress, or the usual defense mechanisms, may be inappropriate...under these conditions. Practice provides a gradual induction into teaching, and should provide a cushion against the 'reality shock' which so many new teachers experience.
4. Teaching behavior is extremely complex, involving the full range of thought processes, verbal behavior, and physical action. An essential of practice for novice teachers, then, is the development in the schools and colleges of a corps of trained supervising teachers.
5. Teachers, through practice, can learn to analyze, criticize, and control their own teaching behavior. Training in self-analysis (of teaching) should be a primary objective in practice, for most of teaching occurs in isolation from other critical adults.
6. Practice has the dual purpose of training and the elimination of the unfit. The conditions of practice must simulate real conditions as closely as possible to provide a test of the candidate's capacity, both for the purpose of helping him if he shows potentiality, or eliminating him if he proves unfit.
7. Practice provides the experiences which give meaning to all other instruction in education (teaching). If practice occurs simultaneously with other instruction, the teacher can 'try out' the principles, concepts and content

of his own teaching. Instead of 'talking about' problems, instruction in education can become problem solving. (15:39-48)

The preceding assumptions were listed in order to indicate the complexity of the teaching process as well as the highly specialized behavior expected of a teacher. The student teaching period is the time for the prospective teacher to come to grips with reality as concerns the obligations and responsibilities of teaching. The patterns which are formed during student teaching may follow the student throughout his teaching career. Therefore, those responsible for teacher education programs should make this experience as realistic and meaningful as possible.

Programs in Existence and Present Status of Research

The development of student teaching programs has been closely related to the normal school movement over the past century and has paralleled the establishment of departments and colleges of education in universities and liberal arts institutions during the past sixty years. Originally, student teaching was designed so that students might learn a few patterns of teaching. Today they are expected to develop a comparatively high degree of competence in many phases of the teacher's work.

Woodruff, (22) Doane, (7) and Boyce, (4) in separate analyses of programs of teacher preparation, concluded that student teaching was the most worthwhile requirement in the

teacher education program. Such a unique position might be a part of the reason that "the general status of critical, evaluative research on student teaching is poor." (13:2)

Maaske's findings (1954) concluded in the preceding statement were attributed to two major factors; (1) the difficulty in doing conclusive research in such a diverse and uncontrollable field of activity, and (2) a general lack of research interest in this area. The former factor remains, the latter no longer seems to be true. Greater interest in research related to the area of student teaching is easily evidenced quantitatively, if one examines the rapidly increasing number of entries in the bibliographies printed annually since 1937 in the Association for Student Teaching Yearbooks. The titles of their Yearbooks 1954 to 1963 provide an indication of the emphasis given this area by the Association: Facilities for Professional Laboratory Experiences in Teacher Education, 1954; Functions of Laboratory Schools in Teacher Education, 1955; Improving Instruction in Professional Education, 1958; The Supervising Teacher, 1959; Evaluating Student Teaching, 1960, Teacher Education and the Public Schools, 1961; The Outlook in Student Teaching, 1962; Concern for the Individual in Student Teaching, 1963.

Scates annual reports of research in teacher education list greater numbers of topics related to the study of student teaching. (14)

The present trend seems to be toward more studies of this critical area of teacher preparation. Those reported in the literature which seem to have direct bearing on the present study are analyzed in the succeeding chapter.

Objectives of Student Teaching as Reported in the Literature

There appears to be general consensus concerning student teaching program objectives. Variations are discernible, but basic agreement among widely separated institutions seems to exist.

Since 1954 Northern Illinois University has offered, in the summer session, a special student teaching program for experienced teachers; some of whom have been away from teaching for several years, others requiring student teaching for certification, etc. The goals of the program are:

- A. To analyze the teaching-learning situation.
- B. To evaluate the teaching-learning situation.
- C. To suggest ways to improve the teaching-learning situation.
- D. To plan a teaching-learning situation.
- E. To guide a teaching-learning situation.
- F. To evaluate the achievement of students.
- G. To report the progress of children to parents.
- H. To act to improve the teaching profession in general. (1:78)

Grim and Michaelis offered advice to student teachers and incorporated in their statement some objectives of student teaching.

Student teaching is an opportunity to gain practical classroom experience under expert supervision. During student teaching you can learn about the actual work of the teacher in the classroom, in the guidance program, and in

out-of-class experiences. You can learn about the teacher's relations to other school workers, and about his community responsibilities. Student teaching is a laboratory experience in which you can plan and develop learning experiences with pupils and secure help when you need it. The ideas you have secured in previous courses can be focused upon actual school problems as you work with high school pupils in a realistic situation. Student teaching is a significant part of a professional program designed to help you become a competent teacher. (9:3)

Many teacher preparation institutions provide their student teachers and cooperating teachers with mimeographed materials or handbooks containing specific instructions relating to such items as; procedures, evaluation, and suggested experiences. Following are a series of excerpts relating to student teaching objectives taken from some of these materials.

Material available from the Industrial and Technical Education Department at Utah State University contained the following:

Anyone preparing for employment in professional occupations needs adequate schooling and also some type of experience which closely resembles the actual activities in which he will participate as a professional person. The importance of such experience needs to be emphasized. In the preparation of teachers, the student teaching program is designed to give this experience.

It is believed that the experiences gained by student teachers should be as realistic as possible. In other words, the student teaching situation should be as typical as possible of the experiences of the full-time teacher. Anything short of this is apt to give anything but a true picture of what the situation will be when one accepts employment as a teacher. The range of professional laboratory experiences as

a student teacher should include, first, systematic observations; second, limited participation; and finally, full participation in the same kinds of school and community activities as those in which he will later engage as a regular teacher. Specific objectives are:

1. To provide opportunity for gaining insight into the duties and responsibilities of public school teachers.

2. To provide actual experiences in carrying out teaching assignments under the most favorable conditions possible, including adequate supervision.

3. To provide for the professional development of prospective Industrial Education teachers.

4. To encourage student teachers to participate in all of the activities in which regular teachers engage and to render professional services to students through classroom and curricular activities. (18:1)

Purdue University, Industrial Education Curriculum area, provides a Guide for Supervising Teachers in which two statements appeared relevant to this discussion:

A major objective of the student teaching experience is to strengthen, develop, and reinforce the attitudes, understandings, and skills essential to becoming an effective teacher. (10:1)

While the primary purpose of student teaching is to provide an opportunity for the student to learn to teach in his area of specialization, he should also experience as many aspects of the total teaching situation as time permits. (10:20)

The Handbook for Supervising Teachers in use at Ball State Teachers College contained a list of specific objectives for student teachers.

Specific objectives of student teaching:

1. To provide students with opportunities to go beyond verbalized acceptance of educational

theory to an understanding of the meaning of this theory in action.

2. To provide opportunities for students to test their abilities in applying theory to various activities of the teacher.

3. To sharpen the students' awareness of problems and factors in teaching situations.

4. To increase the students' ability to use basic principles in novel situations.

5. To help students clarify their own philosophies of education. (12:4)

The Industrial Arts Education Division of Oswego, New York included these statements in their guide for cooperating teachers.

The student teaching program at State University of New York, College of Education at Oswego, has been developed to give each student an opportunity to experience first-hand, the many facets of the teaching profession [italics not in the original] under a guided internship.

This experience should reflect in every way the multitude of responsibilities inherent in teaching in the industrial arts laboratory. The student should become a part of the school and the community to which he is assigned and take part in all the activities of an industrial arts teacher, within the limits of the time and situation. ...Students should feel able and qualified at the completion of their semester's experience in student teaching to assume the full-time responsibilities of an industrial arts teacher. [italics not in the original] (11:1)

Objectives of Student Teaching at the State University of New York, College at Buffalo, Industrial Arts Education Division

The statements which follow were taken from two sources; the first from the Industrial Arts Education Division Student Teacher Guide and the second from the Elementary and Secondary Education Division's Student Teaching

Handbook of the State University of New York, College at Buffalo. Both were included in order to indicate the variations which exist between divisions on one campus and also to point out that most statements of objectives for student teaching fall somewhere within this range.

...one learns to teach by being put in a situation where he must teach and, at the same time, study his performance under the guidance of a teacher who is well-versed in the intricacies of teaching.

The student teaching program is designed to offer continuously enlarging experiences with these three facets of teaching (i.e., what to teach, how to teach, why teach it) under the guidance of experienced teachers. It is here that the student learns to select and organize instructional content, that lessons are prepared and analyzed for their effectiveness, that techniques of class control are examined and patterns for future practices are set.
(19:1)

Objectives of the student teaching program of the Elementary and Secondary Education Divisions at the State University of New York, College at Buffalo are:

To help a student:

1. Become acquainted with the role and operation of the public schools to which he is assigned.
2. Become acquainted with the various responsibilities of the teacher in the public schools to which he is assigned.
3. Assume, under qualified supervision, the various responsibilities of a regular classroom teacher.
4. Further develop a philosophy of education.
5. Gain a knowledge of appropriate methods and materials of teaching.
6. Increase understanding of child growth and development.

7. Develop skill in the use of effective techniques for teaching and evaluation.

8. Develop an experimental and creative attitude.

9. Extend knowledge of subject matter in the areas taught. (20:2)

Stratemeyer and Lindsey proposed six purposes of student teaching:

1. To gain understanding and competence in guiding a group of learners in all of their activities.

2. To get the "feeling" of being a teacher, to feel the rewards and satisfactions which come from continuous growth of learners over a period of time.

3. To build a concept of the complete job of the teacher, with the understanding of the range of activities and roles which a teacher must play.

4. To develop a philosophy, including guiding principles, through testing ideas in practice, analyzing consequences, and modifying or strengthening theoretical concepts.

5. To discover needs, through experience in a range of responsibilities, and to plan activities to meet those needs.

6. To acquire a satisfying and intimate relationship to a profession through participation in its organization and activities.
(17:50-51)

Careful perusal of the preceding purposes reveals the repetition which exists among certain sets of objectives as well as some basic differences. Notable by its absence is any listing of well-defined behaviorally stated goals or objectives.

The necessity of having objectives around which to organize programs of student teaching was pointed out by Batchelder, Lawrence and Myers.

Unless the objectives of the program are carefully defined and clearly understood by all persons involved, a great deal of confusion will result. This is especially true in an off-campus program where personnel who have not had previous experience in the preparation of teachers may be involved. To the extent that the objectives are stated in terms of behavioral changes in students, the objectives will serve as adequate guides to program development and to valid evaluation procedures. [italics not in original] It is important that the objectives for student teaching be considered in relation to the aims of the total teacher education program. (2:14)

Sharpe, in the sixth chapter of Teacher Education for a Free People, offered five criteria necessary for a high quality professional laboratory experience. He stated that it should be: "1. challenging, 2. provide for involvement, 3. provide for guidance and assistance, 4. provide for intellectualization, and 5. be satisfying." (16:196)

The statements of objectives included in this chapter, if transposed into criteria such as Sharpe's listing, appear consistent with it.

Evenden pointed out in the 1962 AST Yearbook: "There is no professional phase of a teacher's preparation upon which there is more agreement in theory and more diversity in practice than in the development of necessary teaching skills during student teaching." (8:120)

Such diversity is one of the most desirable features of a program of student teaching. A stereotyped, lock-step arrangement through which all youngsters pass is out of order when dealing with the highly complex nature of individuals, methodology, and concepts related to successful teaching as pointed out, for example, by Shaplin. (15:33-59)

Cottrell, Dean of Education at Ohio University stated, "the successful (student teaching) program will have built into it a good deal of flexibility. No standardized program has much promise." (5:44)

A further point of view, not contradictory but written to provide a note of caution regarding extreme diversionary methods or facilities, was provided by Cronbach. "The more closely learning experiences resemble the situations in which the learning will be used the more adequate they will be." (6:245)

Summary

Student teaching programs are a permanent feature of teacher education. The central problem lies within the professional educator's ability to analyze, devise and organize programs which will provide appropriate experiences from which prospective teachers may acquire the essential skills, knowledge, and understandings needed to make them competent teachers.

Succeeding chapters of this study concern primarily the analysis phase referred to above and result in proposals related to improving one particular program: i.e., the student teaching program of the Industrial Arts Education Division at the State University of New York, College at Buffalo.

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CHAPTER III

RELATED RESEARCH:

PART II, PROBLEMS, NEEDS, ANXIETIES, AND ROLES

This chapter identifies pertinent research which is related to student teachers' expressed concerns prior to student teaching and their reactions to the experience upon completion of it. Since the major purpose of the present study centers around proposals for improving an existing program, entries have been included which are related to this area. The research has been classified under three major headings: (1) the problem areas of student teachers, (2) the needs of student teachers, and (3) the anxieties of student teachers. Extensive research of the literature revealed a number of such studies and they have been reviewed categorically.

1. The Problem Areas of Student Teachers

Shumsky and Murray reported the discussion by a group of student teachers of their attitudes toward discipline. The discussion was based upon written reactions to a cartoon situation.

The authors suggested the need to inculcate in the beginning teacher a more realistic expectation of the

problems involved in relating to children. "The ego-ideal of a democratic, warm, informal, and permissive teacher is an over-simplification. It is an over-simplification to assume that any teacher is always democratic in his approach to children or that it is always desirable to be so." (33:455)

In terms of methodology, the study illustrated a way of helping student teachers analyze their own attitudes and strengthen the awareness of their own confusions. "It is important in working with student teachers to help them explore their attitudes and expectancies with regard to student teaching [*italics not in the original*] , and to help them to understand the impact of disciplinary incidents upon their teaching behavior." (33:456)

More realistic information concerning this vital problem area (discipline) and more adequate preparation regarding it, is a need which teacher education institutions must be aware of and working toward constantly. This is especially true concerning prospective secondary school teachers.

An analysis of a survey made by Hoover, Boetto, and Doyle of 350 Arizona supervising teachers concerning their student teachers' effectiveness, revealed that definite weaknesses appeared in extra-class participation and in motivation of pupils. Some lesser weaknesses occurred in provision for individual differences, use of evaluation

instruments, and basic writing skills. This study suggested implications for teacher education programs and recommended that some scaling instrument might be made a part of the student's official papers. (16)

One problem often overlooked by public teacher education institutions was contained in the last sentence of a passage written by Lofthouse in the 41st Yearbook of the A.S.T..

Before entering the public school for the first time for student teaching, a class of juniors in a Catholic Women's College was asked to write down the problems they expected to encounter. Most of them anticipated difficulties with discipline, "prejudice" (their own and others), and the observation of religious holidays. They worried about how school supplies were paid for and how much homework they should give....Sometimes we do not fully realize how unusual or traumatic student teaching experiences can be when individuals live intimately for the first time with persons of other cultures, races, or creeds. (21:144)

Student teachers who come in ever increasing numbers, from suburban areas, are often faced with what may be a traumatic experience when the student teaching assignment directs them to a large city school system or a rural community. It is not proposed that students from suburban homes be given student teaching assignments in similar areas and that those from urban centers be sent to city schools. The point is made that wide differences between home background and student teaching center location might create severe problems.

Anderson reported a study made to determine the anxieties and worries that prospective teachers have concerning their first teaching position. He held the position that, although the subjects had either completed student teaching or were presently so engaged, their responses to a question asking them to list their worries would mirror their experiences during student teaching. A group of forty-two teachers college seniors was used as a sample for the study and the results showed that their concerns were centered around:

1. their ability to affect learning.
2. their ability to maintain acceptable pupil behavior (discipline).
3. their load of responsibility.
4. their ability to get along with staff members. (2:340)

Among further conclusions of the study, Anderson indicated a belief that school administrators and teachers college personnel should direct their efforts toward helping young teachers find the first year of teaching a satisfying and successful experience. (2)

It is logical to suspect that most prospective student teachers have concerns similar to those of the students in Anderson's study. It is important for all individuals connected with teacher education to exert their energies toward designing programs which will result in satisfying and successful student teaching experiences.

Wey, Miller, and Suggs, in separate studies of the problems of student teachers and teachers reported similar conclusions. Wey collected 5,539 difficulties encountered

by 132 student teachers and 95 first-year teachers. He reports that handling problems of pupil control and discipline is the one specific type of difficulty encountered most frequently by student teachers and first-year teachers. (44)

Miller's study revealed that both groups encountered similar problems. Those most often reported were: for student teachers, (1) stimulating interest among pupils, and (2) maintaining pupil control; for teachers, (1) adapting to ability level of pupils, (2) stimulating interest among pupils, and (3) determining the educational needs of each pupil. (27)

The persistent problems of teachers which Suggs reported were as follows: (1) personal problems, (2) student discipline and (3) service loads. One suggestion which she made for alleviating these problems, was periodic evaluation of teacher education programs to ascertain their effectiveness. Suggs inferred that programs would be improved if provision were made to give student teachers more extensive experience in practical situations and to use progressive methods of teaching in classrooms. (36)

One of the most inclusive listings of the problems encountered by students during student teaching was provided by Wey. He reported these difficulties as follows: (problems are ranked in descending order)

1. handling problems of pupil control and discipline.
2. motivating pupil interest and response.
3. handling routine phases of classroom management.
4. adjusting to deficiencies in school equipment, physical conditions, and materials.
5. handling broader aspects of teaching techniques.
6. lack of command over subject matter and instructional materials.
7. lack of effective teaching voice.
8. presenting the lesson and guiding pupil discussion.
9. adapting to needs, interests, and abilities of pupils.
10. difficulties involved in planning and organizing learning activities, materials, and procedures. (43:102)

Three further studies seem remarkably similar in providing directives for student teaching programs. Haskew said, "...studies concerned with various aspects of student teaching revealed the following trends:

- a. lengthening the period and expanding the daily time devoted to student teaching.
- b. steady increase in use of off-campus schools for student teaching.
- c. college supervision of students increasingly provided by generalists rather than subject matter specialists.
- d. little attention to outside classroom experiences of student teachers.
- e. diminution of other college work taken concurrently with student teaching. (13:178)

Rucker studied the changes in student teaching from 1932 to 1952. Among trends he identified were:

- a. a trend toward student teaching as a full-time experience.
- b. use of more laboratory experiences in teacher education.
- c. more off-campus experiences in student teaching, including community experiences where teaching is performed.

- d. increase in time allotted for student teaching.
- e. increase in academic credit awarded for student teaching.
- f. use of laboratory activities, including student teaching, as the reference point of the whole curriculum in teacher education.
- g. student teaching on more grade levels. (30:262)

The changes found by Rucker and Haskew are echoed by McGrath who said: "Two of the important changes in the off-
ing are:

- 1. A new philosophy for student teaching including prerequisite work experience with youth, pre-student teaching classroom teaching, resident full-time teaching for a minimum of six weeks, and others, is coming into acceptance.
- 2. Periods of internship for a semester or for a full year before completion of the professional training for certification is an approaching reality in many regions. (25:149)

Principles governing the development of professional laboratory experiences were formulated by the Committee of Studies and Standards. This committee was appointed in 1945 by the American Association of Colleges for Teacher Education for the purpose of making recommendations for the professional education of teachers.

Eight principles were developed and are listed below:

- 1. The particular contribution of professional laboratory experiences (including student teaching) to the education of teachers is three-fold: (1) an opportunity to implement theory - both to study the pragmatic value of the theory and to check with the student his understanding of the theory of application, (2) a field of activity which, though raising questions

and problems, helps the student teacher to see his needs for further study; and (3) an opportunity to study with the student his ability to function effectively when guiding actual teaching-learning situations.

2. The nature and extent of professional laboratory experiences should be planned in terms of the ability and needs of the student and should be an integral part of the total program of guidance.
 3. Professional laboratory experiences should provide guided contact with children and youth of differing abilities and backgrounds for a period of time sufficient to contribute functional understanding of human growth and development.
 4. The professional program should be so designed as to afford opportunity for responsible participation in all of the important phases of the teacher's activities, both in and out of school.
 5. Professional laboratory experiences should be cooperatively developed by the student and his advisors. Adequate supervision and guidance should be provided through cooperative efforts of laboratory and college teachers.
 6. Professional laboratory experiences should be integrated with other phases of the school program. Professional education is the responsibility shared by all members of the faculty, each contributing to the maximum development of the student as an individual, as a citizen, and as a member of the teaching profession.
 7. Evaluation of professional laboratory experiences should be in terms of growth in understandings and abilities needed in the situations faced by the teacher working in our democracy.
 8. Physical facilities should be adequate to provide a range of first hand experiences with children, youth, and adults in varied school, home, and community situations.
- (1:18)

Within these principles are many of the concepts which student teachers can acquire only through active involvement. Programs of student teaching must be designed to insure that each student becomes involved to an extent which will permit acquisition on his part of the skill, ability, and knowledge necessary to make him an effective teacher.

2. The Needs of Student Teachers

Not as much research has been done in the area of "needs" of student teachers as in the "problems" area. One explanation for this is that it is more difficult to isolate needs than it is to point out problems.

McConnell, during a five-year period, collected statements from one hundred twenty student teachers who performed their student teaching in a large urban community. The purpose of the statements was to compile, through indirect means, information as to how student teachers evaluated their supervising teachers. Their comments on how the supervising teachers helped them as student teachers, and their suggestions as to what the supervising teachers could have done to help them, indicated that student teachers:

1. need and appreciate suggestions for improvement in many areas.
2. need and want opportunities to show initiative and assume responsibility after a sense of security has been established by good personal relations with the supervising teacher and by a definition of what is expected of them.

3. realize the need for having access to detailed information about their pupils and for having actual experiences in making reports, keeping records, and becoming acquainted with the total school program. (23:85)

Further clarification of the needs of student teachers was provided by Bernadine Schunk writing in the 1959 Association for Student Teaching Yearbook. "The needs of student teachers are as follows:

1. the need for acceptance.
2. the need to know the supervising teacher.
3. the specific personal needs.
4. the need for prestige and status.
5. the need for self-analysis. (32:44)

Wilkinson attempted to secure student teacher's suggestions for experiences which might be included to increase the effectiveness of an existing program of student teaching. He solicited responses from sixty-seven graduates to eighteen items in the student teaching experience and reported the following results: "These items were rated by less than 50 per cent of the respondents as being of great value:

1. Keeping logs or daily reports of student teaching experiences.
2. Writing case studies and/or class profiles.
3. Doing clerical work.

Suggestions made included:

1. Remain in classroom all day.
2. Teach one full day with little or no supervision.
3. Increase student teaching period to one full year to allow more time for observation.
4. Require more teaching.
5. Begin in September so that opening of school can be observed. (45:367)

The suggestions made by these students indicate their feelings concerning experiences for which they felt a need and which were not completely available to them.

Flexibility within a student teaching program is a necessity in order to meet the needs of each individual student teacher. Certain needs will be common to all, but individual differences will exist. Hatfield pointed out that, "one factor in successful student teaching might well be the adequacy of feelings that the student has about himself as a person." (14:88) In a summary, Hatfield said, "The findings are in accordance with the expectations that significant and positive relationships exist between a student's self-evaluation and his success in student teaching." (14:89)

Support for Hatfield's position was readily available from Combs and Snygg who wrote:

If it is important that students learn to perceive themselves as liked, wanted, acceptable, able, and responsible, then it follows that education must provide them with the kinds of experiences which help them see themselves so and avoid treating them in ways that destroy positive self-feeling.... (10:379)

This statement is a clear challenge to teacher educators to devise pre-student teaching experiences, as well as student teaching programs, which will permit qualified students to acquire positive self-feelings.

If a positive relationship exists between the needs of student teachers and those of teachers, then the elements

required of one should be the same as those for the other. Any difference which does exist will be in matter of degree rather than different elements. As long ago as 1939 Michener had this to say: "...unusual success in teaching is composed of five elements:

1. a positive philosophy of education.
2. sufficient control of subject matter.
3. varied methods of teaching.
4. knowledge of children.
5. good teaching personality. (26:5-6)

3. The Anxieties and Expectations of Student Teachers

Beginning in the junior year at most teacher preparation institutions, students begin to think seriously about their student teaching experience. Whether the feelings which they possess are of anxiety, or expectancy, or something else, the fact remains that new, important, and challenging situations await them and they are vitally concerned.

Travers, Rabinowitz, and Nemovicher, through a study in 1953, attempted to discover the anxieties felt by a group of student teachers. They administered a twenty-one item sentence completion test at the beginning and end of a one-semester course in student teaching. Three sentence stems: "I hope my class never _____; I shall expect the pupils in my class _____; and, When I become a teacher I suppose my greatest problem will be _____." (38:47), were used in the analysis of the data.

Major sources of anxiety were the problem of discipline and whether the pupils would like the student as a teacher. It was discovered that the anxieties expressed by students prior to student teaching remained the same after completion of the experience. The authors concluded, "It seems safe to say that student teaching for this group provides an experience which does not greatly alter original anxieties concerning teaching." (38:51)

In order to ascertain the expectations and/or concerns which an individual holds, the researcher must secure his information from the individual. No outside source can provide it. Hruska attempted to discover the student teachers' views on supervision and reported the following as desirable expectations held by the student of his supervising teacher.

1. Evidence of a feeling of acceptance of the student teacher.
2. Being a guide into the professional role.
3. Orienting the student to the school, its policies, its philosophy, its faculty, its community, its parents, its activities.
4. Judging the prospective teacher's instructional readiness, methods, progress, and finally his overall abilities. (17:50)

Hruska believed that the supervising teacher, "...is the person who guides the student teacher into his work, who interprets the theory and shows how it works in practice, and who makes the most important first impression upon the mind of the future teacher" and consequently thought, "the supervising teacher is singly the most influential

participant in the preparation of future teachers." (17:52)

If this is true, teacher education institutions should exercise extreme care in the selection of supervising teachers and should have a thorough training program available for them. However, this is not the case in many teacher preparation institutions.

A candid response from student teachers concerning their impressions and reactions to various characteristics and behaviors encountered during student teaching was elicited by Trimmer in two studies which are reported in the Journal of Teacher Education. The first of these consisted of an opinion poll of 351 student teachers on the subject, "Why you would recommend or not recommend that your cooperating teacher be asked to serve again." (39:537) The responses to the question were summarized and are listed below in order of frequency of mention. In this instance, Trimmer analyzed student responses with a view toward discovering their dissatisfactions with the supervising teacher and the role he played. This presupposes that they (the students) had some prior expectations which were not attained or satisfied. The list follows:

Deficiencies of supervising teachers as noted by student teachers:

1. lack of constructive criticism.
2. no regular conferences.
3. never allowed control of the class.
4. no suggestions as to method or technique.
5. freedom but no guidance.
6. lack of organization.
7. rigidity.

8. not frank in criticism.
9. poor attitude toward pupils.
10. inflexibility in teaching methods. (39:538)

Trimmer concluded that only ten per cent of the supervising teachers were considered as satisfactory, and that student teachers are anxious to know their deficiencies, want supervision, and an opportunity to be on their own. He also stated that supervising teachers need to be selected more carefully and that special preparation be provided for them. (39)

In his second study, published six months later, Trimmer reported the worthwhile and helpful characteristics and behaviors named by the same three hundred fifty-one student teachers. In general, the student teacher desired that the supervising teacher:

1. permit the student teacher freedom to plan and execute what is going to take place in the classroom.
2. hold regular conferences.
3. make suggestions as to method and materials.
4. know the subject matter thoroughly.
5. offer constructive criticism.
6. be helpful and cooperative. (40:231)

Within these listings of deficiencies and helpful characteristics of supervising teachers are included the expectations and satisfactions held by the student teachers. They are inferred, however, and may or may not constitute an accurate or complete listing. No studies were found which were directly concerned with student teachers' expected and actual outcomes compared with objectives.

The variable of "objectives" was not included in either of the following studies but both included the area of "needs" of student teachers. Lingren described a study made of one hundred forty student teachers at the University of Pittsburgh who replied anonymously to an opinionnaire outlined "to determine the kinds and amount of help received from each of the major cooperating staff members." (20:23)

He concluded by listing these specific proposals for action in the program surveyed:

1. Principals should hold group meetings of student teachers to foster orientation to the school and understanding of its goals.
2. Supervising teachers should guide student teachers in keeping school records, using curriculum guides, becoming acquainted with the community and using community resources, studying disciplinary actions observed or taken by the student.
3. College supervisors should be allotted more time for supervision of student teachers.
4. Instructors of methods courses might well provide for student participation in planning the methods courses in an effort to make these courses more helpful.
5. The coordinator of student teaching should seek better techniques for selecting supervising teachers and for matching these teachers with students when assignments are made. (20:27)

McCurdy in a study of indicated needs similar to that done by Lingren listed among his conclusions the following:

1. The study indicates that handling discipline problems and recognizing individual differences are major concerns recognized by student and supervising teachers.

