



An evaluation of the teacher education program at Montana State University by graduates of that program
by Ronald Boyd Mattson

A dissertation submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of DOCTOR OF EDUCATION
Montana State University
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Abstract:

The- Problem. The problem for this study was divided into several different parts. These included: (1) the development of a model that would provide guidelines for a continuous evaluation of the undergraduate teacher training programs at Montana State University; (2) the development of a questionnaire that could be used to determine the adequacy of the professional teacher training program; (3) to determine the adequacy of the teacher training program, as perceived by the graduates; and (4) to determine the relative value of the courses in the professional teacher training curriculum as perceived by graduates.

Methods and Procedures. Two questionnaires were designed to obtain information from elementary and secondary teacher graduates concerning such information as sex, age, majors, minors, employment status, grade level at which the respondent last taught, school enrollment, and teaching experience.

Two parts of the questionnaires were devoted to rating program objectives and professional courses. Rating was done on a five-point scale. The questionnaires were checked for content validity and reliability by submitting them to a panel of experts and administering them to 20 elementary and 20 secondary college senior teacher trainees.

The questionnaires were mailed to the members of the 1969 Montana State University College of Education graduating class. This group included 110 elementary teachers and 218 secondary teachers. Response rates for the groups were: 73.5 per cent for elementary teachers and 76.5 per cent for secondary teachers.

Finding and Conclusions. Both elementary and secondary teacher trained graduates believed that for the most part the respective training programs were adequate. Areas in which the respondents felt deficient involved teaching strategies, student evaluation, classroom management, recognition of learning disabilities, and team teaching.

Both elementary and secondary teachers rated the course Educational Psychology in the "Of little value" range.

Recommendations. Elementary and secondary teacher trainees should be given more training in recognizing learning disabilities, in the application of techniques used in individualized instruction, team teaching strategies, and evaluation of student progress. Elementary teachers need more training in classroom management, role playing and simulation. The teacher training program should incorporate more practical experience with theory.

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by

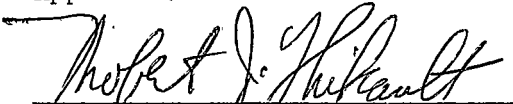
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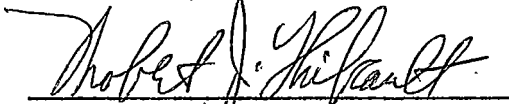
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ABSTRACT

The Problem. The problem for this study was divided into several different parts. These included: (1) the development of a model that would provide guidelines for a continuous evaluation of the undergraduate teacher training programs at Montana State University; (2) the development of a questionnaire that could be used to determine the adequacy of the professional teacher training program; (3) to determine the adequacy of the teacher training program as perceived by the graduates; and (4) to determine the relative value of the courses in the professional teacher training curriculum as perceived by graduates.

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Recommendations. Elementary and secondary teacher trainees should be given more training in recognizing learning disabilities, in the application of techniques used in individualized instruction, team teaching strategies, and evaluation of student progress. Elementary teachers need more training in classroom management, role playing and simulation. The teacher training program should incorporate more practical experience with theory.

CHAPTER I
INTRODUCTION

The Montana State University College of Education staff is presently engaged in making preparations for a review of the College's undergraduate teacher education program by the National Council for Accreditation of Teacher Education (NCATE), a voluntary college accrediting agency founded for the