2. Because student teachers need much help in coping with feelings of apprehension, uncertainty, and fear, supervising teachers need to have a positive attitude toward students and teaching.
3. Supervising teachers and school personnel should interpret and help the student teacher gain an understanding of the school policies and the total program of the school.
4. Student teachers fail to have many of the experiences which research suggests they need in preparing for teaching as grouped in the questionnaire. (24)

4. Research in Industrial Arts Education Student Teaching

Careful scrutiny of the literature related to student teaching programs in Industrial Arts education reveals a shortage of critical and evaluative research. Of the few studies which have been completed, none related directly to the present study except in a tangential way.

Maley's study in 1949, of industrial arts education student teaching, revealed that:

1. "Practice" is not up to the thinking of experts.
2. There is a high regard for group decision making.
3. The goals of student teaching should grow out of goals for total program.
4. A committee should establish goals for student teaching.
5. Student teachers should participate in curriculum planning.
6. There should be a written statement of policy regarding student teaching.
7. Student teaching should be done before last semester of senior year.
8. One month notice in advance to students planning to student teach.
9. Student teaching dates should coincide with secondary school's calendar.

10. Broaden the scope and sphere of student teaching while teaching. (22)

These conclusions were followed by four recommendations which would serve to more nearly satisfy the needs or expectations of student teachers as expressed by them in the studies of Trimmer, Hruska, Lingren and others. The recommendations were as follows:

1. student teachers should have greater exposure to the community.
2. student teachers should have more contact with students.
3. broaden the student teacher's activities in the shop.
4. broaden the student teacher's sphere of relationships in the school. (22)

Another pertinent study was made by Huss in 1950. He reported current information and opinions concerning student teaching as it is carried on in the field of industrial arts education in several colleges and universities of the United States.

Among his listing of suggestions for further study were included the following:

1. Evaluation of the whole student teaching experience needs to be studied in light of our newer beliefs as to the objectives of education, of industrial arts, and of student teaching in this curriculum area.
2. Studies are needed as to how well methods courses are implemented and applied in student teaching activities.
3. We need to study ways of combining professional teacher training courses and student teaching activities.
4. We need to organize and implement practical and thorough courses in the supervision of Industrial Arts prospective teachers. (18)

Sargent's study at Wayne State in 1956 was designed to upgrade the student teaching program in industrial arts at Northern Michigan College, Marquette, and to develop two brochures, one for student teachers' use and one for supervising teachers.

Three major tasks with which Sargent was concerned were:

1. To learn the duties and qualifications of personnel conducting student teaching programs.
2. To learn what opinions and practices were included in present programs.
3. To determine what activities should be included in off-campus programs. (31)

He utilized the resultant data in the development of handbooks to be used by student and supervising teachers and in his proposal for an off-campus student teaching program at Marquette.

These recommendations were made by Sargent at the conclusion of his study:

1. There is a need for an orientation program for cooperating teachers.
2. Cooperating teachers must maintain high standards.
3. Cooperating teachers should allow the student teacher to assume responsibility as fast as he can take it and as much as he can take.
4. Manuals should be made available and used by both student teachers and cooperating teachers. (31)

An "action research" study extending over a seven-year period was conducted by Hiser in 1958 using a population at Oswego State Teachers College.

The problem centered around two major areas: (1) characteristics of good teachers, and (2) reliable criteria for judging teaching success and for appraisal of student teaching success. This study was focused on the pre-service program of on-campus work leading to the off-campus experience. It is included here because, in the process of developing instruments and procedures, Hiser necessarily became involved in judgements which were directly related to needs and expectations held by students as well as supervising and college teachers. The basic assumptions which he held prior to the study included three which indicate this involvement. They are:

1. that the basic purpose of a teachers college is to develop competent teachers.
2. that the development of personal qualities is part of the educational process and these qualities need continuous evaluation.
3. that the faculty personnel of a college is obligated to help each student acquire personal-professional traits and competencies important to teaching. (15)

Hiser's emphasis of the essential stress on personal qualities in the development of competent teachers, necessitates close relationships between student and teacher--for the purpose of providing the teacher with a better understanding of the student. Better understanding involves knowledge of the hopes, fears, and innermost feelings of the individual which, when known, enable more effective treatment.

In like manner, the present study, through a closer analysis of student teachers' expectations and satisfactions in regard to student teaching, should result in proposals for improvement of an existing program. The ultimate goal is that of developing more competent teachers of industrial arts education.

5. Roles of Personnel Connected with Student Teaching Programs

A number of studies are reported in the journals which deal with the question of roles. Administrators, supervising teachers, and college supervisors are identified usually as those persons having a role to play, along with the student teacher. No research has been discovered dealing with the role of 'other teachers' on the staff of the cooperating school in relation to student teachers.

A. Role of the supervising teacher

Student teachers are assigned to supervising teachers who are responsible for guiding their learning experiences. The supervising teacher must constantly be aware of not only the student teacher he is supervising, but of the children in the classroom as well. The student teacher should be offered opportunities to participate in as many phases of the educational program as possible. However, the supervising teacher must be certain that such participation is also of value to the children being taught.

Recognizing the position in which the supervising teacher is placed, Blair admonished him to be aware of and understand the three-fold responsibility placed upon him. He must be: "1. a guide of children and youth, 2. a guide of the student teacher entrusted to him, and 3. a professional person responsible for and privileged to help raise the standards of teacher education." (8:26)

Blair further suggested the following important roles of the supervising teacher:

1. being interested in the student as a person and a colleague.
2. helping the student teacher become identified as a member of the staff.
3. accepting the student teacher and college supervisor into classes and extra-class activities.
4. ✓ planning aloud and sharing plans with others.
5. guiding the student in developing creative teaching methods that are his.
6. helping the student teacher evaluate his progress and needs and those of his pupils.
7. holding conferences as a means to an end.
8. continuing the supervising teachers own general and professional education.
9. maintaining active membership in professional organizations.
10. sharing community activities and responsibilities with the student teachers. (8:28)

In a similar study Veselak reviewed general responsibilities in supervising student teachers. He included such areas as familiarity with physical facilities of the school and community, understanding of the student's responsibilities as a student teacher, introduction to the staff, and orientation to the curriculum of the department. Particular stress was placed on supervision of laboratory experiences

such as observation of regular teachers, actual control of the class, maintenance of discipline, and responsibilities for keeping records and writing reports. (41)

Supervising teachers who accepted the responsibilities stated above, would come to know their student teachers well, and therefore be of greater help to them.

An appropriate analogy presented by Morrison expressed the view that supervision of student teaching might better be called coaching, a four part process involving:

1. assigning responsibilities
2. giving the student a chance to perform on his own
3. observing
4. discussing the performance and providing guidance for improvement (28:83)

In order to understand the process of coaching, the following factors must be recognized as important:

1. establishing an atmosphere of confidence
2. maintaining an atmosphere of permissiveness
3. establishing standards and setting a good example (28:83)

Ted Ward, at Michigan State University, developed a small brochure entitled, "What Makes the Difference?" in which he presented suggestions to supervising teachers. He noted that "friendliness, thoughtfulness, clear communication with the student, and encouragement are important factors in working with student teachers. The goal is toward initiative on the part of the student teacher." (42:6) He emphasized the importance of the supervising teacher in determining the degree of success attained by the student teacher.

There is little doubt concerning the fact that the supervising teacher has an extremely important role to play in the student teaching program. Further support is provided by the Association for Student Teaching and its 38th Yearbook. This yearbook focused attention on the significant role played by the supervising teacher. The first three chapters dealt with identifying and defining the supervising teacher's role in the teacher education program. Subsequent chapters considered the supervising teacher's work in relation to understanding the needs of student teachers, meeting those needs in the classroom, school, and community, and the inter-relationships between the supervising teacher and other professional workers. The last two chapters examined the work of the supervising teacher in future teacher education programs and considered the task ahead. (4)

Smith, Krause, and Atkinson devoted considerable space to a description of the role of supervising teachers. Their listing of responsibilities (34:256-257) was similar to those already indicated and agreed with Taylor (37), Anson (3), and Price (29).

Taylor suggested the prospective supervising teacher consider:

1. his willingness to plan and set goals with the college representative and to seek his help when needed
2. to face his own strengths and weaknesses and improve his skill in working with the student teacher
3. to allow the student teacher to make his own decisions and develop along his own lines

4. to agree on common purposes with the student teacher
5. to protect the self-respect of the student
6. to be accessible to him and to realize that the limits of his effectiveness may be related to administration and supervisory support. (37:352)

Anson outlined a program designed to help the supervising teacher furnish guidance and assistance to student teachers. Emphasis was placed on permitting the student to experiment with his own abilities. (3:73-75)

Price said, "One of the most significant conclusions of the study was that the relation between supervising teachers and student teacher's classroom performances indicated that student teachers seemed to acquire many of the teaching practices of their supervising teachers during the student teaching semester." (29:474) The data Price collected from his use of the Minnesota Teacher Attitude Inventory (MTAI) seemed to show "...that a considerable change occurred in student teacher's attitudes during the student teaching semester. There was a tendency for their attitudes to change in the direction of those held by their respective supervising teachers." (29:475)

The MTAI has been used in a substantial number of studies in an attempt to measure attitude change. Findings have ranged from those similar to the above to those that were almost exactly opposite.

B. Role of the college supervisor

Carr provided an area of concern for college supervisors, who teach methods courses. He challenged all teachers of teachers to consider the fact that teachers do not teach as they were taught to teach. "They have been taught to make lesson plans, but they do not plan; they are taught not to lean on the textbook, but they are supported by it; they are taught to use variety in teaching, but they are limited to one method." (9:166)

College supervisors are in the most advantageous position to instigate action to implement change in this condition. This should be an area of sincere concern to them and one of their principal roles following their direct responsibility to the student teachers. Greater effort should be expended by college supervisors toward making professors of education aware of the degree to which student and beginning teachers emulate them. It might be worth taking some of their time and effort away from their usual duties in order to accomplish this.

Carr suggested three basic steps to remedy this situation:

1. re-examine what is taught in education courses
 2. professors must practice the principles of teaching they so ardently advocate
 3. each student should be encouraged to develop his own philosophy of education
- (9:168)

Barber listed seven responsibilities of the college supervisor of student teachers.

1. select the participating schools and cooperating teachers
2. arrange the schedule of his visits with each of them
3. arrange workshops or seminars with student teachers
4. observe the student teacher in the classroom
5. evaluate the student teacher
6. evaluate the student teacher's notebook of plans, records, reports, etc.
7. prepare a letter of recommendation for student teacher's credentials (7:46)

The college supervisor provides the closest contact with the college program. In some instances he may be teaching courses on the campus in addition to his supervision responsibilities, or he may be assigned to full-time supervision. In either case, regardless of the particular organizational pattern in the staffing of the student teaching program, college supervisors usually assume responsibility for such functions as the following, stated by Stratemeyer and Lindsey.

1. Working with the coordinator of student teaching in completing assignments of student teachers, assuming special responsibilities for:
 - a) careful study of the student's record with him and his major advisor at the college
 - b) identification of appropriate laboratory situations for each student
 - c) cooperative study with potential cooperating teachers of the student's record, the classroom situation, and the cooperating teacher
 - d) clarification with the building principal of questions and suggestions regarding the possible placement of student teachers in the building

2. Participation with other college supervisors in study and improvement of the student teaching program, including his own professional inservice growth.
3. Providing general guidance of a group of student teachers through:
 - a) group seminars to discuss common problems of the students with whom he is working
 - b) supply of materials and resources to enhance the students work in the classroom
4. Providing specific guidance to each student teacher through:
 - a) a careful study of his record with him and identification of his needs as a basis for planning for his student teaching activities
 - b) observation of his work in the classroom, followed by cooperative analysis of what was observed and planning for next steps on the basis of the analysis. (This should be done with the student, the cooperating teacher, and the college supervisor in conference and is the core of evaluation of student growth.)
 - c) individual conferences with the student
 - d) individual conferences with the supervising teacher
5. Providing through group conferences general help to the group of cooperating teachers working with his students.
6. Providing specific help to a cooperating teacher through individual conferences, supply of materials and resources, and background information on the student.
7. Serving as the liaison person between the cooperating teacher and the college, interpreting the college program to the cooperating teacher and communicating general problems and feelings of the cooperating teacher to the college.
8. Helping, if requested, in any way that he can with work in the school or in the cooperating teacher's classroom. (35:95-96)

This description of the duties of the college supervisor is comprehensive and illustrates the complexity of his responsibilities. Extremely competent individuals are required to fill this role adequately.

C. Role of the cooperating school principal

Student teacher coordinators and college supervisors generally view the role of the principal as primarily that of liaison officer between their own schools and teacher education institutions. This is reported by Kennedy in a recent Association for Student Teaching Bulletin. (19:7-10)

Duker added two more dimensions to their role by grouping activities under three headings:

1. Orientation
2. Those during the student teaching experience
3. Those related to the teacher education institution. (12:470)

A significant area of concern expressed by student teachers can be met most adequately by the principal of the cooperating school. The student teacher should be made to feel welcome, be accepted as a contributing member of the staff, and be given status in the system. The principal is the most logical individual to whom these responsibilities fall, and the extent to which he carries them out can be of considerable importance to the student teacher.

Downer, writing in the 33rd Yearbook of the Association for Student Teaching, described an investigation of administrative practices of facilities available to student

teachers in public schools. In the section devoted to a description of the specific responsibilities of public school personnel, she wrote:

The building principals in many public schools deserve attention for their active interest and participation in teacher education. They visit student teachers, offer suggestions, interpret school policies, and promote desirable attitudes on the part of students by including them in the school functions. (11:115)

Whether teacher education institutions and the personnel responsible for student teaching programs adequately emphasize the responsibilities of the principal, is an unanswered question. The need, however, for the principal to play a definite role is obvious.

D. Role of "other teachers" on the staff of the cooperating schools

The literature contains no study which attempts to define the role of other teachers in relation to student teachers.

Obviously, student teachers associate with members of the faculty and staff of the cooperating school. What effects are produced through these associations? Is it that the student teacher acquires a true picture of what teaching is and what teachers are like or does he acquire a distorted view?

There seems to be a significant area here for concerted research. Sociologists refer to the informal structure within institutions and have indicated the significance of this

group or organization. The implication here is that teacher educators should recognize that there is a function to be carried out by "other teachers" and that serious consideration be given to ways of identifying and implementing their role.

Summary

This chapter indicated the nature of the research which was reported in the literature. It should be evident to the reader that the bulk of the research was concerned with the problems of student teachers and the roles of personnel connected with the student teaching program. No studies were found which reported on the subject of the present study and the number of reported research papers decreased as one proceeded downward through the following listing:

1. Role of supervising teachers
2. Role of college supervisors
3. Role of cooperating school principals
4. Role of other teachers on the staff of the cooperating schools

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CHAPTER IV

ANALYSIS OF OUTCOMES AND OBJECTIVES

This chapter concerns the verbalized expected and actual outcomes of student teachers as expressed by them on a questionnaire which was administered before and after student teaching. The relation between outcomes and the objectives of the student teaching program were analyzed.

A. Descriptions of the Population Used in the Study

The subjects of this study were all second semester industrial arts education juniors or first-semester seniors who were enrolled in student teaching during the second, third, or fourth quarters of the school year 1962-1963. They had completed all of the basic technical course work, the academic and methods courses, and were physically and scholastically eligible for student teaching. At the time of the pre-test administration they had known of their specific student teaching assignments for approximately one month and may have visited their cooperating schools, although this was not a specific requirement. The supervising teachers to whom they were assigned had a minimum of three years of successful teaching, most of them possess

the masters degree, and their years of experience as cooperating teachers ranged from one year to thirty-two years. Of the five college professors responsible for the supervision of student teachers in the industrial arts education division, two of them had been awarded the doctorate, one had all but the dissertation completed and two were in the "post masters degree" category.

B. The Student Teaching Program at Buffalo,
Industrial Arts Education Division

The student teaching program consisted of a split nine-week semester when students attained junior standing. The semesters at Buffalo are eighteen weeks long and the professional sequence (consisting of methods courses and student teaching) at this level was as indicated in the following excerpt taken from the 1961-62 General Catalog.

Division A (Student teaching - First Nine Weeks)*

THIRD YEAR

Course Titles	First Semester	Second Semester
I.A. 311 Principles and Practices of Industrial Arts	X	
FIRST NINE WEEKS		
I.A. 411 Student Teaching		X
SECOND NINE WEEKS		
I.A. 312 Principles and Practices of Industrial Arts		X

FOURTH YEAR

I.A. 411 Student Teaching	X	
SECOND NINE WEEKS		
I.A. 412 Laboratory of Industrial Arts Teaching		X

*Note: The above includes only the methods courses and student teaching. For a listing of other college courses offered, see the college catalog.

(1:185-186)

Division B (Student teaching - Second Nine Weeks)THIRD YEAR

Course Titles	First Semester	Second Semester
I.A. 311 Principles and Practices of Industrial Arts	X	
FIRST NINE WEEKS course work on campus		X
SECOND NINE WEEKS I.A. 411 Student Teaching		X

FOURTH YEAR

FIRST NINE WEEKS I.A. 312 Principles and Practices of Industrial Arts	X	
SECOND NINE WEEKS I.A. 411 Student Teaching	X	
I.A. 412 Laboratory of Industrial Arts Teaching		X
(1:185-186)		

All industrial arts students take course I.A. 311 for a full semester the beginning of their junior year.

Students who fell into Group A (shown on page 69) followed a schedule in which their first student teaching experience came during the first half of the second semester of their junior year. The second half of the second semester they took course I.A. 312. During their senior year this group had their second student teaching assignment during the first nine-weeks of the first semester, coming back on campus the second nine weeks for concentrated course work. This left the second semester of the senior year, for course I.A. 412, Laboratory in Industrial Arts Teaching.

Students who fell into Group B (shown on the preceding page) had the same sequence of courses and student teaching, alternating quarters with the Division A group.

In effect then, each industrial arts student, commencing with the junior year, enrolled in a sequence of professional courses and student teaching as follows:

1. Full semester professional course I.A. 311
2. Student teaching for nine weeks (first experience)
3. Nine weeks professional course I.A. 312
4. Student teaching for nine weeks (second experience)
5. Full semester professional course I.A. 412

All course work was done on campus and all student teaching was done full-time, off campus.

The present study was based upon a population drawn from the student body under the above program. A total of one hundred and four (104) students were involved and of this total thirty-six (36) students were in their first nine-weeks student teaching assignment and sixty-eight (68) were in their second nine-weeks student teaching assignment.

C. Expected Outcomes

The questionnaire (Form A) completed by all of the student teachers on the day preceding their student teaching experience required that they think ahead into the student teaching experience and indicate what they hoped to learn

from a) the supervising teacher, b) the college supervisor, c) the principal, and d) other teachers on the staff of the cooperating school to which they were assigned.

A total of one thousand ninety seven (1,097) items were tabulated and are shown in Table I in descending rank order. Frequency of response and the per cent of the total items were also indicated. The items included in the table were referred to as "expected outcomes" or those concerns which students verbalized on the day preceding their entry into student teaching. All of the responses from the four categories were included in this listing and the average number of expected outcomes equalled 10.55 per student. Sample responses included in each category will be found in Appendix C.

Most beginning student teachers enter into the student teaching experience with mixed emotions. Their methods courses have made an impact, comments from former student teachers, and their own feelings of adequacy or inadequacy are directly involved. In addition, most students are hopeful of acquiring certain skills and information related to teaching. Table I reveals the expected outcomes held by the group of students represented in this study.

The frequency column in Table I indicated the number of times an expected outcome appeared in the questionnaires which was classifiable under the heading indicated in the column at the left. The percentages show the portion of

TABLE I

EXPECTED OUTCOMES VERBALIZED BY PROSPECTIVE STUDENT TEACHERS,
FREQUENCY OF MENTION, PERCENTAGE OF TOTAL
RESPONSES, AND RANK OF EACH OUTCOME

Rank	Expected Outcome	Frequency	Percentage
1	Techniques of teaching	195	17.77
2	Behavior, discipline	113	10.30
3	Knowledge of teacher's role	108	9.84
4	Guidance in learning how to teach	94	8.56
5	Knowledge of school curriculum, organization of	76	6.92
6	Laboratory organization, operation, management	48	4.37
7	Constructive criticism	47	4.28
8	Relations with students, knowledge of them	45	4.10
9	Honest appraisal of progress and ability	44	4.01
10	Subject matter knowledge, technical skills	43	3.91
11	Professional relations with staff and community	39	3.55
12	Long-range planning, course development	37	3.37
13	Attitudes toward teaching	25	2.27
14	Critical self-analysis	22	2.00
15	Principal's authority and relations with staff and students	21	1.91
16	Evaluation of students	20	1.82
17	*Lesson planning	20	1.82
18	Learn about administration	20	1.82
19	Support and acceptance	19	1.73
20	Educational philosophy, professional attitude	14	1.27
21	*Audio-visual and use of teaching materials	13	1.18
22	Confidence	12	1.09
23	See what teachers are really like	8	.72
24	Praise and encouragement	7	.63
25	Help me to mature	3	.27
26	How to improve industrial arts	2	.18
27	Observation of good teaching	1	.09
28	Help with case study	1	.09
Totals		1097	100.00

*These may be thought of as subheadings of "techniques of teaching" but are listed separately to indicate specific concerns which were verbalized by some students. Similar instances will be noted in each of the succeeding tabulations. See appendix C for sample responses.

the total responses classified into the specific category represented by the rank order number assigned to it. For example:

Rank	Expected Outcome	Frequency	Percentage
1	Techniques of teaching	195	17.77

Rank 1 means that this category was mentioned most often. Frequency 195 means that reference to this category was made 195 times. Percentage 17.77 - there were 1,097 total items listed by the 104 student teachers, therefore, frequency divided by total number of outcomes equals the percentage of the total number of outcomes listed under the heading of "techniques of teaching". Similar treatment was given all of the other categories listed in the table.

The percentages appearing in Table I should not be thought of as the per cent of student teachers mentioning each concern. If the total number (1,097) of items included on the questionnaire can be thought of as indicating the total concern expressed by the students in this study, then each category (ranks 1 through 28) represents a portion of this total concern.

Factors revealed in Table I:

1. "Techniques of teaching" represented the category of expected outcomes mentioned most frequently. Almost 18 per cent of the total responses came under this heading.

2. Student teachers expressed almost equal concern in the areas of "behavior and discipline" (10.30 per cent);

"knowledge of teacher's role" (9.84 per cent); and "guidance in learning how to teach" (8.56 per cent).

3. Almost 7 per cent of the responses appeared under the heading of "knowledge of the school curriculum, and organization of it".

4. More than 50 per cent (53.39) of the total expected outcomes as listed by prospective student teachers were in the following five categories:

<u>Expected Outcomes</u>	<u>Percentage</u>	
a) Techniques of teaching	17.77	} 53.39 per cent
b) Behavior, discipline	10.30	
c) Knowledge of teachers role	9.84	
d) Guidance in learning how to teach.	8.56	
e) Knowledge of school, curriculum, organization of	6.92	

5. Only two responses out of 1,097 expressed the hope to learn "how to improve industrial arts teaching"---.18 per cent.

6. Less than 2 per cent of the responses centered around the area of "lesson planning".

7. Less than 5 per cent of the responses centered around the area of "laboratory organization, operation, and management".

8. Less than 2 per cent of the total expected outcomes, as listed by prospective student teachers, were in each of the following areas:

- a) Evaluation of students (1.82 per cent)
- b) Learning about administration (1.82 per cent)
- c) Educational philosophy, professional attitude (1.27 per cent)
- d) Audio-visual and use of teaching materials (1.18 per cent)

9. Some factors thought to be important in the program of preparation of teachers were not mentioned frequently as expected outcomes by this group of student teachers. Namely, ranks: (8) "Relations with students, knowledge of them" (4.10 per cent), (13) "Attitudes toward teaching" (2.27 per cent), and (20) "Educational philosophy, professional attitude" (1.27 per cent).

D. Actual Outcomes

Further analysis of the above data was made in a subsequent section dealing with a comparison of verbalized expected and actual outcomes. Therefore, in order to set the stage for such a comparison, Table II which represents treatment similar to that used in Table I follows. Table II represents the rank order of "Actual Outcomes" with frequencies and percentages included. It will be noted that the total number of actual outcomes recorded is 921, which represents a decrease of 176 over the recorded number of expected outcomes. This fact might indicate that student teachers did not actually realize the number of expectations which they held prior to beginning the student teaching experience.

TABLE II

ACTUAL OUTCOMES VERBALIZED BY STUDENT TEACHERS,
FREQUENCY OF MENTION, PERCENTAGE OF TOTAL
RESPONSES, AND RANK OF EACH OUTCOME

Rank	Outcome	Frequency	Percentage
1	Techniques of teaching	163	17.69
2	Behavior, discipline	118	12.81
3	Knowledge of teacher's role	92	9.98
4	Guidance in learning how to teach	51	5.53
5	Laboratory organization, operation, management	48	5.21
6	Professional relations with staff and community	46	4.99
7	Relations with students and knowledge of them	44	4.77
8	Long-range planning, course development	35	3.80
9	Subject matter knowledge, technical skills	34	3.69
10	*Lesson planning	34	3.69
11	Knowledge of school curriculum, organization of	32	3.47
12	Support and acceptance	30	3.25
13	*Audio-visual and use of teaching devices	26	2.82
14	Constructive criticism	24	2.60
15	Honest appraisal of progress and ability	24	2.60
16	Confidence	19	2.06
17	Evaluation of students	15	1.62
18	Educational philosophy, professional attitude	15	1.62
19	Learn about administration of the school	13	1.41
20	Critical self-analysis	12	1.30
21	See what teachers are really like	11	1.19
22	Attitude toward teaching	10	1.08
23	Praise and encouragement	9	.97
24	Help me mature	6	.65
25	Principal's authority and relations with staff	6	.65
26	Observation of good teaching	2	.21
27	Importance and significance of industrial arts.	2	.21
Totals		921	100.00

*See footnote, page 73, Chapter IV.

The explanation which accompanied Table I applies to Table II, with the exception that the data included in Table II was secured from the student teachers on the day following the completion of their student teaching assignment. This table contains the students verbalized actual outcomes. They were asked to reflect back upon their student teaching experience and to indicate the things which they did learn from the: a) supervising teacher, b) college supervisor, c) principal, and d) other teachers on the staff of the cooperating schools to which they were assigned. All of the responses from the four categories were included in this listing and the average number of actual outcomes equalled 8.66 per student. (The number of expected outcomes per student was 10.55).

Examination of Table II revealed the following:

1. "Techniques of teaching" was the area which ranked highest, approaching 18 per cent (17.69 per cent) of the total number of actual outcomes reported by the students in this study.

2. Almost 13 per cent (12.81 per cent) of the total number of responses were in the category of "behavior and discipline".

3. Slightly more than 50 per cent (51.22 per cent) of the total number of responses fell under the following categories:

<u>Actual Outcomes</u>	<u>Percentage</u>
a) Techniques of teaching	17.69
b) Behavior, discipline	12.81
c) Knowledge of teacher's role	9.98
d) Guidance in learning how to teach	5.53
e) Laboratory organization, operation, management	5.21

4. Only two responses (.21 per cent) were related to "observation of good teaching".

5. A total of fifteen responses, (1.62 per cent) referred to student teachers having received "praise and encouragement" or having been helped to mature.

6. Approximately equal numbers of responses were elicited in the categories of: a) "professional relations with staff and community", and b) "relations with students and knowledge of them", (4.99 per cent and 4.77 per cent, respectively).

7. An almost equal number of responses were in each of the following categories:

<u>Actual Outcomes</u>	<u>Percentage</u>
a) Long-range planning, course development	3.80
b) Subject matter knowledge, technical skills	3.69
c) Lesson planning	3.69
d) Knowledge of school curriculum, organization of	3.47
e) Support and acceptance	3.25

8. A definite change took place in the ranking of several of the actual outcomes when compared with expected outcomes.

It should be re-emphasized that the percentages shown in the preceding ranking denoted the portion of the total number of outcomes reported by the students in the study. They did not indicate the number of students who reported outcomes in each of the ranks. This approach was used in the belief that it would be more meaningful to deal with percentages of the total number of responses.

E. Expected Outcomes Compared with Actual Outcomes

The rankings of verbalized outcomes, expected and actual, are shown in Table III. The arrows connecting the numbers of the two columns indicate the direction of movement of the item from the expected to the actual outcome column.

The first four expected outcomes: (1) "techniques of teaching; (2) behavior and discipline; (3) knowledge of teacher's role; and (4) guidance in learning how to teach", retained the same relative positions in the actual outcome ranking. This seemed to indicate that the expectations were satisfactorily met. At any rate, the actual outcomes in these four categories were ranked highest in number of responses included on the post student teaching questionnaire.

The per cent of responses for "techniques of teaching" in both columns was almost equal; 17.77 per cent for expected and 17.69 per cent for actual outcomes listing.

Students indicated, from the number of responses for the category "behavior and discipline", that they received

TABLE III

COMPARISON OF PERCENTAGES AND RANK ORDER OF THE EXPECTED AND ACTUAL OUTCOMES VERBALIZED BY THE STUDENT IN THIS STUDY

Expected Outcomes	Percentage	Rank	Rank Order	Comparison rank	Percentage	Actual Outcomes
1. Techniques of teaching	17.77	1		1	17.69	1. Techniques of teaching
2. Behavior, discipline	10.30	2		2	12.81	2. Behavior, discipline
3. Knowledge of teacher's role	9.84	3		3	9.98	3. Knowledge of teacher's role
4. Guidance in learning how to teach	8.56	4		4	5.53	4. Guidance in learning how to teach
5. Knowledge of school, curriculum, organization	6.92	5		5	5.21	5. Laboratory organization, operation, management
6. Laboratory organization, operation, management	4.37	6		6	4.99	6. Professional relations with staff and community
7. Constructive criticism	4.28	7		7	4.77	7. Relations with students and knowledge of them
8. Relations with students, knowledge of them	4.10	8		8	3.80	8. Long-range planning, course development
9. Honest appraisal of progress and ability	4.01	9		9	3.69	9. Subject matter knowledge, technical skills
10. Subject matter knowledge, technical skills	3.91	10		10	3.69	10. Lesson planning
11. Professional relations with staff and community	3.55	11		11	3.47	11. Knowledge of school, curriculum, organization
12. Long-range planning, course development	3.37	12		12	3.25	12. Support and acceptance
13. Attitudes toward teaching	2.27	13		13	2.82	13. Audio-visual and use of teaching devices
14. Critical self-analysis	2.00	14		14	2.60	14. Constructive criticism
15. Principal's authority and relations with staff and students	1.91	15		15	2.60	15. Honest appraisal of progress and ability
16. Evaluation of students	1.82	16		16	2.06	16. Confidence
17. Lesson planning*	1.82	17		17	1.62	17. Evaluation of students
18. Learn about administration of the school	1.82	18		18	1.62	18. Educational philosophy, professional attitude
19. Support and acceptance	1.73	19		19	1.41	19. Learn about administration of the school
20. Educational philosophy, professional attitude	1.27	20		20	1.30	20. Critical self-analysis
21. Audio-visual and use of teaching materials*	1.18	21		21	1.19	21. See what teachers are really like
22. Confidence	1.09	22		22	1.08	22. Attitudes toward teaching
23. See what teachers are really like	.72	23		23	.97	23. Praise and encouragement
24. Praise and encouragement	.63	24		24	.65	24. Help me to mature
25. Help me to mature	.27	25		25	.65	25. Principal's authority and relations with staff
26. How to improve industrial arts	.18	26		26	.21	26. Observation of good teaching
27. Observation of good teaching	.09	27		27	.21	27. Importance and significance of industrial arts
28. Help with case study	.09	28				
Totals	100.00				100.00	

*see footnote, page 73, Chapter IV

more help in this area than they had anticipated. Expected outcomes totaled 10.30 per cent and actual outcomes totaled 12.81 per cent, for an increase of 2.51 per cent.

"Knowledge of the teacher's role" maintained an almost equal emphasis as indicated by the expected outcome percentage, 9.84 and the actual outcome percentage, 9.98. Only a very slight increase (.14 per cent) in the number of actual outcome responses was noted.

There were 8.56 per cent of expected outcome responses reported in the category "guidance in learning how to teach", while only 5.53 per cent (a difference of minus 3.03 per cent) of actual outcome responses were listed. Although the rank of this item in the actual outcome column remained the same as that in the expected outcome column, there were fewer responses. This seemed to indicate that student teachers did not receive as much "guidance in learning how to teach" as they had expected.

Further analysis of Table III indicated that from the 5th through the 28th ranks, none of the items in the actual outcomes column retained its original rank. Examination of rank changes from expected to actual reveals that: (1) the first four ranks remained the same, (2) nine moved up, and (3) fourteen moved down. The total number of rank position changes was forty-seven up and forty-seven down.

Items which changed rank downward from assigned rank in the expected outcome column were listed in descending

order in relation to amount of rank position change.

1. "Honest appraisal of progress and ability" ranked 15th in the expected outcome column and dropped ten ranks to 25th in the actual outcome column.

2. "Audio-visual and use of teaching devices" ranked 13th in expected outcomes and dropped nine ranks to 22nd in actual outcomes.

3. "Relations with students and knowledge of them" dropped seven ranks, from 7th place to 14th place.

4. "Laboratory organization, operation, management" dropped six ranks, from 5th position to 11th.

5. "Subject matter knowledge, technical skill" ranked 9th in expected outcomes and dropped six ranks to 15th in actual outcomes.

6. "Constructive criticism" ranked 14th in expected outcomes and dropped six ranks to 20th in actual outcomes.

7. "Confidence", rank 16; "Educational philosophy, professional attitude", rank 18; and "Observation of good teaching", rank 26; each dropped one rank in the actual outcome column.

There are a number of implications contained in the preceding listing. Foremost among them is the fact that students' expectations were not met adequately in a number of categories. The areas of concern in which this occurred may easily be identified in the above listing. However, it should be repeated that the first four categories in the

expected outcome column retained the same rank in the actual outcome listing. The total per cent of responses in these first four ranks in each column was 46.47 per cent for expected outcomes and 46.01 per cent for actual outcomes. It would seem therefore, that as regards "techniques of teaching, behavior and discipline, knowledge of teacher's role, and guidance in learning how to teach", student teachers had received almost as much help as they hoped they would.

F. Expected and Actual Outcomes
Compared with Objectives

The objectives of the student teaching program at Buffalo were enumerated in Chapter II, pages 24 and 25. Table IV reveals the same objectives and indicates the classification of student responses and the objective under which they were included. The number of expected outcomes for each response category was indicated along with the percentage of total responses.*

The objectives appear in the same order in which they were presented in the Student Teaching Handbook. The percentage of total responses which appears in the extreme right

*The assignment of the outcomes to specific objectives was made after careful consideration of the best placement for each outcome. The researcher solicited views from his associates, tried various arrangements on colleagues, studied the literature, and finally made the decisions regarding classification.

TABLE IV

COMPARISON OF OBJECTIVES OF THE STUDENT TEACHING PROGRAM AT BUFFALO AND RELATED EXPECTED OUTCOMES

Objectives of the Student Teaching Program at Buffalo	Related Expected Outcomes	Rank	Frequency	Percentage
1. become acquainted with the role and operation of the public school to which he is assigned	Knowledge of school, curriculum, organization of Principal's authority, relations of staff and students Learn about administration	5 15 18	76 21 20	10.65
2. become acquainted with the various responsibilities of the teacher in the public schools to which he is assigned	Knowledge of teacher's role Laboratory organization, operation, management Professional relations with staff and community See what teachers are really like	3 6 11 23	108 48 9 8	18.48
3. assume the various responsibilities of a regular classroom teacher	Long-range planning, course development Lesson planning Praise and encouragement Help me to mature	12 17 24 25	37 20 7 3	6.09
4. further develop a philosophy of education	Educational philosophy, professional attitudes Attitude toward teaching	20 13	14 25	3.54
5. gain a knowledge of appropriate methods and materials of teaching	Guidance in learning how to teach Audio-visual and use of teaching materials Observation of good teaching	4 21 27	94 13 1	9.83
6. increase understanding of child growth and development	Behavior, discipline Relations with students, knowledge of them Help with case study	2 8 28	113 45 1	14.49
7. develop skill in the use of effective techniques for teaching and evaluation	Techniques of teaching Constructive criticism Honest appraisal of progress and ability Critical self-analysis Evaluation of students	1 7 9 14 16	195 47 44 22 20	29.88
8. develop an experimental and creative attitude	Support and acceptance Confidence How to improve Industrial Arts	19 22 26	19 12 2	3.00
9. extend knowledge of subject matter in the areas taught	Subject matter knowledge, technical skills	10	43	3.91
	Totals		1097	100.00

85

hand column indicated that a reordering of the objectives would occur if the percentage of student teacher expected outcomes were used.

Table V is similar in format to Table IV, showing a comparison of the actual outcomes and objectives. Again, the objectives were listed in the same order as that in the student teachers' guide. The percentages of responses shown to the right indicated that a reordering of ranks would result if student teacher actual outcomes had been used.

This reordering of objectives may be seen in Figure 1, page 90 where they are ranked according to per cent of expected outcome responses.

The objective "Developing skill in the use of effective techniques for teaching and evaluation" ranked highest in both expected and actual outcomes. Almost 30 per cent (29.88) of the total responses in expected outcomes and slightly more than 25 per cent (25.81) of the actual outcomes were related to this objective. There was a drop of 4.08 per cent in actual outcomes compared to expected outcomes.

"Becoming acquainted with the various responsibilities of the teacher in the public schools to which he is assigned" ranked second in both expected and actual outcomes. The number of expected outcomes was not as high as the number of actual outcomes. There were 18.48 per cent of responses reported as expected outcomes while 21.37 per cent were reported as actual outcomes. This represents a difference

TABLE V
COMPARISON OF THE OBJECTIVES OF THE STUDENT TEACHING PROGRAM AT BUFFALO AND RELATED ACTUAL OUTCOMES

Objectives of the Student Teaching Program at Buffalo	Related Actual Outcomes	Rank	Frequency	Percentage
1. become acquainted with the role of and operation of the public school to which he is assigned	Knowledge of school curriculum, organization Learn about administration of the school Principal's authority, relations with staff and students	11 19 25	32 13 6	5.53
2. become acquainted with the various responsibilities of the teacher in the public schools to which he is assigned	Knowledge of teacher's role Laboratory organization, operation, management Professional relations with staff and community See what teachers are really like	3 5 6 21	92 48 46 11	26.37
3. assume the various responsibilities of a regular classroom teacher	Long-range planning, course development Lesson planning Praise and encouragement Help me mature	8 10 23 24	35 34 9 6	9.11
4. further develop a philosophy of education	Educational philosophy, professional attitude Attitude toward teaching	18 22	15 10	2.70
5. gain a knowledge of appropriate methods and materials of teaching	Guidance in learning how to teach Audio-visual and use of teaching devices Observation of good teaching	4 13 26	51 26 2	8.56
6. increase understanding of child growth and development	Behavior, discipline Relations with students and knowledge of them	18 7	118 44	17.58
7. develop skill in the use of effective techniques for teaching and evaluation	Techniques of teaching Constructive criticism Honest appraisal of progress and ability Evaluation of students Critical self-analysis	1 14 15 16 20	163 24 24 15 12	25.81
8. develop an experimental and creative attitude	Support and acceptance Confidence Importance and significance of Industrial Arts	12 16 27	30 19 2	5.52
9. extend knowledge of subject matter in the areas taught	Subject matter knowledge, technical skills	9	34	3.69
	Totals		921	100.00

of plus 2.85 per cent and is indicative of the fact that students received more help in this area than they had expected.

"Increase understanding of child growth and development" ranked third among the objectives. Actual outcomes were higher than expected outcomes. A difference of plus 3.08 per cent was computed.

"Becoming acquainted with the role and operation of the school to which he is assigned" ranked fourth in both expected and actual outcome responses. A relatively small difference (minus 1.44 per cent) in percentage of responses was indicated here. Slightly fewer actual outcome responses were recorded than expected outcome responses.

"Gaining a knowledge of appropriate methods and materials of teaching" was ranked fifth in the distribution of objectives with 9.83 per cent of expected outcomes and 8.56 per cent of actual outcome responses. A difference of minus .73 per cent was reported, indicating a very slight difference in actual outcome responses over expected outcomes.

"Assuming the various responsibilities of a regular classroom teacher" ranked sixth among the nine objectives with 6.09 per cent of expected outcomes categorized under this heading and 5.53 per cent of actual outcome responses. Slightly more (.56 per cent) expected outcomes were noted than actual outcomes.

"Extending knowledge of the subject matter in the areas taught" ranked seventh among nine objectives. The tabulated responses indicated that 3.91 per cent of expected outcomes and 5.52 per cent of actual outcomes were reported in this category. More actual outcomes (1.61 per cent) were listed than expected outcomes, indicating that more student teachers than had anticipated it, received help in the area of subject matter.

"Further developing a philosophy of education" was ranked eighth on the basis of the number of responses recorded by students for both expected and actual outcomes. Only 3.54 per cent of the total expected outcome responses were recorded in this category and 3.69 per cent of actual outcome responses. A negligible difference of plus .15 per cent was recorded. The number of expected and actual outcome responses in this category were similar.

"Developing an experimental and creative attitude" held the lowest rank (ninth) among both expected and actual outcome responses. Only 3 per cent and 2.70 per cent, respectively, was recorded. Slightly more (.30 per cent) responses were listed under expected outcomes than under actual outcomes.

Further analysis of Figure 1, page 90 revealed that the objectives ranked first, second, and third: (1) "skill in the use of effective techniques for teaching and evaluation; (2) responsibilities of the teacher in the public

1. Develop skill in the use of effective techniques for teaching and evaluation
2. Become acquainted with the various responsibilities of the teacher in the public schools to which he is assigned
3. Increase understanding of child growth and development
4. Become acquainted with the role and operation of the school to which he is assigned
5. Gain a knowledge of appropriate methods and materials of teaching
6. Assume the various responsibilities of a regular classroom teacher
7. Extend knowledge of the subject taught
8. Further develop a philosophy of education
9. Develop an experimental and creative attitude

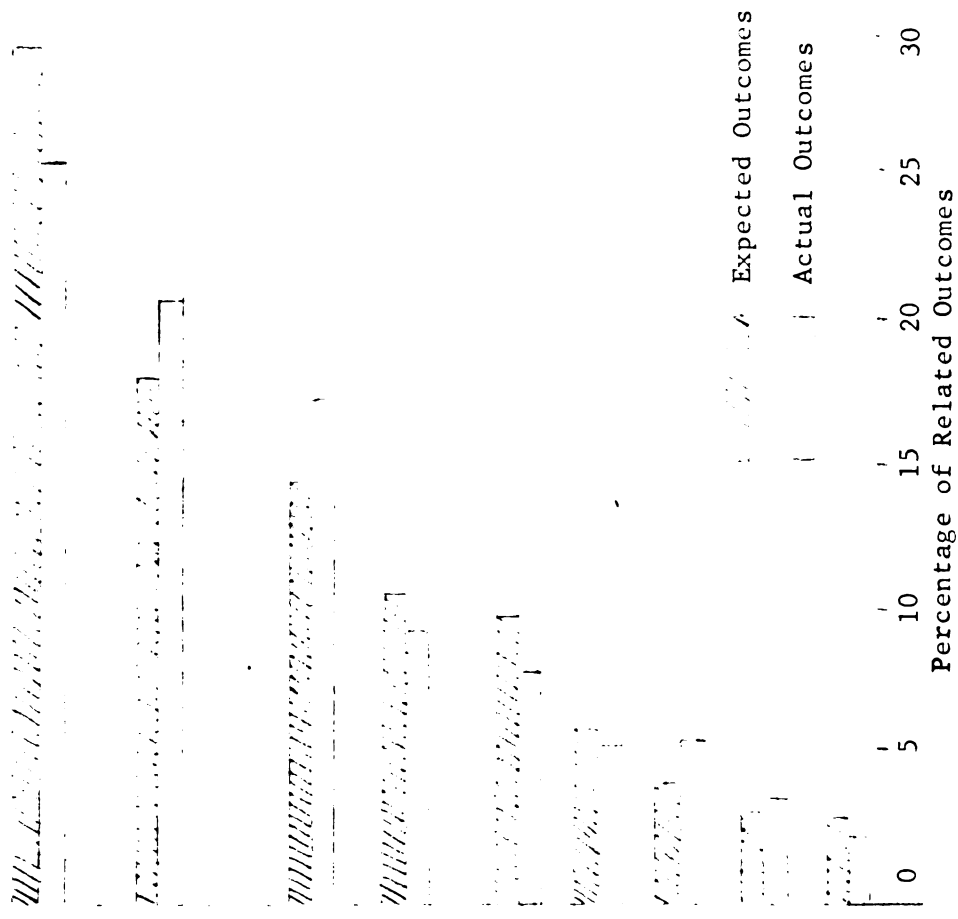


FIGURE 1

RANKED OBJECTIVES OF STUDENT TEACHING AND PERCENTAGE OF RELATED, EXPECTED AND ACTUAL OUTCOMES

school; (3) understanding of child growth and development;" comprised 62.85 per cent of the total expected outcome responses and 64.76 per cent of the total actual outcome responses. The remaining six objectives received only 37.10 per cent and 35.24 per cent respectively of expected and actual outcome responses.

The emphasis of the majority of students, as indicated by their verbalized expected and actual outcomes, was in the direction of the first three objectives which deal primarily with specifics of teaching; i.e., techniques, responsibilities, and child growth and development (behavior). Desire to learn about "becoming acquainted with the role of the school; knowledge of methods and materials of teaching; and assuming the responsibilities of a regular classroom teacher;" (objectives 4, 5, and 6) were not of sufficient concern to consist of more than 26.57 per cent of total expected outcome responses and 23.20 per cent of total actual outcome responses.

Objectives, (7) "extend knowledge of the subject area; (8) further develop a philosophy of education; and (9) develop an experimental and creative attitude," comprised 10.45 per cent of the total expected outcome responses and 11.91 per cent of the total actual outcome responses.

G. Summary

Acquisition of the knowledges, skills, abilities, traits, characteristics, and understandings included or implied in all of the objectives of the student teaching program as listed, is considered essential for the prospective teacher of industrial arts education. An over-emphasis on a few of these objectives, resulting in scant attention to the others, does not assure student acquisition of the essentials from each. This may result in poorly equipped individuals entering the teaching profession.

The fact that this study revealed a greater number (1,097) of expected outcomes than it did actual outcomes (921) was indicative of a need for examination of the emphasis placed on certain aspects of the pre-professional phase of the program as well as the student teaching phase.

After analysis of other data concerning individuals and aspects of the existing student teaching program, specific proposals will be made for improving that program.

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CHAPTER V

EXPECTED AND ACTUAL OUTCOMES IN RELATION TO PERSONNEL IN THE PROGRAM

The present chapter concerns the verbalized outcomes which students held specifically for the supervising teacher, college supervisor, principal, and other teachers. Differences were indicated with respect to expected and actual outcomes verbalized by the students. This chapter will clarify some of the role expectations for individuals connected with programs of student teaching.

A. Expected and Actual Outcomes Related to the Supervising Teacher

1. Expected outcomes

Question 1A on the pre-test requested students to list those things which they hoped to learn from their supervising teacher during the student teaching period. Their responses are referred to as "expected outcomes". Four hundred seventy-nine (479) items, an average of 4.6 per student, were reported and classified into eighteen (18) categories. These were included in Table VI, page 95. The frequency column indicated the number of students who included the item in their response to the question. The per cent of

TABLE VI
 EXPECTED OUTCOMES RELATED TO THE SUPERVISING TEACHER
 ANSWERS TO THE PRE-TEST QUESTION
 "WHAT DO YOU HOPE TO LEARN FROM THE SUPERVISING TEACHER?"

Rank	Expected Outcome	Frequency of Response	Percentage of Students, N=104
1	Techniques of teaching	103	99.04
2	Behavior, discipline	73	70.19
3	Laboratory organization, operation, management	48	46.15
4	Subject matter knowledge, technical skills	41	39.42
5	Knowledge of teacher's role	37	35.58
6	Relations with students, knowledge of them	33	31.73
7	Guidance in learning how to teach	31	29.81
8	Planning for teaching, course development	30	28.85
9	Critical self-analysis	18	17.31
10	Evaluation of students, tests	17	16.35
11	Educational philosophy, profes- sional attitude	9	8.65
12	*Audio-visual and use of teaching aids	8	7.69
13	*Lesson planning	8	7.69
14	Professional relations with staff and community	7	6.73
15	Confidence	7	6.73
16	Knowledge of school, curriculum organization of	6	5.77
17	How to improve industrial arts	2	1.92
18	**Observation of good teaching	1	.96
Totals		479	

*see footnote, page 73, Chapter IV.

**the emphasis may have been on the observation rather than good teaching. Most students seem to want the opportunity to teach.

total students indicating concern in each area was reported and the expected outcomes were ranked in descending order.

Examination of Table VI revealed that "techniques of teaching" was ranked first among the listing of expected outcomes held for the supervising teacher. One hundred and three (103) out of one hundred and four (104) or 99.04 per cent of the students expressed a concern in this area.

The concern for help and guidance in the area of "behavior and discipline," ranked second, with 70.19 per cent of the group mentioning it in their responses to question A. This percentage was lower than that reported for rank 1, but represented almost three-fourths of the student teachers. Primary concern centered around these two major areas.

Less than 50 per cent (46.15 per cent) of the students expressed a concern for learning about "laboratory organization, operation, and management". "Subject matter knowledge, technical skills; and knowledge of teacher's role," ranked fifth and sixth with 39.42 per cent and 35.58 per cent respectively.

Ranks 6, 7, and 8 were expected outcomes held by similar percentages of the group. Rank 6, "relations with students, knowledge of them" by 31.73 per cent; rank 7, "guidance in learning how to teach" by 29.81 per cent; and rank 8, "planning for teaching, course development" by 28.85 per cent.

A wide variation occurred between ranks 8 and 9 with only eighteen students or 17.31 per cent indicating an expected outcome related to "critical self-analysis". Similarly, seventeen students, or a percentage of 16.35 included "evaluation of students," as an area of expected outcomes. Only 8.65 per cent of the students verbalized expected outcomes in the area of "educational philosophy, professional attitude". Eight students (7.69 per cent) included reference to outcomes related to learning about "audio-visual and use of teaching aids," and the area of "lesson planning".*

Seven students expressed a desire to learn about "professional relations with staff and community," from their supervising teacher, and a like number hoped to gain "confidence" from him. Gaining "knowledge of the school, its curriculum, and organization" ranked sixteen out of eighteen, and was an area of concern expressed by 5.77 per cent of the total group.

"How to improve industrial arts" was a matter of concern expressed by two out of one hundred and four students. One expected to "observe good teaching".

There was little doubt concerning the major areas for which the students in this study held expectations from their supervising teachers. These areas were: 1) "techniques of teaching," and 2) "behavior, discipline". "How to improve

*See footnote, page 73, Chapter IV.

industrial arts," and "observation of good teaching," were the categories for which the fewest expectations were reported.

2. Actual outcomes

Table VII, page 99 contains the rank order, frequencies, and percentages of actual outcomes reported by the student teachers. This table contains their responses to Question A Form B (post-test) of the questionnaire. ("....what are some....things which you have learned from the....Supervising Teacher?") Four hundred sixteen (416) actual outcomes were recorded and represented sixty-three fewer actual outcomes than expected outcomes. Student teachers verbalized more expectations than satisfactions from the supervising teacher. They held an average of 4.6 expected outcomes per student. Actual outcomes were only 4.0, a difference of .6 outcomes per student.

Of the actual outcomes verbalized by the students upon completion of their student teaching, all were classifiable into the same categories used for the expected outcome listing, with the exception of those outcomes related to "negative learning" and "no criticism at all". These ranked 15.5 and 18 respectively, in a ranking of twenty categories, with percentage of students reporting them as 5.97 per cent and 3.85 per cent respectively.

TABLE VII
 ACTUAL OUTCOMES RELATED TO THE SUPERVISING TEACHER
 ANSWERS TO THE POST-TEST QUESTION
 "WHAT DID YOU LEARN FROM THE SUPERVISING TEACHER?"

Rank	Actual Outcomes	Frequency of Response	Percentage of Students, N=104
1	Techniques of teaching	82	78.85
2	Behavior, discipline	60	57.69
3	Knowledge of teacher's role	49	47.11
4	Laboratory organization, operation, management	48	46.15
5	Subject matter knowledge, technical skills	32	30.77
6	Relation with students, knowledge of them	31	29.81
7	Planning for teaching, course development	14	13.46
8	Evaluation of students	14	13.46
9	*Audio-visual and use of teaching materials	14	13.46
10	*Lesson planning	11	10.58
11	Educational philosophy, profes- sional attitude	10	9.61
12	Critical self-analysis	9	8.65
13	Professional relations with staff and community	9	8.65
14	Confidence	8	7.69
15	Guidance in learning how to teach	6	5.77
16	Negative learning	6	5.77
17	Knowledge of school, curriculum, organization of	5	4.81
18	No criticism at all	4	3.85
19	Observation of good teaching	2	1.92
20	Importance and significance of industrial arts	2	1.92
Totals		416	

*see footnote, page 73, Chapter IV.

In Table VII, the two categories ranked first and second were: (1) "techniques of teaching," 78.85 per cent; and (2) "behavior, discipline," 57.69 per cent. Rank 3 "knowledge of the teacher's role," and rank 4 "laboratory organization, operation, management," were reported by an almost equal portion of the students, 47.11 per cent and 46.15 per cent respectively. Less than half the students reported that they acquired help from their supervising teachers concerning these two categories.

"Subject matter knowledge, technical skills" was ranked fourth and "relation with students, knowledge of them" was ranked fifth. Percentages for these two categories were, 30.77 and 29.81 respectively. Less than one-third of the student teachers said they had learned things from their supervising teachers related to these two categories.

"Planning for teaching, course development; evaluation of students; and audio-visual and use of teaching materials" shared eighth rank, each with a response of 13.46 per cent.

Rank 10 was "lesson planning," rank 11 was "educational philosophy, professional attitude". These two categories were mentioned as actual outcomes from the supervising teacher by 10.58 per cent and 9.61 per cent respectively. Approximately one out of every ten student teachers felt he had acquired help with "lesson planning and educational philosophy and professional attitudes".

Slightly more than 8 per cent (8.65) of the students reported actual outcomes related to "critical self-analysis

and professional relations with staff and community". "Confidence" was an area in which 7.69 per cent of the group felt they had received help. "Guidance in learning how to teach" was reported by only 5.77 per cent of the student teachers.

Less than 5 per cent (4.81) of the students verbalized actual outcomes relating to "knowledge of school, curriculum, organization of". Two students reported having "observed good teaching". Two students said they had learned about the "importance and significance of industrial arts".

3. Comparison of ranked outcomes and changes in rank

Figure 2, page 102, indicated that several changes in rank occurred in the comparison of ranks held by categories in the expected outcomes column, as compared with those same categories in the actual outcomes column. Five categories retained the same rank, six categories moved up and six moved down in the actual outcomes listing.

Those which remained the same included the following: (rank numbers precede each category), 1. "techniques of teaching, 2. behavior and discipline, 6. relations with students and knowledge of them, 8. planning for teaching, course development, 11. educational philosophy and professional attitude".

The greatest downward change in rank occurred in "guidance in learning how to teach," which ranked seventh

RANKED OUTCOMES

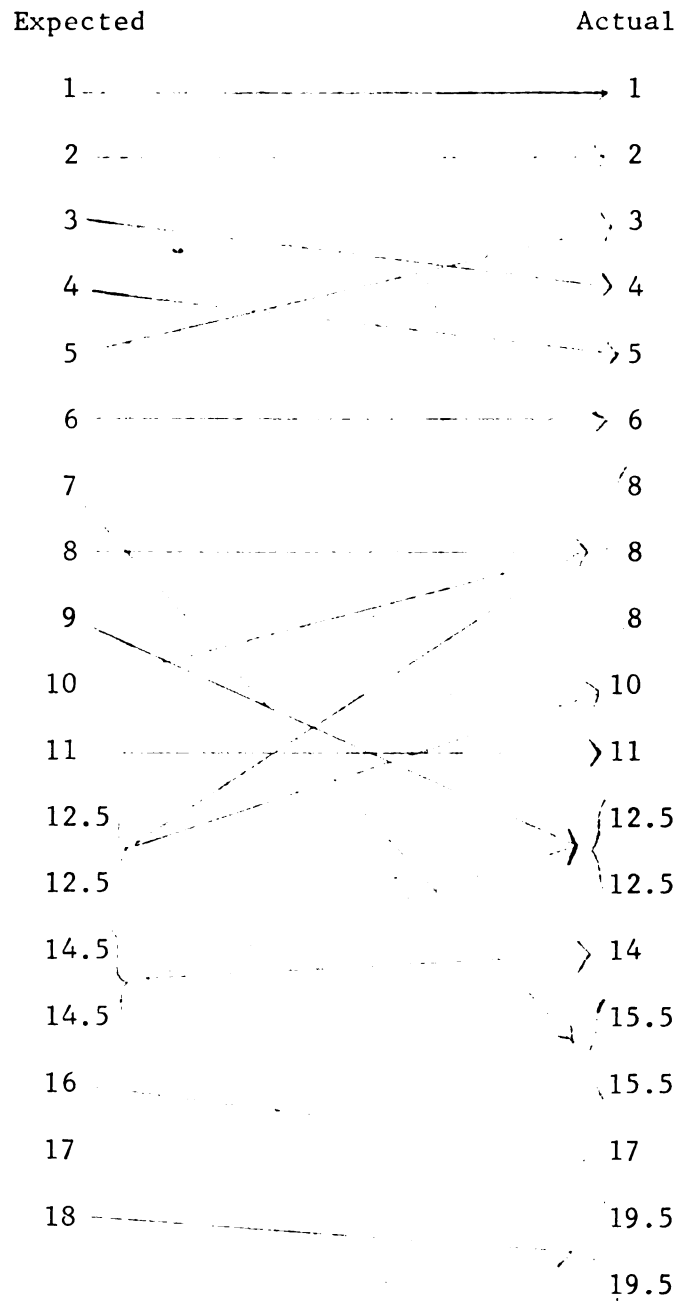


FIGURE 2

CHANGES IN RANK OF EXPECTED AND ACTUAL OUTCOMES
RELATED TO THE SUPERVISING TEACHER

under expected outcomes and 15.5 in the actual outcomes listings. This is a drop of 8.5 ranks. It appears, from their verbalized expectations and satisfactions, that students expected a great deal more help in this area from the supervising teacher than they actually received. (This relatively large difference might also be due, in part, to the fact that "guidance in learning how to teach" may be considered as a summary term which would include several of the other categories of outcomes. Therefore, students who did not feel completely satisfied concerning this item, would tend not to include it in their statements of actual outcomes to the same extent that they did in their expected outcome listing.

The greatest upward change in rank orders occurred with the category of "audio-visual and use of teaching aids" which moved from rank 12.5 in expected outcomes to rank 8 in actual outcomes. This represented an upward movement of 4.5 positions. The total rank changes, as depicted in Figure 3 indicated that the general movement was downward. There were a total of 16.5 changes downward and 13 changes upward. Five positions remained the same.

A general relationship, between expected and actual outcomes verbalized by the students in relation to the supervising teacher, was indicated by the rank position changes.

4. Comparison of percentages of expected and actual outcomes

In Chapter IV percentage comparisons were made using the total number of responses from the subjects of the study. This procedure was followed to indicate the nature and degree of intensity with which expected and actual outcomes were held by the students.

The treatment utilized in the present chapter to compare outcomes related to the specific individuals with whom student teachers came in contact was different. The tabulations of expected and actual outcomes revealed the per cent of students who held similar views. Figure 3, page 105, reveals the relationship which existed between the percentages of the group and their expected and actual outcomes.

Although 99.04 per cent of the student teachers said they expected to learn about "techniques of teaching" from their supervising teachers, only 78.85 per cent indicated that they actually did.

Another wide discrepancy existed in the category of "behavior and discipline". The tabulation of expected outcomes in this area amounted to 70.19 per cent of the group, while actual outcome tabulation showed only 57.69 per cent. This represents a difference of minus 22.50 per cent between expected and actual outcomes.

"Laboratory organization, operation, management" was included by 46.15 per cent of the student teachers as an area of expected outcomes. Exactly the same percentage of

Outcomes

1. Techniques of teaching
2. Behavior, discipline
3. Laboratory organization, operation management
4. Subject matter knowledge, technical skills
5. Knowledge of teacher's role
6. Relations with students, knowledge of them
7. Guidance in learning how to teach
8. Planning for teaching, course development
9. Critical self-analysis
10. Evaluation of students
11. Educational philosophy, professional attitude
12. *Audio-visual and use of teaching aids
13. *Lesson planning
14. Professional relations with staff and community
15. Confidence
16. Knowledge of school, curriculum, organization of
17. How to improve industrial arts
18. Observation of good teaching



FIGURE 3

*see footnote, page 73, Chapter IV.

the group included it as an area of actual outcomes. Of the eighteen categories, this is the only instance where such a relationship occurred.

Almost 40 per cent (39.42) of the students hoped to learn about "subject matter knowledge, technical skills," 30.77 per cent indicated that they actually did.

"Knowledge of the teacher's role" was the category which showed the greatest increase in actual outcomes over expected outcomes. There were 35.58 per cent of the students who expected to learn about this area from the supervising teacher, but 47.11 per cent (an increase of 11.53 per cent) indicated that they actually did. The percentage increase of actual outcomes over expected outcomes in other categories follows:

<u>Expected Outcomes</u>	<u>Percentage of Increase for Actual Outcomes</u>
Audio-visual and use of teaching aids	5.77
Lesson planning	2.89
Professional relations with staff and community	1.92
Confidence	.96
Observation of good teaching	.96
Educational philosophy, professional attitude	.96

Approximately one-third of the student teachers (31.73 per cent) hoped to learn about "relations with students, knowledge of them," 29.81 per cent (minus 1.92) indicated that they actually did. "Guidance in learning how to teach" was the category which revealed the largest variation between reported expected and actual outcomes. Expected outcomes

were held by 29.81 per cent of the group and actual outcomes reported were only 5.77 per cent. This represented a percentage difference of minus 24.04 per cent.

Another category which indicated wide variation was "planning for teaching, course development". While 28.85 per cent of the students held expected outcomes in this area, only 13.46 per cent reported actual outcomes in it. This difference amounted to minus 15.39 per cent.

"Critical self-analysis" was reported by 17.31 per cent of students as an area of expected outcomes, 8.65 per cent reported it in actual outcomes. "Evaluation of students" revealed a close relationship between expected and actual outcomes, 16.35 per cent and 13.46 per cent respectively.

Only 5.77 per cent of the students expressed expected outcomes in the area of "knowledge of school, curriculum, and organization," while 4.81 per cent verbalized actual outcomes in this category.

Of the one hundred and four students in the study, one expressed a desire to learn about "how to improve industrial arts" from his supervising teacher. None of the students reported an actual outcome related to this area.

B. Expected and Actual Outcomes Related to the College Supervisor

1. Expected outcomes

Question B on the pre-test, requested that students list those things which they hoped to learn from their

college supervisor during the student teaching period. Two hundred eighty-five (285) items were reported and were classified into twenty-two (22) categories. This was an average of 2.74 items per student. Table VIII, page 109, contains the number of students who indicated expected outcomes, the percentage of the total group indicating expected outcomes, and the rank order for each category.

"Techniques of teaching" was ranked first among the listing of expected outcomes held for the college supervisor. Slightly more than one-half (52.88 per cent) of the students expressed a concern in this area.

"Constructive criticism" ranked second in the listing of expected outcomes of the college supervisor with 44.23 per cent of the students including it in their responses to the pre-test question B. Third ranked, with 42.31 per cent of the group reporting it, was the category of "honest appraisal of my progress and ability". A considerable gap in percentage of students reporting existed between the third and fourth ranked categories. "Guidance in learning how to teach" ranked fourth and included 27.88 per cent of the students.

"Behavior and discipline" ranked fifth, with 14.42 per cent of the students including it. Help with "lesson planning" and "relations with students" ranked 6.5 in expected outcomes, and were included by 11.54 per cent of the students in the study.

TABLE VIII
 EXPECTED OUTCOMES RELATED TO THE COLLEGE SUPERVISOR
 ANSWERS TO THE PRE-TEST QUESTION
 "WHAT DO YOU HOPE TO LEARN FROM THE COLLEGE SUPERVISOR?"

Rank	Expected Outcomes	Frequency of Response	Percentage of Students, N=104
1	Techniques of teaching	55	52.88
2	Constructive criticism	46	44.23
3	Honest appraisal of my progress and ability	44	42.31
4	Guidance in learning how to teach	29	27.88
5	Behavior, discipline	15	14.42
6	*Lesson planning	12	11.54
7	Relations with students	12	11.54
8	Someone to confide in	9	8.65
9	Relations with staff	8	7.69
10	Organization for teaching, planning	7	6.73
11	Praise and encouragement	7	6.73
12	Knowledge of teacher's role	6	5.77
13	Relations with supervising teacher	6	5.77
14	Educational philosophy, profes- sional attitude	5	4.81
15	Confidence	5	4.81
16	*Audio-visual and teaching aids	5	4.81
17	Critical self-analysis	4	3.85
18	Techniques of student evaluation	3	2.88
19	Help me mature	3	2.88
20	Subject matter knowledge	2	1.92
21	Knowledge of school, organization of	1	.96
22	Help with case study	1	.96
Totals		285	

*see footnote, page 73, Chapter IV.

The remaining categories, from rank 8 through 22, (as shown in Table VIII), were reported by a small percentage of the students. There were 8.65 per cent who held expected outcomes related to "someone to confide in;" 7.69 per cent for "relations with staff;" 6.73 per cent for "organization for teaching" and "praise and encouragement;" 5.77 per cent for "knowledge of teacher's role" and "relations with supervising teacher;" 4.81 per cent for each of the following: "educational philosophy and professional attitude, confidence, and audio-visual and teaching materials". Only 3.85 per cent included "critical self-analysis;" 2.88 per cent indicated "techniques of student evaluation" and "help me mature". Two students (1.92 per cent) expected to learn "subject matter knowledge" from the college supervisor. One expected to gain "knowledge of the school and its organization" and "help with the case study".

It is apparent that although there was a wide range of expected outcomes which student teachers held for the college supervisor, the major concerns were grouped into four categories. The first four ranks under expected outcomes shown in Table VIII, page 109, were: (1) "techniques of teaching; (2) constructive criticism; (3) honest appraisal of progress and ability; and (4) guidance in learning how to teach". The percentage of responses in the remaining eighteen categories never approached those reported for the first four ranks.

2. Actual outcomes

The actual outcome listing on Table IX, page 112, was established from data derived from student responses to Question B on the post-test which asked them to list those things which they had learned from their college supervisor.

"Techniques of teaching" ranked number one, with 64.42 per cent of the students reporting actual outcomes related to it. A difference of 39.38 per cent existed between ranks one and two. Only 24.04 per cent of the students reported learnings related to the category of "constructive criticism," yet this category ranked second under actual outcomes.

Ranks 2, 3, 4, and 5 were similar in the number of students reporting outcomes. Twenty-five (24.04 per cent) included items related to "constructive criticism" which ranked second, and twenty-four (23.08 per cent) included items related to "honest appraisal of progress and ability," which ranked third. "Lesson planning" ranked fourth with twenty-three students (22.11 per cent) responses in that category, and "organization for teaching, planning" ranked fifth with twenty-one students (20.19 per cent).

"Behavior, discipline" ranked sixth with 14.42 per cent of the students indicating actual outcomes related to this area. The next two categories "relations with students" and "guidance in learning how to teach," received equal percentages of responses, 13.46 per cent, and were ranked at 7.5. "Audio-visual and teaching materials" was ranked

TABLE IX

ACTUAL OUTCOMES RELATED TO THE COLLEGE SUPERVISOR
ANSWERS TO THE POST-TEST QUESTION
"WHAT DID YOU LEARN FROM THE COLLEGE SUPERVISOR?"

Rank	Actual Outcomes	Frequency of Response	Percentage of Students, N=104
1	Techniques of teaching	67	64.42
2	Constructive criticism	25	24.04
3	Honest appraisal of my progress and ability	24	23.08
4	*Lesson planning	23	22.11
5	Organization for teaching, planning	21	20.19
6	Behavior, discipline	15	14.42
7	Guidance in learning how to teach	14	13.46
8	Relations with students	14	13.46
9	*Audio-visual and teaching materials	12	11.54
10	Confidence	11	10.58
11	Relations with staff	9	8.65
12	Praise and encouragement	9	8.65
13	Relations with supervising teacher	8	7.69
14	Knowledge of teacher's role	7	6.73
15	Help me mature	6	5.77
16	Educational philosophy, profes- sional attitude	5	4.81
17	Someone to confide in	3	2.88
18	Critical self-analysis	3	2.88
19	Not much help at all	2	1.92
20	Subject matter knowledge	2	1.92
21	Didn't spend enough time with me	2	1.92
22	Techniques of student evaluation	1	.96
Totals		283	

*see footnote, page 73, Chapter IV.

ninth with 11.54 per cent of the students indicating actual outcomes from the college supervisor. Eleven students (10.58 per cent) stated that "confidence" was an area in which they felt they had received help.

The categories of "relations with staff" and "praise and encouragement" received equal percentages of student responses. This was 8.65 per cent, and the ranks assigned were 11.5 out of a total of twenty-two. Ranks 13 through 15 represent categories of actual outcomes mentioned by eight or fewer students.

The remaining categories represent actual outcomes verbalized by three or fewer students. The categories were: "someone to confide in; critical self-analysis; subject matter knowledge; and techniques of student evaluation".

Two students indicated that the college supervisor was "not much help at all" and two felt that he "didn't spend enough time with me".

The greatest emphasis expressed by the student teachers concerning actual outcomes from the college supervisor was in "techniques of teaching". "Constructive criticism" ranked second, followed by "honest appraisal; lesson planning; and organization for teaching, planning". These categories represented areas where the largest number of actual outcomes were verbalized by students after completion of one student teaching assignment.

The total number of verbalized expected outcomes for the college supervisor was 285, actual outcomes numbered 283. The figures for the supervising teacher were 479 and 416 respectively, indicating that students expected and received more help from the supervising teacher than from the college supervisor.

3. Comparison of ranked outcomes and changes in rank

Figure 4, page 115, indicates that a number of changes in rank occurred from the expected to the actual outcome listing. Five ranks moved upward while eleven moved downward. Four categories which maintained the same rank were: 1. "techniques of teaching; 2. constructive criticism; 3. honest appraisal of my progress and ability; and 20. subject matter knowledge".

"Someone to confide in" ranked eighth in expected outcomes and 17.5 in actual outcomes. This represented a drop of 8.5 ranks. There were 8.65 per cent of the students who included this area in their expected outcome responses. Only 2.88 per cent included it in the actual outcome response.

Almost twenty-eight per cent (27.88) of the students expected help in the category of "guidance in learning how to teach" and ranked this as item four in expected outcomes. Only 13.46 per cent mentioned it as an actual outcome and its rank fell to 7.5, which represented a drop of

RANKED OUTCOMES

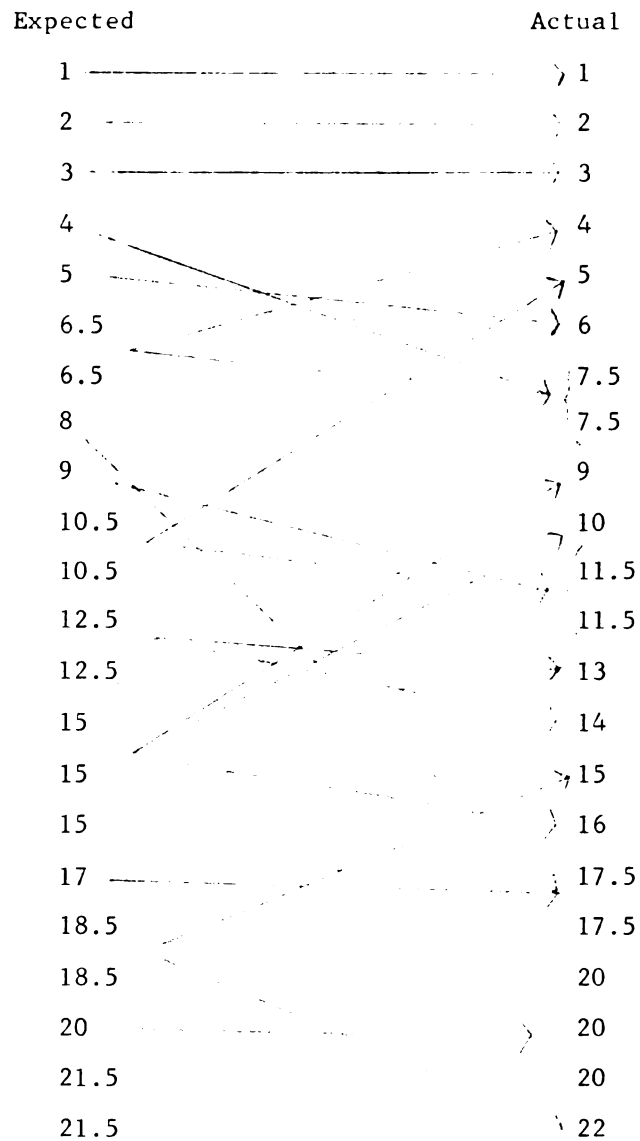


FIGURE 4

CHANGES IN RANK OF EXPECTED AND ACTUAL
OUTCOMES RELATED TO THE COLLEGE SUPERVISOR

3.5 ranks. Approximately one-half of those who expressed a desire for help in this category actually received it.

"Techniques of student evaluation" ranked eighteenth in the expected outcomes listing, dropped to twenty-second (the lowest rank) in the actual outcome list. A few student teachers expected help from the college supervisor in the area of "student evaluation" but fewer received such help. The remaining downward changes in rank amounted to changes of one, or one and a half, ranks.

The following categories showed an upward change in rank:

"Lesson planning" moved from rank 6.5 to rank 4 in actual outcomes. The number of students who reported help in "lesson planning" from the college supervisor almost doubled the number who expected such help.

"Organization for teaching, planning" was ranked 10.5 in the expected outcome listing and moved up to rank 5 in the actual outcome list. This represented a change of 5.5 positions. Three times the number of students who had expected help in this area reported having actually received it.

"Audio-visual and teaching materials and confidence" held 15th rank in the expected outcome list and moved upward to ranks 9 and 10, respectively, in the actual outcome listing.

"Help me mature" ranked 18.5 in the expected outcome listing and moved upward 3.5 ranks to 15th in the actual outcome column.

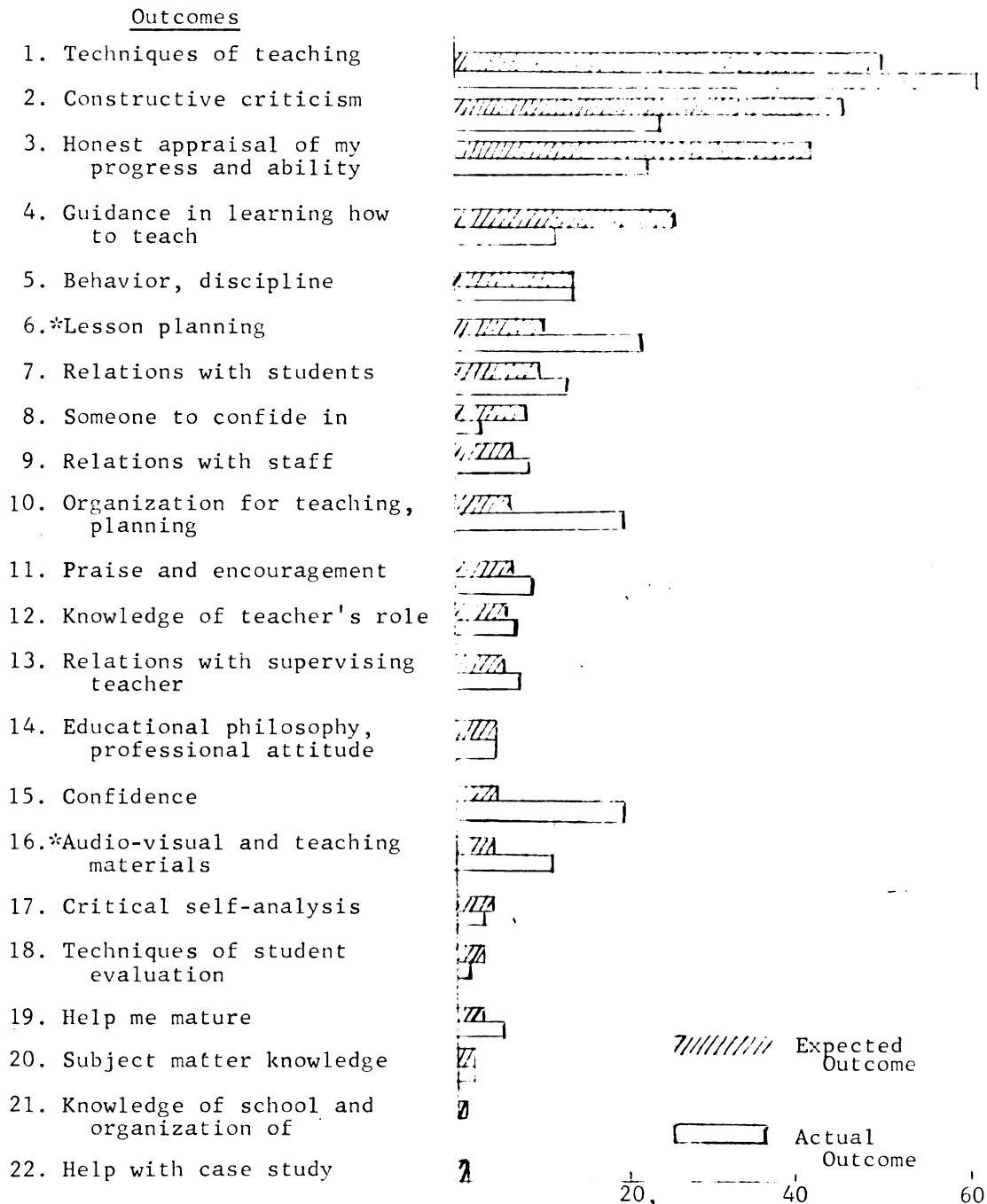
Changes in rank, of expected outcome categories listed for the college supervisor, showed the greatest variation in ranks 4, 6.5, 8, 10.5, 15, and 18.5. An upward movement occurred in ranks 6.5, 10.5, 15, and 18.5 amounting to a total of 21.5 position changes. Downward movement occurred in ranks 4, 5, 6.5, 8, 9, 10.5, 12.5, 15, 17, and 18.5 for a total of 26.0 position changes.

4. Comparison of percentages of expected and actual outcomes

Reference to Figure 5, page 118, reveals the relationship which existed in percentages, between the expected and actual outcomes as verbalized by the students in reference to learnings expected and realized from the college supervisor. The twenty-two categories were listed, the shaded bar following each item represents the per cent of students who held expected outcomes in that category. The unshaded bar represents the per cent of students who verbalized actual outcomes related to that category.

With the exception of the first four items, the per cent of students who reported expected and actual outcomes was low for the majority of the categories listed. In some areas, the percentages for expected outcomes exceeded actual outcomes, in others, the reverse was true, and in a few areas percentages remained equal.

Those categories in which a greater number of students verbalized expected outcomes than were reported as actual outcomes were as follows:



*see footnote, page 73, Chapter IV.

FIGURE 5

COMPARISON OF EXPECTED OUTCOMES AND ACTUAL OUTCOMES
FROM THE COLLEGE SUPERVISOR

1. "Constructive criticism," 44.23 per cent of the students expected help in this area but only 23.08 per cent reported having received it.

2. "Honest appraisal of my progress and ability," 42.31 per cent of the students verbalized an expectation related to this area, 23.08 per cent reported that the college supervisor had actually given them such appraisal.

3. "Guidance in learning how to teach," 27.88 per cent of the students reported expected outcomes in this area, 13.46 per cent reported actual outcomes.

4. "Someone to confide in," 8.65 per cent of the students expected this to be a part of the role of the college supervisor, while only 2.88 per cent reported that it actually was.

5. Minimal differences were reported for the categories of: "critical self-analysis, techniques of student evaluation, knowledge of school and its organization, and help with the case study". The last two categories were reported as expected outcomes by .96 per cent of the group. None included them as actual outcomes.

The categories in which a greater percentage of students reported actual outcomes than expected outcomes were as follows:

1. "Techniques of teaching," 52.88 per cent of the students expected to receive help in this category, 64.42 per cent reported that they actually had.

2. "Lesson planning," 11.54 per cent of the students verbalized expected outcomes in this area, 22.11 per cent indicated actual outcomes related to it. Almost double the number of students who expected help in lesson planning from the college supervisor actually received such help.

3. "Organization for teaching, planning," 6.73 per cent of the students expected this category as an area in which they would receive help from the college supervisor, but almost three times as many, (20.19 per cent) verbalized actual outcomes related to it.

4. "Praise and encouragement," 6.73 per cent of the students reported that they expected the college supervisor to provide this, 8.65 per cent reported that he had done so.

5. "Confidence and audio-visual and teaching materials," more than twice as many students reported that the college supervisor had helped them in these two areas than had expected him to do so. The percentages were 4.81 expected, and 10.58 actual, for "confidence" and 4.81 expected, and 11.54 actual, for "audio-visual and teaching materials".

6. "Knowledge of teacher's role; relations with supervising teacher; and help me mature," a slight increase in actual outcomes over expected outcomes was reported for these categories.

Categories in which the expected outcomes and actual outcomes were equal, as indicated by per cent of students reporting, were:

1. "Behavior and discipline," 14.42 per cent of the students expected and received help from the college supervisor in this area.

2. "Educational philosophy, professional attitude," 4.81 per cent of the students expected and received help in this area.

3. "Subject matter knowledge," 1.92 per cent (two students) reported expected and actual outcomes related to this category.

The major areas in which students indicated they had received help from the college supervisor were: "techniques of teaching; constructive criticism; honest appraisal; lesson planning; and organization for teaching, planning".

Therefore, the major expectations which student teachers held for their college supervisors, for the most part, were met. A need for college supervisors to provide more constructive criticism and honest appraisal of the students' progress and ability were indicated.

C. Expected and Actual Outcomes Related to the Cooperating School Principal

1. Expected outcomes

Question C on the pre-test requested that students list those things which they hoped to learn from the principal of their cooperating school during the student teaching period. One hundred ninety-four (194) items were reported and classified into twelve categories. This was an average of 1.86

items per student. Table X, page 123, contains the rank order listing of expected outcomes, the frequency or number of students reporting expected outcomes in each category, and the per cent of the total group indicating expected outcomes in each category.

Only one category was reported in which more than 50 per cent of the students indicated expected outcomes. There were 53.85 per cent of the students who hoped to learn about "school organization and policies" from the principal of the cooperating school to which they were assigned. This was the major area of concern verbalized in relation to expectations from the principal.

Learning about "the teaching profession and role of the teacher" from the principal, ranked second in expected outcomes, with 27.88 per cent of the students including it in their responses to question C. The principal's "relations with staff and students, authority" was the category ranked third with 20.19 per cent of the students including it as an expected outcome. There were 19.23 per cent of the students who hoped to "learn about administration and the problems of". This represented 20 students out of the 104 included in the study. There were fifteen students (14.42 per cent) who indicated that "they didn't expect much contact or much help" from the principal. Thirteen students (12.50 per cent) hoped to receive "cooperation and guidance" from the principal during their student teaching period. Only

TABLE X

EXPECTED OUTCOMES RELATED TO THE PRINCIPAL
ANSWERS TO THE PRE-TEST QUESTION
"WHAT DO YOU HOPE TO LEARN FROM THE PRINCIPAL?"

Rank	Expected Outcomes	Frequency of Response	Percentage of Students, N=104
1	School organization, policies	56	53.85
2	The teaching profession, role of the teacher	29	27.88
3	Relations with staff and students, authority	21	20.19
4	Learn about administration, problems of	20	19.23
5	Don't expect much contact or much help	15	14.42
6	Cooperation and guidance	13	12.50
7	Principal's views on industrial arts	12	11.54
8	Advice about discipline and behavior	10	9.61
9	Support and acceptance	9	8.65
10	Knowledge of community	6	5.77
11	School records and information about pupils	2	1.92
12	Constructive criticism, teaching hints	1	.96
	Totals	194	

11.54 per cent expressed concern about learning the "principal's views on industrial arts".

Expected outcomes related to "advice about discipline and behavior" were expressed by ten students (9.61 per cent). "Support and acceptance" by the principal was an outcome expressed by 8.65 per cent of the students. Six students (5.77 per cent) held expectations of the principal concerning "knowledge of the community".

Expected outcomes related to "school records and information about pupils" and "constructive criticism, teaching hints" were included by 1.92 per cent and .96 per cent of the students, respectively.

2. Actual outcomes

One hundred forty-eight (148) responses, for an average of 1.42 per student, were tabulated into twelve categories, and comprise the listing of actual outcomes indicated by the students on the post-test response to Question C, (see Table XI, page 125). This question requested that students indicate those things which they had learned from the principal of the cooperating school.

More than half of the students (52.88 per cent) said they had little contact with and received little help from the principal. This category was rank 1 in the list of actual outcomes. "Advice about discipline and behavior" was received by seventeen students (16.35 per cent).

TABLE XI

ACTUAL OUTCOMES RELATED TO THE PRINCIPAL
ANSWERS TO THE POST-TEST QUESTION
"WHAT DID YOU LEARN FROM THE PRINCIPAL?"

Rank	Actual Outcomes	Frequency of Response	Percentage of Students, N=104
1	Very little contact, very little help	55	52.88
2	Advice about discipline, behavior	17	16.35
3	Cooperation and guidance	14	13.46
4	Learn about administration, problems of	13	12.50
5	School organization, policies	12	11.54
6	The teaching profession, role of the teacher	10	9.61
7	Constructive criticism, teaching hints	8	7.69
8	Support and acceptance	7	6.73
9	Relations with staff and students, authority	6	5.77
10	Knowledge of community	3	2.88
11	Principal's views on industrial arts	2	1.92
12	School records and information about pupils	1	.96
	Totals	148	

"Cooperation and guidance" ranked third with 13.46 per cent of the students having verbalized outcomes related to this category.

Thirteen students (12.50 per cent) felt that they "learned about administration, problems of" from their principal. Only 11.54 per cent indicated that they learned about "school organization, policies," while 9.61 per cent felt they had received help in learning about "the teaching profession and role of the teacher".

"Constructive criticism, teaching hints" were felt to have been provided for 7.69 per cent of the students by the principal and 6.73 per cent felt they had received his "support and acceptance". "Relations with staff and students, authority" was a category of actual outcomes reported by six students (5.77 per cent).

Three students (2.88 per cent) indicated that the principal had provided "knowledge of the community", two students (1.92 per cent) reported learning their "principal's views on industrial arts" and only one student (.96 per cent) reported that he had learned about "school records and information about pupils".

It was apparent from this analysis that only a small percentage of the students felt they had actually learned very much from the principal.

3. Comparison of ranked outcomes and changes in rank

Figure 6, page 128, represents the changes in rank which occurred from the expected outcome to the actual outcome listing. It was apparent that considerable shifting of ranks had taken place. Only two categories of outcomes retained the same rank in both listings; rank 4, "learn about administration and the problems of," and rank 10, "knowledge of community". Of the remaining ten ranks, five moved up and five moved down, for a total of fifteen position changes downward and nineteen upward.

Ranks 1, 2, and 3 in expected outcomes fell to 5th, 6th, and 9th place, respectively, in actual outcomes. These were: "school administration, policies; the teaching profession; role of the teacher; and relations with staff and students, authority".

Ranks 7 and 11 in the expected outcome listing fell to 11th and 12th positions in actual outcomes. These were: "principal's views on industrial arts; and "school records and information about pupils".

Of the fifty-six students (53.85 per cent), who indicated that they expected to learn about "school organization, policies" in answer to Question C on the pre-test, twelve (11.54 per cent) reported actual outcomes in this category. This drop of rank 1 in expected outcomes, to rank 5 in actual outcomes, represents the largest numerical difference.

RANKED OUTCOMES

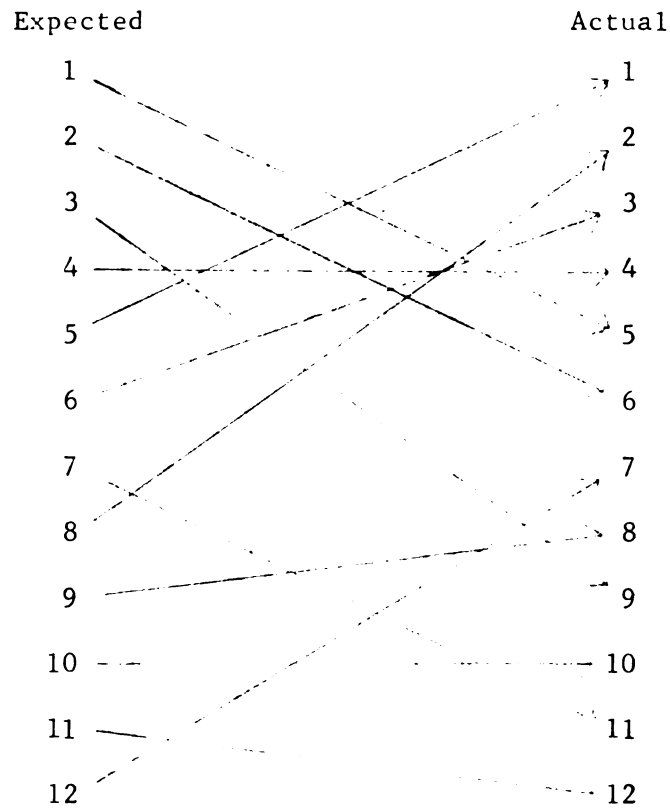


FIGURE 6

CHANGES IN RANK OF EXPECTED AND ACTUAL
OUTCOMES RELATED TO THE PRINCIPAL

Five ranks moved upward from expected outcome position to actual outcome position. The most significant upward move was made by the category "don't expect much contact or much help". This item ranked 5th in expected outcomes mentioned by fifteen students (14.42 per cent) and moved up to rank 1 in the actual outcome listing with fifty-five students (52.88 per cent) including it in their responses on the post-test.

"Cooperation and guidance" ranked 6th in expected outcomes and moved up three ranks to 3rd position in the actual outcomes column. "Advice about discipline and behavior," which ranked 8th in expected outcomes, moved upward to rank 2 in the actual outcome listing. This represented a move of six ranks upward. Rank 12, "constructive criticism, teaching hints," in expected outcomes, became rank 7 in actual outcomes. One student indicated an expected outcome in this area, eight students mentioned actual outcomes related to this category.

There appeared to be little or no correlation between the expected and actual outcomes relating to the principal of the cooperating school, as expressed by the students in this study. Of the first eight ranks in expected outcomes, all but one showed upward or downward movement of three ranks or more in the actual outcome listing.

4. Comparison of percentages of expected and actual outcomes

Figure 7, page 131, reveals the relationship which existed between the percentages of expected and actual outcomes, as verbalized by students in this study, in reference to learnings expected and realized from the principal of their cooperating school. The twelve categories were listed in rank order by per cent of expected outcomes.

There were eight categories where expected outcomes exceeded actual outcomes and four categories where a reversal of this situation occurred.

Expected outcomes exceeded actual outcomes in the following categories:

1. "School organization, policies," 53.88 per cent of the students expected help in this area, 11.54 per cent received it.
2. "The teaching profession, role of the teacher," 27.88 per cent of the students expected help in this area, 9.61 per cent reported actual outcomes related to it.
3. "Relations with staff and students, authority," 20.19 per cent of the students indicated expected outcomes relating to this area, 5.77 per cent included it in their actual outcomes.
4. "Learn about administration, problems of," 19.23 per cent of the students expected help in this area, 12.50 per cent reported actual outcomes related to it.

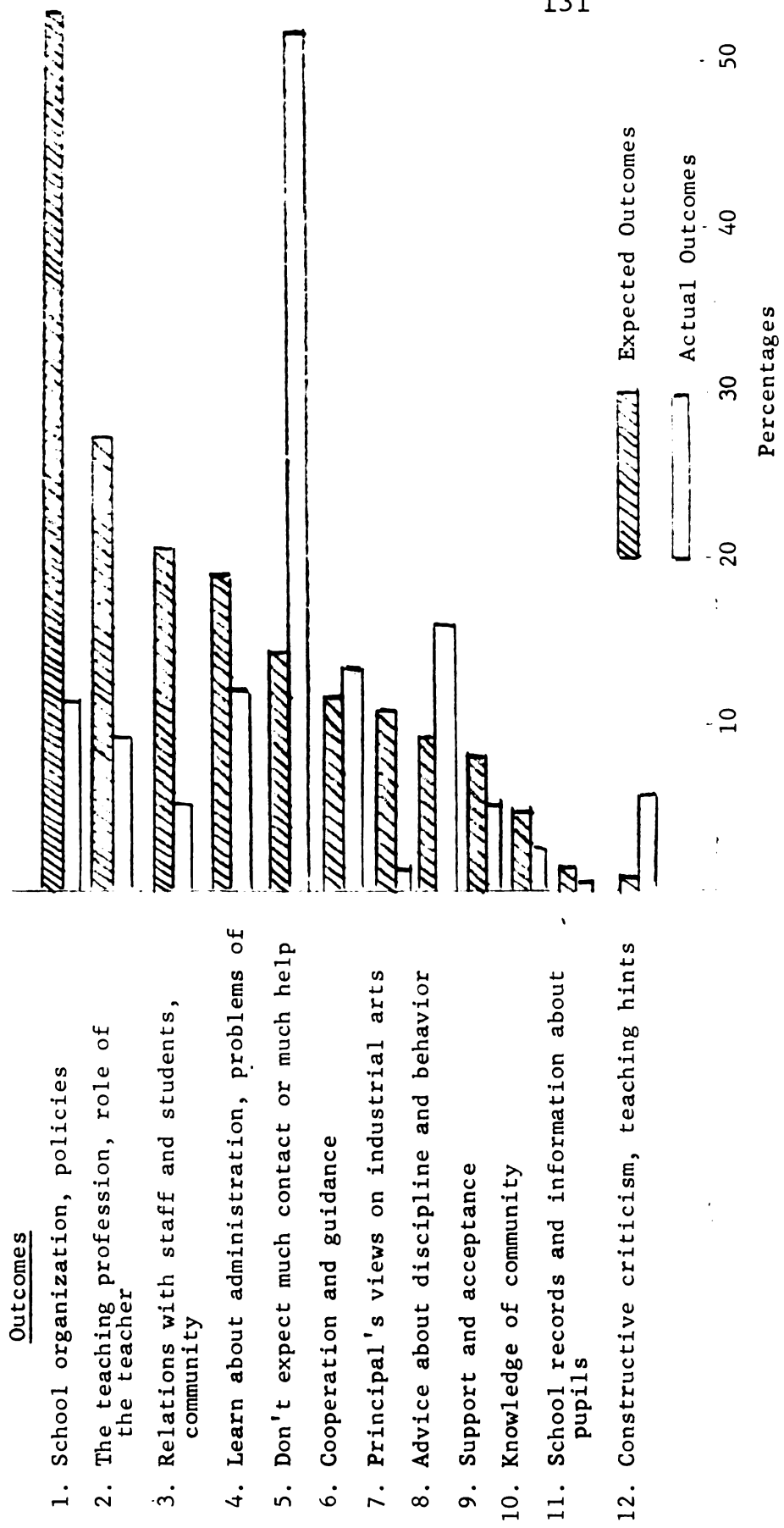


FIGURE 7

COMPARISON OF EXPECTED OUTCOMES AND ACTUAL OUTCOMES FROM THE PRINCIPAL

5. "Principal's views on industrial arts," 11.54 per cent of the students held expectations in this category, 1.92 per cent included it in their actual outcomes.

6. "Support and acceptance," 8.65 per cent of the students indicated expectations in this area, 6.73 per cent reported actual outcomes related to it.

7. "Knowledge of community," and "school records and information about pupils," expected outcomes were indicated by 5.77 per cent and 1.92 per cent of the students, respectively. Actual outcome percentages were 2.88 per cent and .96 per cent, respectively.

Actual outcomes exceeded expected outcomes in the following categories:

1. "Don't expect much contact or much help," 14.42 per cent of the students held expectations of this type for the principal, 52.88 per cent (increase of 38.46) reported actual outcomes related to it.

2. "Cooperation and guidance," indicated as an expected outcome by 12.50 per cent of the students, 13.46 per cent reported it in their actual outcome listing.

3. "Advice about discipline and behavior," included in expected outcomes by 9.61 per cent of the students, reported as an actual outcome by 16.35 per cent (increase of 4.64).

4. "Constructive criticism, teaching hints," one student (.96 per cent) held expectations for this area, eight students (7.69 per cent) reported this area in actual outcomes.

5. Summary

There was little direct relationship between expected and actual outcomes held for the principal of the cooperating school by the students in this study. All of the actual outcome percentages were low, with the exception of the percentage indicated for number five in Figure 7, page 131.

D. Expected and Actual Outcomes Related to the Other Teachers on the Staff of the Cooperating School

1. Expected outcomes

Table XII, page 134, contains a listing of expected outcomes revealed by student responses to Question E on the pre-test. Question E was, "What do you hope to learn from other teachers on the staff of the cooperating school to which you are assigned?"

Two hundred twenty-five (225) items were tabulated from which thirteen categories were established. These categories were presented in descending rank order, the number and per cent of students reporting similar expected outcomes were indicated. An average was recorded of 2.16 expected outcomes per student, from other teachers.

Examination of Table XII revealed that "techniques of teaching, and teacher's role and the profession" ranked 1st and 2nd among the list of expected outcomes verbalized by students in relation to what they hoped to learn from other teachers. There were 35.58 per cent and 31.73 per cent, respectively, of the students indicating such outcomes.

TABLE XII

EXPECTED OUTCOMES RELATED TO OTHER TEACHERS
 ANSWERS TO THE PRE-TEST QUESTION
 "WHAT DO YOU HOPE TO LEARN FROM OTHER TEACHERS?"

Rank	Expected Outcomes	Frequency of Response	Percentage of Students, N=104
1	Techniques of teaching	37	35.58
2	Teacher's role and the profession	33	31.73
3	Attitude toward teachers	25	24.04
4	Help in learning to become a teacher	21	20.19
5	Attitude toward industrial arts and its place in the curriculum	19	18.27
6	How to handle pupils, discipline	18	17.31
7	Relations with other teachers and community	17	16.35
8	Help with case study, knowledge of pupils	13	12.50
9	Acceptance as a colleague	12	11.54
10	School organization, policies, salaries	9	8.65
11	See what teachers are really like	8	7.69
12	Learn about extra curricular activities	7	6.73
13	Don't expect much contact or much help	6	5.77
Totals		225	

"Attitude toward teaching, and help in learning to become a teacher" were categories ranked 3rd and 4th. Similar percentages of students indicated expected outcomes related to these areas, 24.04 and 20.19 per cent, respectively. Ranks 5, 6, and 7 were expected outcomes held by similar percentages of the group: rank 5, "attitude toward industrial arts and its place in the curriculum" by 18.27 per cent; rank 6, "how to handle pupils, discipline" by 17.31 per cent; and rank 7, "relations with other teachers and community" by 16.35 per cent. "Help with case study, knowledge of pupils" ranked 8th with 12.50 per cent of the students reporting expected outcomes related to this category. "Acceptance as a colleague" ranked ninth with 11.54 per cent of the students verbalizing expected outcomes related to this area.

The remaining four ranks (10 through 13) were categories of expected outcomes verbalized by less than ten per cent of the students in this study. They were as follows: rank 10, "school organization, policies, salaries" 8.65 per cent; rank 11, "see what teachers are really like" 7.69 per cent; rank 12, "learn about extra-curricular activities" 6.73 per cent; rank 13, "don't expect much contact or much help" 5.77 per cent.

Table XII contained a number of expectations which students held for other teachers and indicated that they had a definite role to play regarding the student teacher.

2. Actual outcomes

Student responses to the post-test question, "What did you learn from the other teachers on the staff of the cooperating school to which you were assigned?", were reported in Table XIII, page 137. Two hundred thirty-one (231) actual outcomes were tabulated. This amounted to 2.22 verbalized actual outcomes per student or .06 per cent more than the number of verbalized expected outcomes per student.

The actual outcome categories listed in Table XIII are not separated by wide percentage variations. The first five ranks in actual outcomes show that only one student difference existed between each of them. The percentages for each of these ranks was similar though lower than those reported in the expected outcome listing.

Approximately equal numbers of students verbalized actual outcomes for the following five categories: (1) "how to handle pupils, discipline; (2) learn about extra-curricular activities; (3) relationships with other teachers, community; (4) teacher's role and the profession; (5) acceptance as a colleague". The percentages of students who reported the above ranged from 25.96 for rank 1 to 22.11 for rank 5.

Similarly, ranks 6, 7, and 8 indicated that almost equal numbers of students verbalized actual outcomes for each category. Rank 6 was "techniques of teaching" with

TABLE XIII
 ACTUAL OUTCOMES RELATED TO OTHER TEACHERS
 ANSWERS TO THE POST-TEST QUESTION
 "WHAT DID YOU LEARN FROM OTHER TEACHERS?"

Rank	Actual Outcomes	Frequency of Response	Percentage of Students, N=104
1	How to handle pupils, discipline	27	25.96
2	Learn about extra-curricular activities	26	25.00
3	Relationships with other teachers, community	25	24.04
4	Teacher's role and the profession	24	23.08
5	Acceptance as a colleague	23	22.11
6	Techniques of teaching	20	19.23
7	Help in learning to become a teacher	17	16.35
8	Not much contact, not much help	15	14.42
9	Attitude toward industrial arts, its place in the curriculum	13	12.50
10	School organization, policies, salaries	12	11.54
11	See what teachers are really like	11	10.58
12	Attitude toward teaching	10	9.61
13	Help with case study, knowledge of pupils	8	7.69
Totals		231	

19.23 per cent of the students holding expectations related to this area. Rank 7 was "help in learning to become a teacher" with 16.35 per cent, rank 8 was "not much contact, not much help" with 14.42 per cent.

The remaining five categories of actual outcomes related to other teachers are as follows: rank 9, "attitude toward industrial arts, and its place in the curriculum" 12.50 per cent; rank 10, "school organization, policies, salaries" 11.54 per cent; rank 11, "see what teachers are really like" 10.58 per cent; rank 12, "attitude toward teaching" 9.61 per cent; and rank 13, "help with case study, knowledge of pupils" 7.69 per cent.

Students' verbalized outcomes indicated that they acquired help from other teachers on the staff of the cooperating school. The totals of expected and actual outcomes showed that there were a greater number of satisfactions than expectations. Fifteen students (14.42 per cent) reported that they did not have much contact with other teachers.

3. Comparison of ranked outcomes and changes in rank

Figure 8, page 139, provides a graphic representation of the changes in rank which occurred from the expected to the actual outcome listing. The two rankings were almost totally different. Rank 10, "school organization, policies, salaries" and rank 11, "see what teachers are really like"

RANKED OUTCOMES

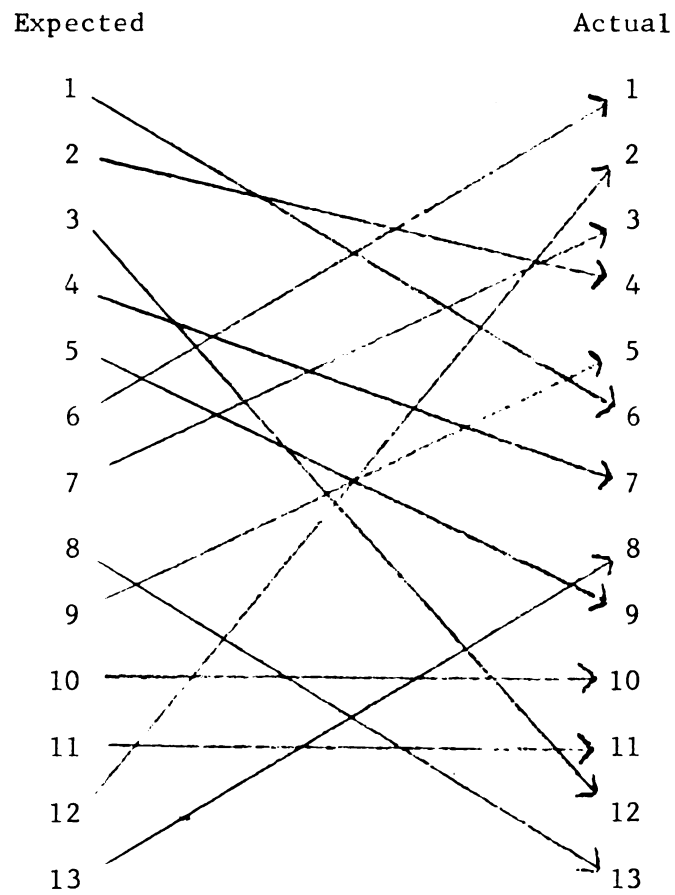


FIGURE 8

CHANGES IN RANK OF EXPECTED AND ACTUAL
OUTCOMES RELATED TO OTHER TEACHERS

were the only two categories which retained the same rank for both expected and actual outcomes. Of the remaining eleven ranks, five moved up and six moved down for a total movement of twenty-eight rank positions downward and twenty-eight upward.

"Learn about extra-curricular activities" ranked 12 in expected outcomes and moved up to rank 2 in actual outcomes. This represented the largest upward movement.

All of the categories in the first five ranks in expected outcomes, plus rank 8, fell to lower positions in actual outcomes. These were: "techniques of teaching," which ranked 1st in expected outcomes and 6th in actual outcomes; "teacher's role and the profession," which ranked 2nd in expected outcomes and 4th in actual outcomes; "attitude toward teaching," ranked 3rd in expected outcomes and 12th in actual outcomes. Rank 4, "help in learning to become a teacher" and rank 5, "attitude toward industrial arts and its place in the curriculum" dropped to ranks 7 and 9, respectively, in the actual outcome listing.

The largest downward movement occurred with "attitude toward teaching" which fell from rank 3 in expected outcomes to rank 12 in actual outcomes.

Categories which moved upward in rank from expected to actual outcomes were as follows: "how to handle pupils, discipline," from 6th place to 1st; "relations with other teachers and community," from 7th place to 3rd; "acceptance

as a colleague," from 9th place to 5th; "learn about extra-curricular activities," from 12th place to 2nd; and "don't expect much contact or much help," from 13th place to 8th.

Analysis of Figure 8 revealed that the top ranked items in expected outcomes fell to lower positions. Almost all of the items which ranked near the bottom of the expected outcome listing moved upward in the actual outcome column. There was little apparent direct relationship between the student's expected and actual outcomes as related to other teachers on the staff of the cooperating school.

4. Comparison of percentages of expected and actual outcomes

Figure 9, page 142, provides a graphic representation of verbalized outcomes and the per cent of students who said they had expected or received help related to each of them.

There were six categories where verbalized expected outcomes exceeded actual outcomes and seven categories where actual outcomes exceeded expectations. Expected outcomes exceeded actual outcomes in the following categories:

1. "Techniques of teaching," 35.58 per cent of the students expected help in this area, 19.23 per cent said they had received it.

2. "Teacher's role and the profession," 31.73 per cent of the students held expectations in this area, 23.08 per cent reported actual outcomes.

Outcomes

1. Techniques of teaching
2. Teacher's role and the profession
3. Attitude toward teaching
4. Help in learning to become a teacher
5. Attitude toward industrial arts and its place in the curriculum
6. How to handle pupils, discipline
7. Relations with other teachers and community
8. Help with case study, knowledge of pupils
9. Acceptance as a colleague
10. School organization, policies, salaries
11. See what teachers are really like
12. Learn about extra-curricular activities
13. Don't expect much contact or much help

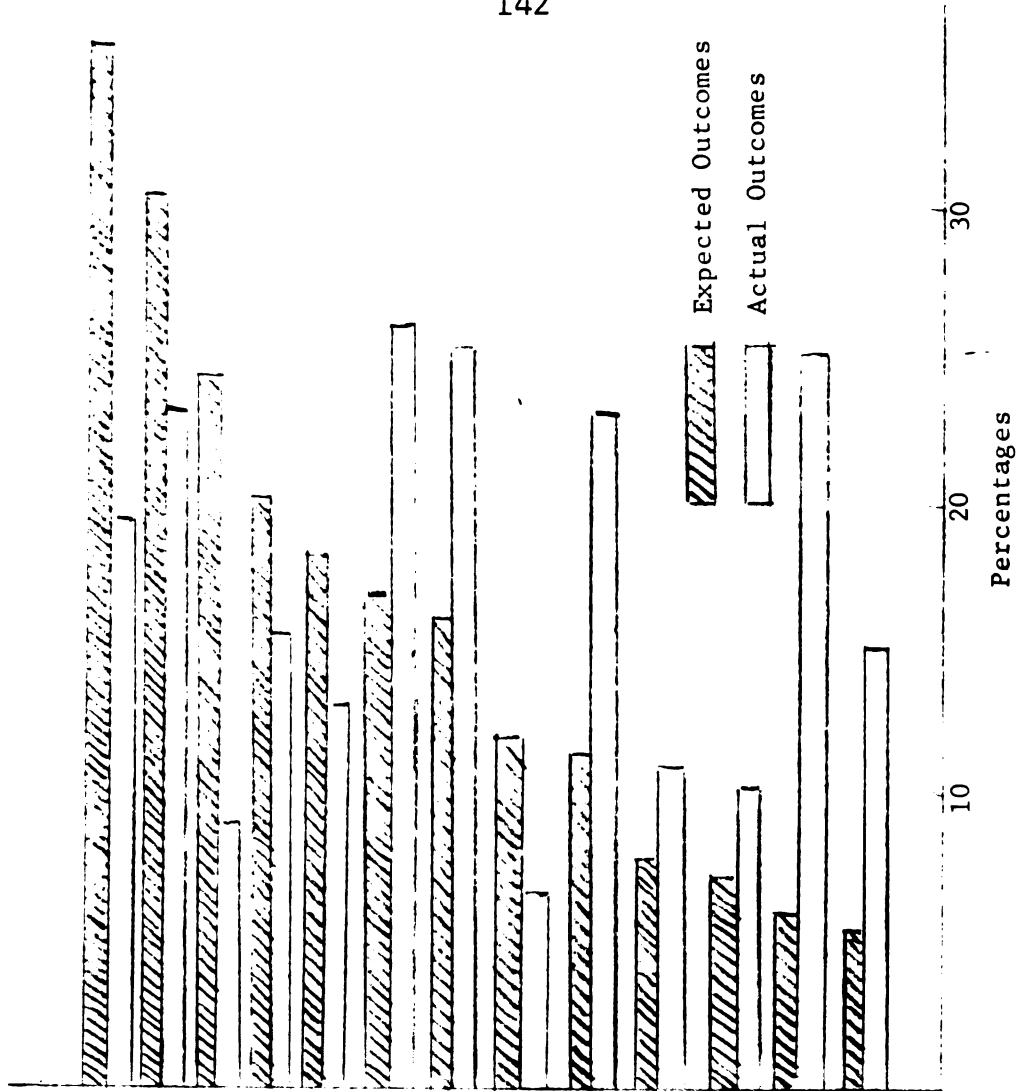


FIGURE 9

COMPARISON OF EXPECTED OUTCOMES AND ACTUAL OUTCOMES FROM OTHER TEACHERS

3. "Attitude toward teaching," 24.04 per cent of the students held expectations related to this area, 9.61 per cent reported actual outcomes.

4. "Help in learning to become a teacher," 20.19 per cent of the students said they expected help in this area, 16.35 per cent received help.

5. "Attitude toward industrial arts and its place in the curriculum," 18.27 per cent of the students held expectations in this area, 12.50 per cent reported actual outcomes here.

6. "Help with case study, knowledge of pupils," 12.50 per cent held expected outcomes for this area, 7.69 per cent reported actual outcomes.

The categories in which actual outcomes exceeded expected outcomes were:

1. "How to handle pupils, discipline," 17.31 per cent of the students reported expectations in this area, 25.96 per cent reported actual outcomes.

2. "Relations with other teachers and community," 16.35 per cent of the students held expected outcomes, 24.04 per cent reported actual outcomes in this area.

3. "Acceptance as a colleague," 11.54 per cent of the students verbalized expected outcomes in this area, 22.11 per cent reported actual outcomes.

4. "Learning about extra-curricular activities," 6.73 per cent of the students held expected outcomes, 25.00 per cent reported related actual outcomes.

5. "Don't expect much contact or much help," 5.77 per cent of the students indicated expectations in this area, 14.42 per cent reported related actual outcomes.

E. Summary of Total Expected and Actual Outcomes in Relation to Personnel in the Student Teaching Program

Data was presented and comparisons made between expected and actual outcomes of student teachers in relation to the personnel with whom they came in contact during student teaching. Outcomes were compared as they related to: a) the supervising teacher, b) the college supervisor, c) the principal, and d) the other teachers on the staff of the cooperating school. The total number of outcomes verbalized by the students for each of the above were included in the following listing:

	<u>Total Number of Expected Outcomes</u>	<u>Total Number of Actual Outcomes</u>
Supervising Teacher	479	416
College Supervisor	285	283
Principal	194	148
Other Teachers	225	231

The number of expected outcomes which students held for the college supervisor were considerably fewer than those held for the supervising teacher but actual outcomes were almost equal.

Students verbalized almost as many expected and actual outcomes for other teachers as they did for the college supervisor. Expected outcomes were sixty fewer and actual outcomes fifty-two fewer, than those reported for the college supervisor.

The fewest expected and actual outcomes verbalized by the students were in relation to the principal. Thirty-one fewer expected outcomes were held for him than were held for other teachers.

Major expected and actual outcomes as verbalized by the students for the personnel with whom they came in contact during student teaching were presented in descending rank order in the following groupings:

SUPERVISING TEACHER

<u>Major Expected Outcomes</u>	<u>Major Actual Outcomes</u>
1. Techniques of teaching	1. Techniques of teaching
2. Behavior, discipline	2. Behavior, discipline
3. Laboratory, organization, operation, management	3. Knowledge of teacher's role
4. Subject matter knowledge, technical skills	4. Laboratory organization, operation, management
5. Knowledge of teacher's role	5. Subject matter knowledge, technical skills

COLLEGE SUPERVISOR

<u>Major Expected Outcomes</u>	<u>Major Actual Outcomes</u>
1. Techniques of teaching	1. Techniques of teaching
2. Constructive criticism	2. Constructive criticism
3. Honest appraisal of my progress and ability	3. Honest appraisal of my progress and ability
4. Guidance in learning how to teach	4. Lesson planning
5. Behavior, discipline	5. Organization for teaching, planning

PRINCIPAL

<u>Major Expected Outcomes</u>	<u>Major Actual Outcomes</u>
1. School organization, policies	1. Very little contact, very little help
2. The teaching profession, role of the teacher	2. Advice about discipline and behavior
3. Attitude toward teaching	3. Relationships with other teachers, community
4. Learn about administration, problems of	4. Learn about administration, problems of
5. Don't expect much contact or help	5. School organization, policies of

OTHER TEACHERS

<u>Major Expected Outcomes</u>	<u>Major Actual Outcomes</u>
1. Techniques of teaching	1. How to handle pupils, discipline
2. Teacher's role and the profession	2. Learn about extra-curricular activities
3. Attitude toward teaching	3. Relationship with other teachers, community
4. Help in learning to become a teacher	4. Teacher's role and the profession
5. Attitude toward industrial arts and its place in curriculum	5. Acceptance as colleague

CHAPTER VI

EXPECTED AND ACTUAL OUTCOMES, ATTITUDES AND INTENT TO TEACH

Introduction

The preceding chapter contained an analysis of the verbalized outcomes indicated by the student teachers both before and after student teaching. A composite list of outcomes was developed, as well as a breakdown of the outcomes which were related to each of the following:

a) Supervising Teacher, b) College Supervisor, c) Principal, and d) Other Teachers. The information presented indicated the specific expected outcomes verbalized by students just prior to student teaching. The specific actual outcomes, as verbalized by them upon completion of student teaching, were also revealed.

Two basic questions were answered: (1) What are the expected and actual outcomes of student teachers as stated by them just prior to and immediately following one student teaching experience? and (2) Do student teachers receive the amount and kinds of help and guidance they expect from the people with whom they will come in contact during student teaching? ..

Since the data indicated that differences existed between expected and actual outcomes as verbalized by the students, it seemed necessary to investigate two additional aspects. The student teacher's attitude toward youngsters and his commitment to teaching were felt to be aspects which, if analyzed, could help clarify the reasons for some of the differences.

The Minnesota Teacher Attitude Inventory was the instrument used to measure attitude. (This instrument is designed to measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships.) A structured, commitment to teaching item, was included on both questionnaires. These were used to secure data which enabled the researcher to answer the remaining two questions in the study. The questions were: (1) Do students with high positive MTAI scores verbalize different expected and actual outcomes than students with low negative MTAI scores? and (2) Do students who say they intend to teach prior to student teaching possess different expected and actual outcomes from those who say they do not intend to teach?

A. Attitude Scores and Verbalized Outcomes

The procedure used to ascertain the expected and actual outcomes for the high and low MTAI scorers was similar to that used in Chapter IV where outcomes were compared with objectives. A master list of expected outcomes was developed

from all of the responses students had included on their questionnaires. A list of actual outcomes was also developed.

In the treatment of the data in Chapters IV and V, all of the student responses were analyzed and used in the development of the tables and figures, as well as in the analysis of them. In this chapter only the upper and lower portions of the population, as determined by MTAI scores, were used.

An equal number of student questionnaires was used for each category. There were twenty-two (22) students in the high positive MTAI score group and twenty-two (22) in the low negative MTAI score group.

The high MTAI students attained scores within a range of plus 41 to plus 88, while the low MTAI scores ranged from minus 43 to minus 11. The mean and median score for each was indicated below:

	<u>Mean</u>	<u>Median</u>
High MTAI	+47.50	+57.27
Low MTAI	-19.50	-23.85

1. Expected outcomes and attitude scores

Table XIV, page 152, contains a listing of expected outcomes as verbalized by the high and low MTAI groups. Frequency of response was indicated along with the percentage of the total number of expected outcomes reported by each group. There was a total of 218 expectations held by the high MTAI group and 223 for the low MTAI group. The total number of expectations for each group indicated that there

TABLE XIV

VERBALIZED EXPECTED OUTCOMES OF THE HIGH AND LOW SCORERS ON THE MTAI

Expected Outcomes (pre-test)	High MTAI		Low MTAI	
	frequency	percentage	frequency	percentage
Techniques of teaching	36	16.51	38	17.04
Behavior, discipline	17	7.80	25	11.21
Knowledge of teacher's role	22	10.10	20	8.97
Guidance in learning how to teach	10	4.59	9	4.04
Knowledge of school, curriculum, organization	11	5.05	13	5.83
Laboratory organization, operation, management	6	2.75	10	4.48
Constructive criticism	13	5.96	9	4.04
Relations with students, knowledge of them	14	6.42	14	6.28
Honest appraisal of progress and ability	12	5.50	13	5.83
Subject matter knowledge, technical skills	9	4.13	8	3.59
Professional relations with staff and community	9	4.13	11	4.93
Long-range planning, course development	7	3.21	5	2.24
Attitude toward teaching	5	2.29	7	3.14
Critical self-analysis	11	5.05	4	1.79
Principal's authority and relations with staff and students	2	.92	6	2.69
Evaluation of students	0	.00	4	1.79

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TABLE XIV (Continued)
 VERBALIZED EXPECTED OUTCOMES OF THE HIGH AND LOW SCORERS ON THE MTAI

Expected Outcomes (pre-test)	High MTAI		Low MTAI	
	frequency	percentage	frequency	percentage
*Lesson planning	4	1.83	4	1.79
Learn about administration	5	2.29	3	1.35
Support and acceptance	9	4.13	4	1.79
Educational philosophy, professional attitude	2	.92	1	.45
*Audio-visual and use of teaching devices	4	1.83	3	1.35
Confidence	4	1.83	4	1.79
See what teachers are really like	3	1.38	6	2.60
Observation of good teaching	3	1.38	2	.90
Totals	218	100.00	223	100.00

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*see footnote, page 73, Chapter IV.

was very little difference in the number of expected outcomes. The low MTAI group reported a slightly higher number than did the high MTAI group.

Of the twenty-four categories into which expected outcomes were tabulated, most of them received almost equal mention. A difference in frequency of three or under was reported for sixteen of the twenty-four categories.

Those categories for which the low MTAI group reported greater concern than the high group were as follows:

1. "Behavior, discipline," more concern was expressed by the low MTAI group in this area than by the high MTAI group. Seventeen responses were counted for the high scorers and twenty-five for the low scorers.

2. "Laboratory organization, operation, management," more expected outcomes for this area were tabulated for the low group. A frequency of ten for the low group and six for the high group was reported.

3. "Principal's authority and relations with staff and students" and "evaluation of students," were reported as concerns by the low group more often than by the high group.

On the basis of the above information, there appeared to be a difference in the areas of concern which these groups of students verbalized prior to beginning their student teaching. The differences were small, but they did exist.

Students who achieved low negative scores on the MTAI prior to student teaching expressed greater concern in the following areas than did those students who achieved high positive scores: (1) "behavior, discipline; (2) laboratory organization; (3) principal's authority and relations with staff and students; and (4) evaluation of students".

The categories in which the high MTAI scorers reported greater concern than did the low MTAI scorers were:

1. "Constructive criticism," was mentioned thirteen times by the high positive scorers and only nine times by the low scorers.

2. "Critical self-analysis," more expected outcomes in this category were held by the high group (11) than the low group (4).

3. "Support and acceptance," concerns in this area were expressed more frequently by the high positive group than by the low negative group (nine for the high group, four for the low group).

Students who achieved high positive scores on the MTAI prior to student teaching expressed greater concern in the following areas than did those who achieved low negative scores: (1) "constructive criticism, (2) critical self-analysis, and (3) support and acceptance".

Differences in the percentage of the total outcomes reported for each category were discernible through analysis of the data presented in Table XIV.

2. Actual outcomes and attitude scores

Table XV, pages 157 and 158, contains a listing of actual outcomes reported by the high and low MTAI groups. The frequency and percentage columns indicate the number and per cent of the total outcomes tabulated for each group of twenty-two students. A sizeable difference was noted in the totals for each of the two groups. The high MTAI scorers included a total of 208 actual outcomes while the low MTAI scorers included 163 actual outcomes, a difference of minus 45. Comparison of the frequency columns revealed a greater difference than was revealed by comparison of the percentage columns.

Students who achieved high positive MTAI scores, verbalized a greater quantity of actual outcomes than those students who achieved low negative MTAI scores.

There were seven categories of actual outcomes in which the low group reported greater numbers of responses than the high group. Of these, two contained a frequency difference of four or more. They were: (1) "see what teachers are really like," and (2) "principal's authority and relations with staff".

The high MTAI group reported greater numbers of actual outcomes in each of sixteen of the twenty-four categories listed in Table XV. A difference in frequency of five or more was tabulated for the following categories:

TABLE XV

VERBALIZED ACTUAL OUTCOMES OF THE HIGH AND LOW SCORERS ON THE MTAI

Actual Outcomes (post-test)	High MTAI		Low MTAI	
	frequency	percentage	frequency	percentage
Techniques of teaching	42	20.19	33	20.24
Behavior, discipline	24	11.54	18	11.04
Knowledge of teacher's role	21	10.10	12	7.36
Guidance in learning how to teach	5	2.40	4	2.45
Laboratory organization, operation, management	7	3.37	7	4.29
Professional relations with staff and community	11	5.29	8	4.91
Relations with students and knowledge of them	14	6.73	10	6.13
Long-range planning, course development	10	4.81	4	2.45
Subject matter knowledge, technical skills	6	2.88	4	2.45
*Lesson planning	4	1.92	6	3.68
Knowledge of school, curriculum, organization	4	1.92	2	1.23
Support and acceptance	2	.96	0	.00
*Audio-visual and use of teaching devices	5	2.40	6	3.63
Constructive criticism	13	6.25	9	5.52
Honest appraisal of progress and ability	10	4.81	5	3.07
Confidence	4	1.92	5	3.07
Evaluation of students	6	2.88	2	1.23
Educational philosophy, professional attitude	4	1.82	5	3.07

*see footnote, page 73, Chapter IV.

TABLE XV (Continued)

VERBALIZED ACTUAL OUTCOMES OF THE HIGH AND LOW SCORERS ON THE MTAI

Actual Outcomes (post-test)	High MTAI		Low MTAI	
	frequency	percentage	frequency	percentage
Learn about administration of the school	2	.96	1	.61
Critical self-analysis	5	2.40	3	1.84
See what teachers are really like	1	.48	6	3.68
Attitude toward teaching	5	2.40	7	4.29
Principal's authority and relations with staff	1	.48	5	3.07
Importance and significance of industrial arts	2	.96	1	.61

- a) techniques of teaching
- b) behavior, discipline
- c) guidance in learning how to teach
- d) long-range planning, course development
- e) honest appraisal of progress and ability

It seemed, from the data presented concerning the actual outcomes reported by those students with high positive MTAI scores, that the student teaching experience is more meaningful for them than for those with low negative attitude scores. The frequency of the actual outcomes verbalized by the high group was consistently higher than that reported by the low group.

3. Comparison of expected outcomes of
all students with those of high
and low MTAI scorers

Table XVI, pages 160 and 161, contains data which shows the percentage of student responses to each of the categories of expected outcomes as they were developed in Chapter IV. Included were listings of percentages for each of the following groups of students: (1) all students (104), (2) all high positive MTAI scorers (22), and (3) all low negative MTAI scorers (22).

Significant information revealed by comparing these percentages was included in the following list:

1. Students with high scores on the MTAI indicated fewer expectations than all of the students, or low scorers, concerning: "behavior, discipline; laboratory organization,

TABLE XVI

COMPARISON OF EXPECTED OUTCOMES AMONG ALL STUDENTS AND THOSE
WITH HIGH POSITIVE AND LOW NEGATIVE MTAI SCORES

Expected Outcomes	All Students percentage	High MTAI percentage	Low MTAI percentage
Techniques of teaching	17.77	16.51	17.04
Behavior, discipline	10.30	7.80	11.21
Knowledge of teacher's role	9.84	10.10	8.97
Guidance in learning how to teach	8.56	4.59	4.04
Knowledge of school, curriculum, organization	6.92	5.05	5.83
Laboratory organization, operation, management	4.37	2.75	4.48
Constructive criticism	4.28	5.96	4.04
Relations with students, knowledge of them	4.10	6.42	6.28
Honest appraisal of progress and ability	4.01	5.50	5.83
Subject matter knowledge, technical skills	3.91	4.13	3.59
Professional relations with staff and community	3.55	4.13	4.93
Long-range planning, course development	3.37	3.21	2.24
Attitudes toward teaching	2.27	2.29	3.14
Critical self-analysis	2.00	5.05	1.79
Principal's authority and relations with staff and students	1.91	.92	2.69
Evaluation of students	1.82	.00	1.79

TABLE XVI (Continued)

COMPARISON OF EXPECTED OUTCOMES AMONG ALL STUDENTS AND THOSE
WITH HIGH POSITIVE AND LOW NEGATIVE MTAI SCORES

Expected Outcomes	All Students percentage	High MTAI percentage	Low MTAI percentage
*Lesson planning	1.82	1.83	1.79
Learn about administration	1.82	2.29	1.35
Support and acceptance	1.73	4.13	1.79
Educational philosophy, professional attitude	1.27	.92	.45
*Audio-visual and use of teaching devices	1.18	1.83	1.35
Confidence	1.09	1.83	1.79
See what teachers are really like	.72	1.38	2.69
Praise and encouragement	.63	.00	.00
Help me mature	.27	.00	.00
How to improve industrial arts	.18	.00	.00
Observation of good teaching	.09	1.38	.90
Help with case study	.09	.00	.00
Importance and significance of industrial arts	.00	.00	.00

*see footnote, page 73, Chapter IV.

operation, management; and evaluation of students".

2. The high MTAI scorers indicated more expected outcomes than the other groups concerning: "critical self-analysis; support and acceptance; and observation of good teaching".

3. The low MTAI scorers indicated a greater number of expectations than the total student group in the category of, "relations with students, knowledge of them".

4. "Guidance in learning how to teach, and educational philosophy, professional attitude" were two categories for which the low MTAI scorers indicated fewer expected outcomes than the other groups.

Further examination of Table XVI revealed that, for the percentages given in each of the categories of expected outcomes listed, those other than the ones mentioned above were similar.

4. Comparison of actual outcomes of
all students with those of high
and low MTAI scorers

The list of actual outcomes which appears in Table XVII, pages 163 and 164, is identical to that developed in Chapter IV. The first column of percentages represent the portion of total actual outcomes verbalized by all of the students in the study. The second two columns, respectively, contain the percentages of total actual outcomes verbalized by the twenty-two students who achieved the highest positive MTAI scores and the twenty-two students who achieved the lowest negative MTAI scores.

TABLE XVII

COMPARISON OF ACTUAL OUTCOMES AMONG ALL STUDENTS AND THOSE
WITH HIGH POSITIVE AND LOW NEGATIVE MTAI SCORES

Actual Outcomes	All Students percentage	High MTAI percentage	Low MTAI percentage
Techniques of teaching	17.69	20.19	20.24
Behavior, discipline	12.81	11.54	11.04
Knowledge of teacher's role	9.98	10.10	7.36
Guidance in learning how to teach	5.53	2.40	2.45
Laboratory organization, operation, management	5.21	3.37	4.29
Professional relations with staff and community	4.99	5.29	4.91
Relations with students and knowledge of them	4.77	6.73	6.13
Long-range planning, course development	3.80	4.81	2.45
Subject matter knowledge, technical skills	3.69	2.88	2.45
*Lesson planning	3.69	1.92	3.68
Knowledge of school, curriculum, organization	3.47	1.92	1.23
Support and acceptance	3.25	.96	.00
*Audio-visual and use of teaching devices	2.82	2.40	3.68
Constructive criticism	2.60	6.25	5.52
Honest appraisal of progress and ability	2.60	4.81	3.07
Confidence	2.06	1.92	3.07

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*see footnote, page 73, Chapter IV.

TABLE XVII (Continued)

COMPARISON OF ACTUAL OUTCOMES AMONG ALL STUDENTS AND THOSE
WITH HIGH POSITIVE AND LOW NEGATIVE MTAI SCORES

Actual Outcomes	All Students percentage	High MTAI percentage	Low MTAI percentage
Evaluation of students	1.62	2.88	1.23
Educational philosophy, professional attitude	1.62	1.82	3.07
Learn about administration of the school	1.41	.96	.61
Critical self-analysis	1.30	2.40	1.84
See what teachers are really like	1.19	.48	3.68
Attitude toward teaching	1.08	2.40	4.29
Praise and encouragement	.97	.00	.00
Help me mature	.65	.00	.00
Principal's authority and relations with staff	.65	.48	3.07
Observation of good teaching	.21	.00	.00
Importance and significance of industrial arts	.21	.96	.61

Examination of the table revealed the following differences:

1. Both high and low MTAI groups verbalized a greater percentage of actual outcomes in the category of "teaching techniques" than the total group of students. The increase in percentage amounted to 2.50 and 2.55, respectively.

2. "Relations with students and knowledge of them," was a category for which both the high and low MTAI groups verbalized a greater percentage of actual outcomes than the total group. Similar percentages were reported for both the high and low MTAI groups.

3. The high and low MTAI groups reported greater percentages of actual outcomes than the total group for the category "constructive criticism". The high MTAI group verbalized a greater number of outcomes for this category than the low MTAI group.

4. The high MTAI group reported a percentage of actual outcomes almost double that reported by the total group, related to "honest appraisal of my progress and ability". The percentage for the low MTAI group was slightly higher than that for the total group.

5. "Attitude toward teaching" received 1.08 per cent of the responses of the total group; 2.40 per cent of the high MTAI group, and 4.29 per cent of the low MTAI group. Students with the lowest MTAI scores verbalized the greatest number of actual outcomes in this area, almost four times as many as reported by the total group.

6. Both the high and low MTAI groups reported a lesser percentage of actual outcomes related to "guidance in learning how to teach".

7. "Lesson planning" was a category of outcomes for which approximately equal percentages were reported by the total student group, as well as the low MTAI group. The high MTAI group reported the lowest percentage.

8. "Knowledge of school, curriculum, organization of" received the highest percentage of response from the total group of students.

9. A relatively large difference was reported between the total group of students and the MTAI groups, for the category, "support and acceptance". The total group verbalized 3.25 per cent of their responses in this category, the high MTAI group reported .96 per cent, and the low MTAI group had no verbalized outcomes related to this category.

10. The low MTAI group verbalized the greatest percentage of outcomes for "see what teachers are really like". Only .48 per cent of verbalized outcomes for the high MTAI group were related to this category, 1.19 per cent for all students, and 3.68 for the low MTAI group.

11. The low MTAI group reported the highest percentage of actual outcomes relating to "principal's authority and relations with staff".

The preceding statements indicated a greater variation between the three groups, with respect to verbalized actual outcomes, than was evident in the prior analysis related to expected outcomes.

B. Stated Intent to Teach and Outcomes

The pre-test questionnaire required the student to indicate his plans concerning intent to teach industrial arts. Each student was asked: "What are your present plans as they pertain to the teaching of industrial arts? (Please check one of the following.)

____ Plan to teach industrial arts, ____ Do not plan to teach industrial arts, ____ Undecided."

Analysis of student responses to this question revealed the following data:

	<u>Number of Students</u>	
	<u>Pre-Test</u>	<u>Post-Test</u>
Plan to teach Industrial Arts	86	91
Do not plan to teach Ind. Arts	13	11
Undecided	5	2
Totals	104	104

Of the 104 students in the study, thirteen (12.50 per cent) indicated on the pre-test that they did not plan to teach industrial arts. Five (4.8 per cent) indicated that they were undecided about teaching, and eighty-six (82.7 per cent) said they planned to teach.

The data under the post-test heading in the listing indicated the results of the post-test response to the same question. The number of students who planned to teach increased, the number of those who did not plan to teach or were undecided, decreased. A number of changes which did not appear in the preceding listing are contained in the following:

1. Of thirteen students who did not plan to teach at pre-test, five indicated they planned to teach on the post-test.

2. Of five students who were undecided about teaching at pre-test, four indicated they planned to teach on the post-test.

3. Of the eighty-six students who planned to teach on the pre-test, three did not plan to teach and one was undecided on the post-test.

An accurate trend toward planning to teach appeared in the listing for those who were undecided or did not plan to teach at pre-test. There were more changes toward a decision to teach than away from it.

Table XVIII, pages 169 and 170, contains percentages which were derived from two sources: (1) the response of the total group of students in the study, and (2) the responses of the eighteen students who indicated on the pre-test that they did not intend to teach or were undecided. The percentages for the former group were provided in Tables I and II of Chapter IV.

TABLE XVIII

COMPARISON OF EXPECTED AND ACTUAL OUTCOMES AMONG ALL STUDENTS AND
THOSE WHO DO NOT PLAN TO TEACH OR ARE UNDECIDED

Expected and Actual Outcomes	Group I All Students		Group II 18 students who do not intend to teach or are undecided	
	Expected Outcomes Percentage	Actual Outcomes Percentage	Expected Outcomes Percentage	Actual Outcomes Percentage
Techniques of teaching	17.77	17.69	16.23	18.18
Behavior, discipline	10.30	12.81	8.90	12.99
Knowledge of school, curriculum, organization	6.82	3.47	7.85	1.30
Laboratory organization, operation, management	4.37	5.21	6.28	4.55
Relations with students, knowledge of them	4.10	4.77	5.76	7.14
Subject matter knowledge, technical skills	3.91	3.69	5.14	3.25
Guidance in learning how to teach	8.56	5.53	4.71	5.84
Knowledge of teacher's role	9.84	9.98	4.19	4.55
Relations with staff and community	1.91	4.99	4.19	5.19
Critical self-analysis	2.00	1.30	3.66	1.30
Constructive criticism	4.28	2.60	3.14	2.60
Honest appraisal of progress and ability	4.01	2.60	3.14	1.30
Evaluation of students	1.82	1.62	2.62	.00

TABLE XVIII (Continued)

COMPARISON OF EXPECTED AND ACTUAL OUTCOMES AMONG ALL STUDENTS AND
THOSE WHO DO NOT PLAN TO TEACH OR ARE UNDECIDED

Expected and Actual Outcomes	Group I All Students		Group II 18 students who do not intend to teach or are undecided	
	Expected Outcomes Percentage	Actual Outcomes Percentage	Expected Outcomes Percentage	Actual Outcomes Percentage
*Lesson planning	1.82	3.69	2.62	3.25
Principal's authority and relations with staff and students	1.91	.65	2.62	1.95
Learn about administration	1.82	1.41	2.26	.00
Support and acceptance	1.73	3.25	2.62	5.84
Attitude toward teaching	2.27	1.08	2.62	3.90
Planning for teaching, course development	3.37	3.80	2.09	2.60
Confidence	1.09	2.06	2.09	2.60
See what teachers are really like	.72	1.19	1.57	1.95
Praise and encouragement	.63	.97	1.05	.00
*Audio-visual and use of teaching devices	1.18	2.82	1.05	3.25
Relations with supervising teacher	.00	.00	.52	.65
Educational philosophy, professional attitude	1.27	1.62	.52	.65
Importance and significance of industrial arts	.00	.21	.00	1.30

*see footnote, page 73, Chapter IV.

1. Comparisons of verbalized expected
outcomes of total group of students
and those who did not plan to teach
or were undecided

There were sixteen categories for which the eighteen students who were undecided, or who did not plan to teach (hereafter referred to as Group II) indicated a greater percentage of expected outcomes than did the total group of students in the study (hereafter referred to as Group I). Five categories in which an increase of one per cent or greater was recorded were:

1. "Relations with staff and community," 1.91 per cent of the expected outcomes of Group I (total students in the study) were related to this area, Group II verbalized 4.19 per cent, a difference of plus 2.28 per cent. Students who were undecided or who did not plan to teach showed more concern about this category than the total group did.

2. "Laboratory organization, operation, management," the percentage of total expected outcomes verbalized by Group I was 4.37 per cent, Group II reported 6.28 per cent, an increase of 1.91 per cent. Students who did not plan to teach or were undecided showed more concern in this area than the total group.

3. "Relations with students, knowledge of them, and critical self-analysis," received equal percentage increases of 1.66 per cent for Group II. Undecided students or those who did not intend to teach held greater expectations related to these categories than those students in Group I.

4. "Subject matter knowledge, technical skills," 3.91 per cent of the total verbalized expected outcomes for Group I were related to this category, 5.24 per cent was reported for Group II. Students who did not intend to teach or were undecided held more expectations in this area than did those students in Group I who intended to teach.

In addition to the outcomes included in the preceding analysis, eleven others showed an increase in percentages for Group II over Group I. In each of these categories, the increase represented less than one per cent and no attempt was made to analyze these differences.

Eight categories of expected outcomes were verbalized by Group I (all students) to a greater extent than by Group II (students who did not intend to teach or were undecided). Of these categories, six were recorded as having a difference greater than one per cent, and were reported in descending rank order:

1. "Knowledge of teacher's role," 984 per cent of the expected outcomes verbalized by Group I were related to this area, 4.19 per cent verbalized by Group II related to it, a difference of 5.65 per cent.

2. "Guidance in learning how to teach," 8.56 per cent of the expected outcomes verbalized by Group I were related to this area, 4.71 per cent were verbalized by Group II, a difference of 3.85 per cent. Students in Group I held the greatest number of expectations in this category.

3. "Techniques of teaching," 17.77 per cent of the expected outcomes verbalized by Group I were related to this category, 16.23 per cent were verbalized by Group II, a difference of 1.54 per cent.

4. "Behavior, discipline," 10.30 per cent of expected outcomes were verbalized in this area by Group II, 8.90 per cent by Group I, a difference of 1.40 per cent.

5. "Planning for teaching, course development," 3.37 per cent of the verbalized expected outcomes of Group I were in this area, 2.09 per cent of the expectations of Group II, a difference of 1.28 per cent.

6. "Constructive criticism," Group I verbalized 4.28 per cent of their outcomes relating to this area, Group II reported 3.16 per cent, a difference of 1.12 per cent.

There were two additional categories for which Group I verbalized a greater percentage of expected outcomes than did Group II. The percentage differences were less than one per cent and no attempt was made to analyze them. They were: (1) "audio-visual and use of teaching devices," and (2) "educational philosophy and professional attitude".

2. Comparisons of verbalized actual outcomes for Group I and Group II

Group II (students who did not intend to teach or were undecided), reported a higher percentage of actual outcomes for thirteen of the twenty-six categories listed in Table XVIII, pages 169 and 170, than did Group I (all students). The percentages contained in column four indicated

that there were eleven categories for which Group II reported a lower percentage than did Group I, and two categories for which equal percentages of expected outcomes were reported.

Of the thirteen categories for which Group II reported higher percentages than Group I, five revealed a difference greater than one per cent and were recorded. The remaining eight categories for which differences below one per cent existed were not analyzed.

1. "Relations with students, knowledge of them," 7.14 of the verbalized actual outcomes of Group II were in this area, 4.77 per cent of Group I, a difference of 2.37 per cent.

2. "Attitude toward teaching," 3.90 per cent of the verbalized actual outcomes held by Group II related to this area, Group I reported 1.08 per cent, a difference of 2.82 per cent.

3. "Support and acceptance," 5.84 per cent of the verbalized actual outcomes held by Group II were in this category, 3.25 per cent held by Group I, a difference of 2.59 per cent.

4. "Principal's authority and relations with staff and students," 1.95 per cent of the verbalized actual outcomes held by Group II were here, .65 reported by Group I, a difference of 1.30 per cent.

5. "Importance and significance of industrial arts," 1.30 per cent of actual outcomes held by Group II were reported in this category, .21 per cent by Group I, a difference of 1.09 per cent.

Eleven categories of actual outcomes were verbalized by Group I (all students) to a greater extent than they were by Group II (students who do not intend to teach or are undecided). Six of these revealed a difference greater than one per cent. The remaining five, for which differences below one per cent existed, were not analyzed.

1. "Knowledge of teacher's role," 9.98 per cent of the total actual outcomes of Group I were in this area, 4.55 per cent of those held by Group II, a difference of 5.43 per cent.

2. "Knowledge of school, curriculum, organization," 3.47 per cent of total actual outcomes verbalized by Group I appeared here, 1.30 per cent of Group II, a difference of 2.17 per cent.

3. "Evaluation of students," 1.62 per cent of the actual outcomes verbalized by Group I were related to this area, none were verbalized by Group II.

4. "Learn about administration," 1.41 per cent of the actual outcomes verbalized by Group I were related to this area. None were reported by Group II.

5. "Honest appraisal of progress and ability," 2.60 per cent of total verbalized actual outcomes of Group I were in this category, 1.30 per cent of those verbalized by Group II, a difference of 1.30 per cent.

6. "Planning for teaching, course development," 3.80 per cent of the total verbalized actual outcomes of Group I were related to this area, 2.60 per cent for Group II, a difference of 1.20 per cent.

C. Summary

This chapter began by indicating the need to answer two specific questions: (1) Do students with high positive scores on the MTAI verbalize different expected and actual outcomes than students with low negative attitude scores? and (2) Do students who say they intend to teach industrial arts prior to student teaching possess different expected and actual outcomes than those who say they do not intend to teach?

The data revealed by the analysis conducted in this chapter dictated a qualified "yes" to both questions. Although all of the groups of student teachers, as determined by MTAI scores as well as stated intent to teach, verbalized similar expected and actual outcomes, differences existed and were summarized as follows.

1. Differences for high and low MTAI scores

A. Expected outcomes

Low negative scorers on the MTAI expressed a greater percentage of their total expected outcomes in the following areas:

- 1) behavior, discipline
- 2) laboratory organization, operation, management
- 3) principal's authority and relations with staff and students
- 4) evaluation of students

High positive scorers on the MTAI expressed a greater percentage of their total expected outcomes in the areas of:

- 1) constructive criticism
- 2) critical self-analysis
- 3) support and acceptance

B. Actual outcomes

Low negative scorers on the MTAI expressed a greater percentage of their total actual outcomes in the areas of:

- 1) see what teachers are really like
- 2) principal's authority and relations with staff and students

High positive scorers on the MTAI verbalized a greater percentage of their total actual outcomes in the areas of:

- 1) techniques of teaching
- 2) behavior, discipline
- 3) guidance in learning how to teach
- 4) long-range planning, course development
- 5) honest appraisal of progress and ability

2. Differences for students who intended to teach, and those who did not intend to teach, or were undecided

A. Expected outcomes

Those students who did not intend to teach, or were undecided, expressed a greater percentage of their total expected outcomes in the areas of:

- 1) relations with staff and community
- 2) laboratory organization, operation, management
- 3) relations with students, knowledge of them
- 4) critical self-analysis
- 5) subject matter knowledge, technical skills

Students who intended to teach expressed a greater percentage of their total expected outcomes in the areas of:

- 1) knowledge of teacher's role
- 2) guidance in learning how to teach
- 3) techniques of teaching
- 4) behavior, discipline
- 5) planning for teaching, course development
- 6) constructive criticism

B. Actual outcomes

Students who did not intend to teach, or were undecided, expressed a greater percentage of their total actual outcomes in the areas of:

- 1) relations with students, knowledge of them
- 2) attitude toward teaching
- 3) support and acceptance
- 4) principal's authority and relations with staff and students
- 5) importance and significance of industrial arts

Students who intended to teach expressed a greater percentage of their total actual outcomes in the areas of:

- 1) knowledge of teacher's role
- 2) knowledge of school, curriculum,
organization
- 3) evaluation of students
- 4) honest appraisal of progress and
ability
- 5) learn about administration
- 6) planning for teaching, course
development

CHAPTER VII

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Recapitulation of the Problem

The specific problem upon which this study was based revolved around answers to four questions:

1. What were the expected and actual outcomes of student teachers as stated by them just prior to and immediately following one student teaching experience?
 - a) how did expected verbalized outcomes compare with actual verbalized outcomes?
 - b) how did the verbalized outcomes (expected and actual) compare with objectives?
2. Did student teachers receive the amount and kinds of help and guidance they expected from each of the following? 1) Supervising Teacher, 2) College Supervisor, 3) Principal, 4) Other Teachers.
 - a) what were the verbalized expected and actual outcomes for each?
 - b) were actual outcomes the same as expected outcomes from each? (greater than, equal to, lesser than, or different from)

3. Do students with high positive MTAI scores verbalize different expected and actual outcomes than students with low negative attitude scores?

4. Do students who say they intend to teach prior to student teaching possess different expected and actual outcomes than those who say they do not intend to teach?

a) what per cent said they intend to teach pre? post?

b) what changes in intent occurred during student teaching in either direction?

The population upon which the study was based included 104 student teachers of the Industrial Arts Education Division at the State University of New York, College at Buffalo. The findings and conclusions related to a specific program.

The four basic assumptions formulated prior to beginning the study were:

1. Industrial arts students at the State University of New York, College at Buffalo, who were about to begin their student teaching experience, were able to verbalize the expectations which they held for it. As they projected ahead and thought about specific persons with whom they would associate, they were able to list specific learnings which they hoped would accrue to them.

2. Industrial Arts students at the State University of New York, College at Buffalo, who had just completed a student teaching assignment, were able to verbalize the satisfactions which they gained from it. As they reflected back

and thought about specific persons with whom they had associated, they were able to list specific learnings which had accrued to them through these associations.

3. An analysis of student's verbalized expectations and satisfactions was a useful method of determining factors relative to improvement of existing conditions within a student teaching program.

4. The existing student teaching program in the Industrial Arts Education Division at the State University of New York, College at Buffalo could be improved and made more meaningful through effective utilization of the findings of the present study.

Two questionnaire forms were developed and used to gather data for the study. The pre-test instrument was designed to elicit the expectations held by student teachers of the personnel with whom they would associate during student teaching. The post-test form was designed to elicit satisfactions held by student teachers from the personnel with whom they had associated.

The instruments were tested by administering them to forty-six first-quarter student teachers in the Industrial Arts Education Division of the State University of New York, College at Buffalo. Revisions were made, and an additional section containing structured response items was added. The Minnesota Teacher Attitude Inventory was selected as the

instrument to be used for establishing categories of student teachers to be used in a comparison of attitudes and outcomes.

The second, third, and fourth quarter student teachers comprised the population about which the study revolved. One hundred and twelve students were in the original sample. Due to several factors, among them illness, failure to complete the student teaching assignment, failure to complete both pre and post-test forms, only one hundred and four student teachers were used in the study.

The pre-test questionnaire, Form A, and the MTAI were administered to each group of student teachers at a seminar session held on the day preceding their first day of student teaching. Form B (post-test) was administered at a similar seminar on the day after their last day of student teaching. Information was given concerning the nature of the study, and assurances provided concerning professional treatment of the data.

Responses to open-end questions from the questionnaire forms were transferred to a combined information sheet to facilitate handling of the data. Categorical and quantified information was inserted on Royal McBee Keysort Cards, so that a simplified procedure for referral to appropriate combined information sheets would be available.

A chronological presentation was used to summarize the major findings of the study. The questions, as originally

stated, are herewith presented, followed by the answers deduced from an analysis of the data.

I. What are the expected and actual outcomes of student teachers as stated by them just prior to and immediately following one student teaching experience?

A. Expected outcomes

1. There were 1079 specific expected outcomes verbalized by the students in this study, these were assimilated into twenty-eight categories.
2. Almost 75 per cent (74.06 per cent) of expected outcomes were related to the following ten specific categories which are presented in descending rank order.
 - 1) techniques of teaching
 - 2) behavior, discipline
 - 3) knowledge of teacher's role
 - 4) guidance in learning how to teach
 - 5) knowledge of school curriculum, organization
 - 6) laboratory organization, operation, management
 - 7) constructive criticism
 - 8) relations with students, knowledge of them
 - 9) honest appraisal of progress and ability
 - 10) subject matter knowledge, technical skills

B. Actual outcomes

1. There were 921 specific actual outcomes verbalized by the students in this study, these were assimilated into twenty-seven categories.
2. Slightly under 75 per cent (72.16 per cent) of actual outcomes were related to the following ten specific categories which are presented in descending rank order.
 - 1) techniques of teaching
 - 2) behavior, discipline
 - 3) knowledge of teacher's role
 - 4) guidance in learning how to teach
 - 5) laboratory organization, operation, management
 - 6) professional relations with staff and community
 - 7) relations with students and knowledge of them
 - 8) long-range planning, course development
 - 9) subject matter knowledge, technical skills
 - 10) lesson planning

1a. How do expected verbalized outcomes compare with actual verbalized outcomes?

1. A sizeable difference existed in the number of expected and actual outcomes verbalized by the students. There were 1097 expected and 921 actual outcomes for a difference of 176. Students did not verbalize as many actual outcomes as expected outcomes.
2. "Techniques of teaching" was an area for which an equal percentage of expected and actual outcomes were verbalized by the students.
3. Students reported having received more help and guidance in the area of "behavior and discipline" than they had expected.
4. "Knowledge of teacher's role" was reported as having maintained an almost equal percentage of student's responses in both expected and actual outcomes.
5. Considerably fewer actual outcomes were verbalized by the students for "guidance in learning how to teach" than were reported as expected outcomes.
6. More help and guidance was provided than the students had expected in the area of "laboratory organization, operation, and management".
7. Students did not receive as much help and guidance as they had expected in the area of "constructive criticism".
8. Slightly more actual outcomes were reported for the area "relations with students, knowledge of them" than were verbalized as expected outcomes.
9. Students did not receive as much help and guidance as they expected in the area of "honest appraisal of progress and ability".
10. "Subject matter knowledge, technical skills" received almost as much emphasis in actual outcomes as was reported for expected outcomes.

1b. How do verbalized outcomes (expected and actual) compare with objectives?

- A. The stated objectives of the student teaching program at the State University of New York, College

at Buffalo, were placed in rank order according to percentages of related expected and actual outcomes as verbalized by the subjects of the study. The results were as follows:

1. The objective "Developing skill in the use of effective techniques for teaching and evaluation" ranked highest in both expected and actual outcomes. Almost 30 per cent (29.88) of the total responses in expected outcomes and slightly more than 25 per cent (25.81) of the actual outcomes were related to this objective.
2. "Becoming acquainted with the various responsibilities of the teacher in the public schools to which he is assigned" ranked second in both expected and actual outcomes. There were 2.85 per cent more verbalized actual outcomes related to this area than there were verbalized expected outcomes. The percentage of total expected outcomes related to this objective was 18.48 per cent.
3. "Increase understanding of child growth and development" was the objective which ranked third. Actual outcomes were reported as higher than expected outcomes with a difference of plus 3.08 per cent. The percentage of total expected outcomes related to this objective was 14.49 per cent.
4. "Becoming acquainted with the role and operation of the school to which he is assigned" was ranked fourth in both expected and actual outcomes. Slightly less (minus 1.44 per cent) actual outcomes responses were recorded than expected outcome responses. More than 10 per cent (10.65) of the total expected outcomes were related to this objective.
5. "Gaining a knowledge of appropriate methods and materials of teaching" was ranked fifth in the distribution of objectives with 9.83 per cent of total expected outcomes and 8.56 per cent of the total actual outcomes.

6. "Assuming the various responsibilities of a regular classroom teacher" ranked sixth among the nine objectives with 6.09 per cent of the total expected outcomes and 5.53 per cent of total actual outcomes related to it.
7. "Extending knowledge of the subject matter in the areas taught" ranked seventh. The tabulated responses show that 3.91 per cent of the expected outcomes and 5.52 per cent of the actual outcomes were reported in this category. There were 1.61 per cent more actual outcomes listed than expected outcomes.
8. "Further developing a philosophy of education" was ranked eighth on the basis of the number of responses recorded by students for both expected and actual outcomes. Only 3.54 per cent of the total expected outcome responses were recorded in this category and 3.69 per cent of total actual outcome responses.
9. "Developing an experimental and creative attitude" holds the lowest rank (ninth). Only 3.00 per cent and 2.70 per cent respectively, of total expected and actual outcomes were related to this area.
10. Almost 63 per cent of the total expected outcomes and almost 65 per cent of total actual outcomes were related to the objectives of "skill in the effective techniques of teaching and evaluation; responsibilities of the teacher in the public schools; and understanding of child growth and development".
11. Approximately 26 per cent of the total expected and actual outcomes and approximately 23 per cent of total actual outcomes were related to the objectives of "become acquainted with the role of the school; knowledge of methods and materials of teaching; and assuming the responsibilities of a regular classroom teacher".
12. Approximately 10 per cent of the total expected outcomes and almost 12 per cent of total actual outcomes were related to the objectives of "extend knowledge of the subject matter area; further develop a philosophy of education; and develop an experimental and creative attitude".

II. Do student teachers receive the amount and kinds of help and guidance they expect from each of the following:

1) Supervising Teacher, 2) College Supervisor, 3) Principal, and 4) Other Teachers?

- a) what are the verbalized expected outcomes from each?
- b) what are the verbalized actual outcomes from each?
- c) are actual outcomes the same as expected outcomes from each? (greater than, equal to, lesser than, different from)

The percentages used in determining answers to the above questions denote the percentage of the total number of students who maintained similar expected and actual outcomes. They do not indicate a portion of total outcomes as was the case in the previous analysis.

IIa. Expected and Actual Outcomes Related to the Supervising Teacher

A. Expected outcomes from the supervising teacher

1. The top ten expected outcomes ranked in descending order were as follows: (figures in parenthesis indicate percentage of students who held similar outcomes)

1) techniques of teaching	(99.04)
2) behavior, discipline	(70.19)
3) laboratory organization	
operation, management	(46.15)
4) subject matter knowledge,	
technical skills	(39.42)
5) knowledge of teacher's role	(35.58)
6) relations with students,	
knowledge of them	(31.73)
7) guidance in learning how	
to teach	(29.81)
8) planning for teaching,	
course development	(28.85)
9) critical self-analysis	(17.31)
10) evaluation of students	(16.35)

2. Over 99 per cent of the students verbalized expected outcomes related to "techniques of teaching".
3. Over 70 per cent of the students verbalized expected outcomes related to "behavior, discipline".
4. Only two students (1.92 per cent) verbalized expected outcomes related to "how to improve industrial arts," only one student (.96 per cent) said he expected to "observe good teaching".

B. Actual outcomes from the supervising teacher

1. The top ten actual outcomes ranked in descending order were as follows: (figures in parenthesis indicate per cent of students who held similar outcomes)

1) techniques of teaching	(78.85)
2) behavior, discipline	(57.69)
3) knowledge of the teacher's role	(47.11)
4) laboratory organization, operation, management	(46.15)
5) subject matter knowledge, technical skills	(30.77)
6) relations with students, knowledge of them	(29.81)
7) planning for teaching, course development	(13.46)
8) evaluation of students	(13.46)
9) audio-visual and use of teaching materials	(13.46)
10) lesson planning	(10.58)
2. "Techniques of teaching; and behavior, discipline" were ranked first and second in actual outcomes by a considerably lower percentage of the group than that which reported expected outcomes for the same area.
3. Less than 50 per cent of the students verbalized actual outcomes in the areas of "knowledge of teacher's role; and laboratory organization, operation, management".

4. Less than one-third of the student teachers verbalized actual outcomes related to "subject matter knowledge, technical skills; relations with students, knowledge of them".
 5. Approximately one out of ten student teachers verbalized actual outcomes related to "lesson planning; and educational philosophy and professional attitudes".
 6. Two students reported actual outcomes concerning "having observed good teaching; and importance and significance of industrial arts".
- C. Actual outcomes compared with expected outcomes related to the supervising teacher.
1. There were 479 expected outcomes verbalized by the students for an average of 4.6 per student. Four hundred sixteen actual outcomes were recorded for an average of 4.0 per student. There were 63 fewer actual outcomes than expected outcomes.
 2. Many of the expected outcomes verbalized by the students were not adequately met by their supervising teachers, as indicated by the difference in the percentage of students who reported actual outcomes related to them. The following is a list of the expected outcomes and the percentage decrease in number of students reporting actual outcomes related to them.

1) techniques of teaching	(-20.19)
2) behavior, discipline	(-22.50)
3) subject matter knowledge, technical skills	(- 8.65)
4) guidance in learning how to teach	(-24.04)
5) planning for teaching, course development	(-15.29)
6) critical self-analysis	(- 8.66)
 3. There were seven areas in which the percentage of students reporting actual outcomes was greater than the percent who verbalized expected outcomes. The four which showed the highest percentage increase were:

1) knowledge of teacher's role	(+17.53)
2) audio-visual and use of teaching aids	(+ 5.77)

- 3) lesson planning (+ 2.89)
- 4) professional relations with staff and community (+ 1.92)
- 4. The only area in which the percentage of students reporting actual outcomes equalled the percentage reporting expected outcomes, was that of "laboratory organization, operation, management".
- 5. Only one student expressed an expectation related to "how to improve industrial arts," none of the students mentioned this as an actual outcome.

I Ib. Expected and Actual Outcomes Related to the College Supervisor

A. Expected outcomes from the college supervisor

- 1. The top ten expected outcomes in descending rank order were as follows: (figures in parenthesis indicate the percentage of students who held similar outcomes)
 - 1) techniques of teaching (52.88)
 - 2) constructive criticism (44.23)
 - 3) honest appraisal of my progress and ability (42.31)
 - 4) guidance in learning how to teach (27.88)
 - 5) behavior, discipline (14.42)
 - 6) lesson planning (11.54)
 - 7) relations with students (11.45)
 - 8) someone to confide in (8.65)
 - 9) relations with staff (7.69)
 - 10) organization for teaching, planning (6.73)
 - 11) praise and encouragement (6.73)
- 2. The major expectations held for the college supervisor, as indicated by the percentage of students who verbalized expected outcomes related to them, were: "techniques of teaching; constructive criticism; honest appraisal of my progress and ability; and guidance in learning how to teach".
- 3. Only 14.42 per cent of the students included "behavior, discipline" as an area of expected outcomes related to the college supervisor.

4. "Lesson planning; relations with students" were two categories for which only 11.54 per cent of the students verbalized expected outcomes.
5. A small percentage, (less than 6.00) of the students held expected outcomes from the college supervisor in relation to the following: (percentages indicated in parenthesis)
 - 1) knowledge of teacher's role (5.77)
 - 2) relations with supervising teacher (5.77)
 - 3) educational philosophy, professional attitude (4.81)
 - 4) confidence (4.81)
 - 5) audio-visual and use of teaching aids (4.81)
 - 6) techniques of student evaluation (3.85)

B. Actual outcomes from the college supervisor

1. The top ten actual outcomes ranked in descending order were as follows: (figures in parenthesis indicate the percentage of students who held similar outcomes)
 - 1) techniques of teaching (64.42)
 - 2) constructive criticism (24.04)
 - 3) honest appraisal of my progress and ability (23.08)
 - 4) lesson planning (22.11)
 - 5) organization for teaching, planning (20.19)
 - 6) behavior, discipline (14.42)
 - 7) guidance in learning how to teach (13.46)
 - 8) relations with students (13.46)
 - 9) audio-visual and teaching materials (11.54)
 - 10) confidence (10.58)
2. The greatest number of actual outcomes from the supervising teacher were verbalized for the category "techniques of teaching".
3. "Constructive criticism; honest appraisal of my progress and ability; lesson planning and organization for teaching, planning" were categories of actual outcomes reported by approximately equal numbers of the student teachers. Together with "techniques of teaching" these four

categories comprised the major portion of the students' verbalized actual outcomes from the college supervisor.

4. Three students (2.88 per cent) reported actual outcomes from the college supervisor concerning the category "someone to confide in". A like number and per cent reported outcomes related to "critical self-analysis".
5. Only two students (1.92 per cent) reported that the college supervisor had been "not much help at all" and the same number reported that he "didn't spend enough time with me".

C. Actual outcomes compared with expected outcomes from the college supervisor

1. There were a total of 285 expected outcomes verbalized by the students, for an average of 2.74 per student. There were 283 actual outcomes reported, for an average of 2.72 per student. The difference in numbers of expected and actual outcomes verbalized by students, in relation to the college supervisor, was minimal.
2. There were three categories in which expected outcomes exceeded actual outcomes. The categories and percentage decrease are listed below:

1) constructive criticism	(-20.21)
2) honest appraisal of my progress and ability	(-19.23)
3) guidance in learning how to teach	(-14.42)
3. There were several categories in which actual outcomes exceeded expected outcomes. The five which showed the highest per cent of increase and the percentage increase for each were:

1) techniques of teaching	(+11.54)
2) lesson planning	(+10.57)
3) organization for teaching, planning	(+13.46)
4) confidence	(+ 5.77)
5) audio-visual and teaching materials	(+ 6.73)

4. Verbalized actual outcomes related to "techniques of teaching" exceeded expected outcomes.
5. Approximately nine per cent of the students, expected the college supervisor to be "someone to confide in". Less than three per cent said that he was.
6. There were three categories in which actual outcome percentages were equal to expected outcome percentages. They were: "behavior and discipline" (14.42 per cent); "educational philosophy and professional attitude" (4.81 per cent); and "subject matter knowledge" (1.92 per cent).

IIc. Expected and Actual Outcomes Related to the Principal of the Cooperating School

A. Expected outcomes from the principal

1. The major expectations which students verbalized in relation to the principal, and the percentage of those holding similar expectations, were as follows:

1) school organization,	(53.85)
policies	
2) teaching profession, role	
of the teacher	(27.88)
3) relations with staff and	
students, authority	(20.19)
4) learn about administration,	
problems of	(19.23)
2. The major concern which students verbalized in relation to their expectations from the principal, was that of "school organization, policies". Over 50 per cent of them included this category on the questionnaire.
3. Almost 15 per cent (14.42 per cent) indicated that they "didn't expect much contact or much help" from the principal.
4. Only 11.54 per cent expressed concern about learning the "principal's views on industrial arts".

B. Actual outcomes from the principal

1. The major actual outcomes ranked in descending order were as follows: (figures in parenthesis

indicate the percentage of students who verbalized similar outcomes).

- 1) very little contact, very little help (52.88)
 - 2) advice about discipline, behavior (16.35)
 - 3) cooperation and guidance (13.46)
 - 4) learn about administration, problems of (12.50)
 - 5) school organization, policies of (11.54)
2. Over 50 per cent of the students reported that they had little or no contact with the principal, and had received little help from him.
 3. Less than 8 per cent of the students felt they received "constructive criticism, teaching hints" or any "support and acceptance" from the principal.
 4. Two students (1.92 per cent) reported having learned their "principal's views on industrial arts", one student (.96 per cent) reported that he had learned about "school records and information about pupils" from his principal.

C. Actual outcomes compared with expected outcomes from the principal

1. A total of 194 expected outcomes were tabulated for an average of 1.86 items per student. There were 148 actual outcomes, or 1.42 per student reported. There was a sizeable difference in numbers of actual outcomes compared with expected outcomes, which were verbalized by the students, in relation to the principal.
2. The top five expected outcomes for which a lower percentage of students reported actual outcomes and the percentage difference for each were as follows:
 - 1) school organization, policies (-42.34)
 - 2) the teaching profession, role of the teacher (-18.27)
 - 3) relations with staff and students, authority (-14.42)
 - 4) learn about administration, problems of (- 6.73)
 - 5) principal's views on industrial arts (- 9.62)

3. The categories and percentage of increase tabulated for actual outcomes over expected outcomes are listed below:
 - 1) don't expect much contact or much help (+38.46)
 - 2) cooperation and guidance (+ .96)
 - 3) discipline, behavior (+ 4.64)
 - 4) constructive criticism, teaching hints (+ 6.73)
4. More than half the students (53.88 per cent) hoped to learn about "school organization, policies" from the principal, 11.54 per cent of them reported having done so.
5. Only 14.42 per cent of the students held expected outcomes from the principal related to "don't expect much contact or much help," 52.88 per cent reported actual outcomes in this area.
6. More students reported having received help with "discipline, behavior," than had expected to. Less than one per cent (.96) reported expectations, 7.69 reported actual outcomes related to this area.
7. The category of "cooperation and guidance" received almost equal emphasis. There were 12.50 per cent of the students who held expected outcomes related to it and 13.46 per cent who reported actual outcomes in that category.

IIId. Expected and Actual Outcomes Related to Other Teachers on the Staff of the Cooperating School

A. Expected outcomes from other teachers

1. There were seven major areas in which students verbalized expected outcomes related to other teachers. These were listed below, along with percentages of students who verbalized similar expectations.
 - 1) techniques of teaching (35.58)
 - 2) teacher's role and the profession (31.73)
 - 3) attitude toward teachers (24.04)
 - 4) help in learning to become a teacher (20.19)

- 5) attitude toward industrial arts and its place in the curriculum (18.27)
 - 6) how to handle pupils, discipline (17.31)
 - 7) relations with other teachers, community (16.35)
2. Approximately one-third of the students held expectations of other teachers related to "techniques of teaching" and "the teacher's role and the profession".
 3. There were 11.54 per cent of the students who were concerned about "acceptance as a colleague," 12.50 per cent expected to receive "help with case study and knowledge of pupils".
 4. Only six students (5.77 per cent) said that they "don't expect much contact or much help" from other teachers.

B. Actual outcomes from other teachers

1. The major actual outcomes, ranked in descending order, were listed below: (figures in parenthesis indicate the percentage of students who verbalized similar outcomes)
 - 1) how to handle pupils, discipline (25.96)
 - 2) learn about extra-curricular activities (25.00)
 - 3) relationships with other teachers, community (24.04)
 - 4) teacher's role and the profession (23.08)
 - 5) acceptance as a colleague (22.11)
 - 6) techniques of teaching (19.23)
 - 7) help in learning to become a teacher (16.35)
 - 8) attitude toward industrial arts and its place in the curriculum (12.50)
 - 9) school organization, policies, salaries (11.54)
 - 10) see what teachers are really like (10.55)
 - 11) attitude toward teaching (9.61)

2. Almost equal numbers of students reported actual outcomes from other teachers related to the first five categories in the previous listing.
3. The categories of "attitude toward industrial arts; school organization, policies; see what teachers are really like; and attitude toward teaching;" received almost equal emphasis as satisfactions verbalized by the students in the study.
4. There were 14.42 per cent of the students who reported that they "did not expect much contact or much help" from other teachers.

C. Actual outcomes compared with expected outcomes from other teachers

1. There was a total of 225 expected outcomes verbalized by the students for an average of 2.16 per student. Two hundred thirty-one actual outcomes, for an average of 2.22 per student, were reported. More actual outcomes than expected outcomes from other teachers were reported by the students.
2. The top six expected outcomes, for which a lower percentage of students reported actual outcomes, and the percentage difference for each were:

1) techniques of teaching	(-16.35)
2) the teacher's role and the profession	(- 8.65)
3) attitude toward teaching	(-14.43)
4) help in learning to become a teacher	(- 3.84)
5) attitude toward industrial arts and its place in the curriculum	(- 5.77)
6) help with case study, knowledge of pupils	(- 4.81)
3. The categories and percentages of increase, tabulated for actual outcomes over expected outcomes, were:

1) how to handle pupils, discipline	(+ 8.65)
2) relations with other teachers, community	(+ 7.69)
3) acceptance as a colleague	(+10.57)

- 4) learn about extra-curricular activities (+18.27)
 - 5) don't expect much contact or much help (+ 8.65)
 - 6) school organization, policies, salaries (+ 2.89)
 - 7) see what teachers are really like (+ 2.89)
4. Primary expected outcomes from other teachers were related to the three major areas of: (1) "techniques of teaching; (2) teacher's role and the profession; and (3) attitude toward teaching".
5. Primary actual outcomes from other teachers were related to three different major areas: (1) "how to handle pupils, discipline; (2) learn about extra-curricular activities; and (3) relations with other teachers and community".

III. Do students with high positive MTAI scores verbalize different expected and actual outcomes than students with low negative MTAI scores?

A. Expected outcomes

1. Students who achieved high positive scores on the MTAI prior to student teaching, verbalized a greater number of expected outcomes related to the areas of: (1) "constructive criticism; (2) critical self-analysis; and (3) support and acceptance," than did the students who achieved low negative scores.
2. Students who achieved low negative scores on the MTAI prior to student teaching verbalized a greater number of expected outcomes related to the areas of: (1) "behavior, discipline; (2) laboratory organization; (3) principal's authority and relations with staff and students; and (4) evaluation of students," than did those students who achieved high positive attitude scores.
3. The high MTAI group verbalized a total of 218 expected outcomes, the low MTAI group verbalized a total of 223 expected outcomes. There was very little difference in the number of expected outcomes verbalized by each of the two groups.

B. Actual outcomes

1. Students who achieved high positive MTAI scores prior to student teaching verbalized 208 actual outcomes. Students who achieved low negative MTAI scores verbalized 163 actual outcomes.
2. The high MTAI group reported greater numbers of actual outcomes in sixteen of twenty-four categories. A difference in frequency of five or more, was noted for the following:
 - 1) techniques of teaching
 - 2) behavior, discipline
 - 3) guidance in learning how to teach
 - 4) long-range planning, course development
 - 5) honest appraisal of progress and ability
3. The low MTAI group reported greater numbers of actual outcomes in seven of twenty-four categories. A difference in frequency of four or more was noted for two categories:
 - 1) see what teachers are really like
 - 2) principal's authority and relations with staff

IV. Do students who say they intend to teach prior to student teaching possess different expected and actual outcomes than those who say they do not intend to teach?

- a) what percentage say they intend to teach pre? post?
- b) what changes in intent occur during student teaching in either direction?

Answers to the sub-questions (a and b) of the above were presented in the following listing:

	<u>Number and Per Cent of Students</u>			
	<u>Pre-Test</u>		<u>Post-Test</u>	
	<u>No.</u>	<u>Per Cent</u>	<u>No.</u>	<u>Per Cent</u>
Plan to teach industrial arts	86	82.7	91	87.5
Do not plan to teach industrial arts	13	12.5	11	10.6
Undecided	5	4.8	2	1.9
Totals	104	100.0	104	100.0

The percentage of students who planned to teach increased from 82.7 per cent at pre-test to 87.5 per cent at post-test. The percentage who did not plan to teach decreased from 12.5 per cent at pre-test to 10.6 per cent at post-test, and those who were undecided decreased from 4.8 per cent at pre-test to 1.9 per cent at post-test.

A number of changes were reported on the post-test, which did not appear in the preceding table. They were as follows:

1. Of 13 students who did not plan to teach at pre-test, five indicated they planned to teach on the post-test, eight did not plan to teach.
2. Of five students who were undecided about teaching at pre-test, four indicated they planned to teach on the post-test, one remained undecided.
3. Of the eighty-six students who planned to teach on the pretest, one became undecided and three indicated on the post-test that they did not plan to teach.
4. The preceding data indicates a trend toward planning to teach, for those who were undecided or who did not plan to teach at pre-test. There were more changes in the direction toward a decision to teach than there were away from it.

The answer provided by the data in this study for the major portion of Question IV is included in the following listing:

- a. Expected outcomes and percentage increase, of students who did not intend to teach, over the group of students who did intend to teach.

Students who did not intend to teach, or were undecided, expressed a greater percentage of their total expected

outcomes in the following areas: (percentage differences in parenthesis)

- | | |
|---|---------|
| 1) relations with staff and community | (+2.28) |
| 2) laboratory organization, operation, management | (+1.91) |
| 3) relations with students, knowledge of them | (+1.66) |
| 4) critical self-analysis | (+1.66) |
| 5) subject matter knowledge, technical skills | (+1.33) |

Students who did intend to teach expressed a greater percentage of their total expected outcomes in the following areas: (percentage differences in parenthesis)

- | | |
|--|---------|
| 1) knowledge of the teacher's role | (+5.65) |
| 2) guidance in learning how to teach | (+3.85) |
| 3) techniques of teaching | (+1.54) |
| 4) behavior, discipline | (+1.40) |
| 5) planning for teaching, course development | (+1.28) |
| 6) constructive criticism | (+1.12) |

- b. Actual outcomes and percentage increase of students who did not intend to teach, over the group of students who did intend to teach.

Students who did not intend to teach, or were undecided, expressed a greater percentage of their total actual outcomes in the following areas: (percentage differences in parenthesis)

- | | |
|---|---------|
| 1) relations with students, knowledge of them | (+2.37) |
| 2) attitude toward teaching | (+2.82) |
| 3) support and acceptance | (+2.59) |
| 4) principal's authority and relations with staff and community | (+1.30) |
| 5. importance and significance of industrial arts | (+1.09) |

The Students who did intend to teach expressed a greater percentage of their total actual outcomes in the following areas:

- | | |
|---|---------|
| 1) knowledge of teacher's role | (+5.43) |
| 2) knowledge of school,
curriculum, organization | (+2.17) |
| 3) evaluation of students | (+1.62) |
| 4) honest appraisal of
progress and ability | (+1.41) |
| 5) learn about administration | (+1.41) |
| 6) planning for teaching,
course development | (+1.20) |

There were differences in the expressed outcomes of the two groups. These differences were primarily in the per cent of total outcomes verbalized by the group of students in relation to each category rather than differences in outcome.

Conclusions

The following conclusions were drawn from the findings in this study:

1. The student teaching program of the Industrial Arts Education Division at the State University College at Buffalo, does not appear to be directed toward encouraging the development of an experimental and creative attitude on the part of student teachers.

2. Industrial arts education student teachers did not seem to acquire, during student teaching, a philosophy of education which would support some of the newer concepts regarding the teaching of industrial arts.

3. Prospective student teachers did not seem to be concerned regarding the dual responsibility of continuing to learn subject matter, as well as methodology, during student teaching. Upon completion of student teaching, the awareness of this responsibility seemed to be slightly more apparent.

4. Student teachers of the Industrial Arts Education Division indicated that the supervising teacher was the most influential person with whom they came in contact during student teaching.

5. It appeared, from the data, that the supervising teachers did not satisfy completely the expectations held for them by the student teachers.

6. The number of expected outcomes which students held for the college supervisor were considerably fewer than those held for the supervising teacher.

7. The college supervisor appeared to satisfy the expectations held for him by the student teachers. However, a need for college supervisors to provide more constructive criticism and honest appraisal of the students progress and ability was indicated.

8. Other teachers on the staffs of the cooperating schools had a significant role to play in relation to the student teachers. Students expected to learn almost as much from the other teachers as they did from the college supervisor.

9. Student teachers indicated that they expected less assistance from the principal than they did from any of the other personnel with whom they would be associated.

10. The principals of the cooperating schools did not appear to satisfy the minimal expectations which students held for them.

11. A close relationship seemed to exist between the major expected and actual outcomes verbalized by the students in regard to the supervising teacher and the college supervisor.

- a. the major expectations and satisfactions reported by the students in regard to the principal and other teachers were not closely related.

12. The number of actual outcomes verbalized by students with high positive Minnesota Teacher Attitude Scores (MTAI) was consistently higher than the number of actual outcomes reported by students with low negative MTAI scores. Use of the MTAI in the present study revealed it to be a predictor of the nature and number of expectations and satisfactions which students held in relation to the student teaching experience.

13. Intent to teach seemed to have an impact upon the major expectations and satisfactions which students verbalized. Those who intended to teach were more concerned and expressed a greater number of satisfactions in the areas of: "knowledge of the teacher's role, and guidance in learning how to teach," than did those who did not intend to teach.

- a. students who did not intend to teach seemed to be more concerned with "relations with staff and community, and laboratory organization, operation".

14. The students in this study were concerned primarily with the "how" aspect of teaching; secondarily with the "what" aspect; and thirdly with the "why" aspect.

Recommendations

In view of the findings in this study, the following recommendations, pertinent to the Industrial Arts Education Division of the State University of New York, College at Buffalo, are suggested:

1. Both college and cooperating school personnel involved in the student teaching program of the Industrial Arts Education Division at Buffalo should be apprised of the expectations and satisfactions which were held for them by the students in this study.
 - a. the present handbooks for student teachers and supervising teachers should be revised to include such information. This would serve as one method of disseminating information as well as delineating the full scope of the program.
 - b. special effort should be made to define the roles of the principal and other teachers on the staffs of the cooperating schools and to outline procedures which will insure future student teachers maximum benefit from their associations with them.

2. The present objectives of the student teaching program should be examined carefully and decisions made regarding the emphasis to be placed on each of them. Better balance is required and may be achieved through clarifying each objective by statements of expected behavior. Such statements would be helpful toward increasing the validity of evaluations made of student teachers.

3. A systematic procedure for the preparation of supervising teachers should be developed. Selection and retention should be based upon established criteria of a high order of excellence.

- a. regularly scheduled regional seminars should be held with all supervising teachers.
- b. under the sponsorship of the Industrial Arts Education Division, a graduate level seminar course related to supervision of student teachers should be made available and offered on a regularly scheduled basis.
- c. visible recognition of the work performed by the supervising teacher, in the form of certificates of merit, library privileges, and inclusion of their names in the college catalogs, should be given. The present practice of granting fee waivers for graduate courses should be continued. Serious consideration should be given the matter of financial remuneration for supervising teachers.

- d. increased utilization of college personnel, equipment, and facilities should be encouraged as a means of improving the quality of student teaching.

4. A pre-test for prospective student teachers which includes the Minnesota Teacher Attitude Inventory should be developed and used. The identification would be made of those students who need additional counseling, and arrangements could be made to provide them with it. The pre-test results might also be of benefit in helping to determine appropriate student teaching assignments.

- a. supervising teachers should be provided with appropriate data from these tests and instructed in the correct interpretation and use to be made of it.

5. The professional sequence courses, as well as the student teaching experience should include a greater emphasis upon the "why" and "what" aspects of industrial arts education and discontinue what appears to be, from the data in this study, an over-emphasis upon the "how" aspect.

- a. emphasis upon the "why" aspect could appropriately be incorporated in all of the technical subject matter areas as well.

6. Greater flexibility should be provided in the existing eighteen week student teaching program of the Industrial Arts Education Division at the State University of New York, College at Buffalo.

- a. provision should be made for those students who require greater or lesser exposure to the teaching situation.

7. College personnel should be encouraged to do research and experimentation related to the preparation of industrial arts teachers. The Industrial Arts Education Division at the State University of New York, College at Buffalo, should work toward the development of an atmosphere of permissiveness toward creativity in method and program. Encouragement and assistance should be provided as required.

8. A carefully designed evaluative study should be made of the total program of student teaching and the professional sequence courses of the Industrial Arts Education Division at Buffalo. A singular forward step toward improvement of the present program would be made if a concerted effort was extended, in an organized fashion, to evaluate thoroughly and objectively present practices and procedures.

- a. sufficient time, resources and personnel should be made available to assure performance of this task.

9. The administration of the MTAI should be utilized by other teacher preparation institutions for purposes of assisting students and college personnel to determine the relationship between student attitudes and their expectations and outcomes of student teaching.

10. Institutions engaged in the preparation of teachers can improve their student teaching programs through use of the techniques incorporated in this study. It is recommended that not only industrial arts education give consideration to the utilization of such an approach in evaluating their programs, but other areas as well.

Proposals for Further Study

The following proposals for further study are suggested:

1. A study should be made of the effect which satisfaction or dissatisfaction with the student teaching assignment has on the student's verbalized expectations and satisfactions from it.
2. An analysis should be made of the prospective student teacher's self-perception of adequacy of preparation and the actual outcomes which accrue to him during student teaching.
3. An attempt should be made to discover the amount of flexibility which can be incorporated into the existing eighteen-week program of student teaching of the Industrial Arts Education Division at the State University of New York, College at Buffalo.
4. A study should be made to determine the time arrangement for student teaching which is most advantageous.

A study of this nature at the State University of New York, College at Buffalo, would involve comparison of the split nine-week and the straight eighteen-week programs.

- a. the need for and frequency of student teacher seminars would be one of the factors requiring study.
- b. the need for and frequency of supervising teacher seminars would also need to be scrutinized.

5. A study should be made of the effectiveness of team teaching in the professional sequence courses as a means of improving the quality of student teaching.

- a. a comparative study of verbalized outcomes of an experimental and control group might indicate greater uniformity of expected outcomes for members of the experimental group.

6. A study of attitude change, brought about during student teaching, would be an appropriate research area.

7. A study should be made in order to ascertain procedures which might be used toward development of greater rapport with cooperating schools across the state, through the student teaching program.

- a. improvement of staff understanding of contemporary problems might be one of the goals.
- b. recruitment of students to the sponsoring college would be an important factor to consider.

- c. improvement and upgrading of programs of industrial arts education across the state would be a most significant goal.

APPENDICES

APPENDIX A

PRE-TEST QUESTIONNAIRE, FORM A

State University College
at Buffalo

Industrial Arts Education Division

Name _____ School _____
____ First 9 wks. experience Supervising Teacher _____
____ Second 9 wks. experience College Supervisor _____
____ First response to MTAI Type of Shop or
Activity _____
____ Third response to MTAI Grade Level _____
Date _____ I.A. 311 Instructor _____
I.A. 312 Instructor _____

Directions: This is an attempt to secure data which will enable us to improve the existing program of student teaching and cause it to be of the most value to students that it is possible for it to become. Your honest answers to the following questions are therefore solicited. Be assured that your responses will be strictly confidential and in no way will affect the judgement made of you by the college or public school supervisors of student teaching.

1. As you think about and plan for this student teaching experience, what do you hope to learn from the following individuals? (List as many things as you can think of - use the back of this form if necessary).

A. Supervising Teacher

..

B. College Supervisor

C. Principal

D. Students (pupils)

E. Other teachers on the staff

2. What are your present plans as they pertain to the teaching of Industrial Arts? (Please check one of the following)

☐ Plan to teach Ind. Arts ☐ Do not plan to teach I.A.
☐ Undecided

3. How do you feel about your preparation for the student teaching experience? Do you feel:

☐ Adequately prepared ☐ somewhat prepared
☐ unprepared

4. Considering what you know concerning the tasks you will face as a student teacher, please indicate the appropriate degree to which you feel prepared as concerns the following two areas:

A. Technical Skills: (hand & machine tool operation, knowledge of subject matter area, etc.)

☐ Adequately prepared ☐ somewhat prepared
☐ serious reservations

B. Teaching Skills: (lesson planning, demonstrating, teaching techniques.)

☐ Adequately prepared ☐ somewhat prepared
☐ serious reservations

5. What is your reaction to the student teaching situation to which you have been assigned? (Please check the appropriate box)

A. The School:

☐ well satisfied ☐ somewhat satisfied
☐ dissatisfied

B. The subject matter area:

☐ well satisfied ☐ somewhat satisfied
☐ dissatisfied

C. The grade level:

___ well satisfied ___ somewhat satisfied
 ___ dissatisfied

6. Following is a listing of items to which you are to respond by placing a check (✓) in the appropriate column. You are asked to project ahead into the student teaching experience and respond to each item on the basis of what you expect to find.

Excel.	Good	Poor

- 1) Pupil behavior
- 2) Professional attitude of teachers
- 3) Content of industrial arts courses
- 4) Quality of pupils' work in industrial arts courses

High	Aver.	Low

- 5) Degree of seriousness with which teachers perform their work
- 6) Enthusiasm & interest of supv. teacher toward Industrial Arts
- 7) Enthusiasm & interest of pupils toward Industrial Arts
- 8) Enthusiasm & interest of other teachers toward Industrial Arts
- 9) Intelligence level of Ind. Arts pupils

Very much	Some	Very Little

10) Time spent in preparation
for teaching

11) Satisfaction gained from
teaching youngsters

12) Help & guidance from
supervising teacher

13) Help & guidance from
college supervisor

14) Help & guidance from
other teachers

15) Help & guidance from
principal

APPENDIX B

POST-TEST QUESTIONNAIRE, FORM B

State University College
at Buffalo

Industrial Arts Education Division

Name _____ School _____
____ First 9 wks. experience Supervising Teacher _____
____ Second 9 wks. experience College Supervisor _____
____ Second response to MTAI Type of Shop or
Activity _____
____ Fourth response to MTAI Grade Level _____
Date _____ I.A. 311 Instructor _____
I.A. 312 Instructor _____

Directions: This is an attempt to secure data which will enable us to improve the existing program of student teaching and cause it to be of the most value to students that it is possible for it to become. Your honest answers to the following questions are therefore solicited. Be assured that your responses will be strictly confidential and in no way will affect the judgement made of you by the college or public school supervisors of student teaching.

1. As you reflect back upon the student teaching quarter which you have just completed, what are some of the most significant things which you have learned from the following individuals? (List as many as you can think of - use the back of this form if necessary).

A. Supervising Teacher

B. College Supervisor

C. Principal

D. Students (pupils)

E. Other teachers on the staff

2. What are your present plans as they pertain to teaching Industrial Arts? (Please check one of the following)

☐ Plan to teach Ind. Arts ☐ Do not plan to teach I.D.
☐ Undecided

3. How do you feel about your preparation for the student teaching experience? Were you:

☐ Adequately prepared ☐ somewhat prepared
☐ unprepared

4. Considering what you know to be some of the tasks to be performed by a student teacher, please indicate the appropriate degree to which you were prepared as concerns the following two areas:

A. Technical Skills: (hand & machine tool operation, knowledge of subject matter area, etc.)

☐ Adequately prepared ☐ somewhat prepared
☐ unprepared

B. Teaching Skills: (lesson planning, demonstrating, teaching techniques)

☐ Adequately prepared ☐ somewhat prepared
☐ unprepared

5. What is your reaction to the student teaching situation to which you were assigned?

A. The School:

☐ well satisfied ☐ somewhat satisfied
☐ dissatisfied

B. The subject matter area:

☐ well satisfied ☐ somewhat satisfied
☐ dissatisfied

C. The grade level:

☐ well satisfied ☐ somewhat satisfied
☐ dissatisfied

6. The following is a listing of items to which you are to respond by placing a check (/) in the appropriate column. You are asked to reflect back upon your student teaching and respond to each item on the basis of the experiences you have had.

Excel.	Good	Poor

- 1) Pupil behavior
- 2) Professional attitude of teachers
- 3) Content of industrial arts courses
- 4) Quality of pupils' work in industrial arts courses

High	Aver.	Low

- 5) Degree of seriousness with which teachers perform their work
- 6) Enthusiasm & interest of supv. teacher toward Industrial Arts
- 7) Enthusiasm & interest of pupils toward Industrial Arts
- 8) Enthusiasm & interest of other teachers toward Industrial Arts
- 9) Intelligence level of Ind. Arts pupils

Very much	Some	Very Little

- 10) Time spent in preparation for teaching
- 11) Satisfaction gained from teaching youngsters
- 12) Help & guidance from supervising teacher
- 13) Help & guidance from college supervisor
- 14) Help & guidance from other teachers
- 15) Help & guidance from principal

APPENDIX C

OUTCOME CATEGORIES AND SELECTED SAMPLE RESPONSES

1. Techniques of teaching:

"teaching skills; teaching techniques; demonstrating; improve teaching techniques; many different systems, ideas, and techniques of teaching; helpful hints concerning the techniques of teaching; methods of teaching; various methods of teaching; proper and different methods of teaching; methods of stimulating interest; how to motivate slow learners; learn how to present lessons in a better manner; proper way to deliver lesson material; good and bad teaching methods; various methods of teaching;

2. Behavior, Discipline:

"proper use and forms of discipline; how to handle problem children; how to keep control of the class; how to best apply discipline; proper handling of pupils; methods of discipline; proper means of disciplining children; good discipline techniques; methods of controlling discipline; solving mass discipline problems; how discipline is handled; how to manage a class; procedure used for disciplining kids;

3. Knowledge of teacher's role:

"record keeping, attendance, materials, etc.; facts about fringe benefits in teaching; program set-up and whether the teacher is allowed to decide upon content and the curriculum; gain new ideas and outlook on the teacher's job; what is teaching; what is expected of me as a teacher; what is teaching like; what the true picture of teaching is like; learn more about the teaching profession; what the life of a teacher is;

4. Guidance in learning how to teach:

"supply help in needed situations; guidance; how to plan and operate so that everything gets done that should be done properly; a better idea of some of the things to do in order to become a good teacher; hope to get help in understanding of how to teach; help to learn to work effectively with students; guidance in becoming an effective teacher; what do you have to do to become a good teacher; help in becoming a good teacher; learn everything I can about teaching; help and guidance in learning how to teach;

5. Knowledge of school, curriculum, organization:

"how school is involved and the policies concerned with the Board of Education; how industrial arts is inter-related with the other curriculum areas; operation of the school; to learn about the school organization and why it is so organized; how school is organized; how all of the departments of the school are organized; more about school curriculum;

6. Laboratory organization, operation, management:

"personnel system; record systems and the need for them; how to plan, layout, and equip a shop; system of shop organization; laboratory layout and organization; personnel organization; how to manage a shop; proper control of the physical setting of the shop;

7. Constructive criticism:

"helpful suggestions which will help me to discover personal weaknesses and inadequacies and how to correct them; constructive criticism of lessons; corrective criticism; advice which will be beneficial to me; suggestions which will be practical and beneficial;

8. Relations with students, knowledge of them:

"abilities of students; their abilities at different grade levels, their interests, their attitudes; how to gain respect of pupils; the type of work I can expect from pupils; how I should act with pupils; how to conduct myself with pupils; how students react to my teaching methods-discipline methods; what kids at this grade level are capable of doing; are needs of students being met; gain an understanding of pupils; what pupils want and expect from a teacher; how friendly can you be with pupils;

9. Honest appraisal of progress and ability:

"do I have the qualities to become an industrial arts teacher; areas in which further development and emphasis should be placed; emphasis upon personal evaluation; if I have the ability to become a teacher who will be a benefit to the teaching profession; his judgement of my class presentations; his evaluation of me in general; evaluation of my performance; receive just criticism; his honest opinion of my teaching; a personal expression and general overview of my student teaching progress; where my weak and strong points lie;

10. Subject matter knowledge, technical skill:

"I wonder if I know the subject matter well enough; learn about finishing procedures more thoroughly; hope to expand my knowledge of the areas I student teach in; gain ability and manipulative skills; learn more about graphic arts and mechanical drawing; helpful hints on different operations in the shop; more about electronics;

11. Professional relations with staff and community:

"how to gain respect of teachers; how I should act with teachers; how to conduct myself with other teachers; creating good relations with faculty and staff; how to get along with other members of the profession; relations with teachers; how friendly; conduct toward other teachers; how to conduct myself with other teachers; how to behave and act in the community, the school, and at professional meetings;

12. Long-range planning, course development:

"course content; determining subject matter suited to students; how to plan a term's work; how to develop a course of study; ideas for setting up data for courses; how to plan a curriculum; how he organizes and plans for the year; long-range course planning; course of study development; facts about course of study making;

13. Attitudes toward teaching:

"attitudes toward teaching; teacher attitudes; learn about the teaching profession and some of the major gripes, also good points; their attitude toward the teaching profession; development of a professional attitude; what teachers think of teaching for their life's work;

14. Critical self-analysis:

"awareness of and improvement of personal qualities; effective use of suggestions to improve all phases of my work; learn to recognize my weaknesses and improve upon them; to learn what I'm doing wrong in my teaching; learn how I can improve and excel as a teacher; to learn to analyze and discover my own weaknesses; how to evaluate myself and my progress; I hope to find what professional qualities that I must improve on; learn what my faults are;

15. Principal's authority and relations with staff:

"how much authority does the principal have; what are his relations with the other teachers; authority of principal in regard to discipline; ways principal handles staff meetings; role of the principal; his views toward the rest of the faculty;

16. Evaluation of students:

"how to properly evaluate students; how to test and evaluate students and their work; how to evaluate industrial arts pupils in the upper grades; methods of preparing tests, grading projects, recording grades; different methods of recording grades; different methods of testing; learn more about how to establish grades; learn about testing procedures; how to grade students and their work;

17. Lesson planning:

"lesson planning; how to prepare for lessons and demonstrations; proper way to prepare lessons; proper method of setting up lesson plans; learn how to prepare myself for lesson presentation; advice on lesson planning; how to organize and select lesson content; guidance in lesson planning;

18. Learn about administration of the school:

"how a school is run; learn about the school and how it operates; the administration of the school and all its departments; how a good high school is run; administrative responsibilities of various staff members, principals, vice-principals, teachers; routine of school administration; awareness of administrative duties;

19. Support and acceptance:

"support and acceptance; hope to have support from him if and when I need it; understanding; hope he will treat me as a regular teacher; most of all I hope he is understanding; understanding in certain situations; acceptance and assistance; a feeling of acceptance as one of them; a welcome to and an acceptance to the school; a feeling of belonging; friendship and acceptability, equality;

20. Educational philosophy, professional attitude:

"views toward teaching, students, industrial arts; personal satisfaction in teaching; what they think of industrial arts; the old school of industrial arts compared with the new philosophy; philosophy of education; his views on teaching and methods; his philosophy of industrial arts and education; the general climate of opinion among industrial arts teachers with respect to other teachers, the administration, the school, the taxpayer, the parent, the pupils, industrial arts, and himself;

21. Audio-visual and use of teaching materials:

"significance and use of teaching aids; teaching aids; use of teaching aids - a) overhead projector, b) opaque projector, c) use of blackboard, etc.; use of teaching aids with every lesson; gain insight into use of audio-visuals; new devices and teaching materials; various teaching materials that may be used; aids to teaching; visual aids and their proper use; blackboard technique;

22. Confidence:

"a feeling of confidence in what I'm doing; confidence in teaching; hope to have him on my side to help me feel capable; feeling of confidence and approval; hope he will make me feel at ease; hope to be helped to acquire confidence in my ability to teach;

23. See what teachers are really like:

"their personalities; different views of life; teacher decorum; what are teachers really like; learn more about the teacher's role and what they are like; requirements to be a teacher; for the first time I hope to be able to see what teachers are really like;

24. Praise and encouragement:

"praise when I need or deserve it; reassurance and encouragement to improve my teaching abilities; being recognized as having some good points; someone to tell me when I do well and help me in the rough spots; encouragement and a pat on the back once in a while;

25. Help me to mature:

"help me mature and make up my mind more about teaching; hope to mature in my judgment and behavior; help me to become a better and more mature person;

26. How to improve industrial arts:

"new ideas for industrial arts content and teaching methods; a) research, b) experimentation; methods of improving industrial arts;

27. Observation of good teaching:

"I hope to be able to observe good teaching;

28. Help with case study:

"help in getting necessary data for the case study;

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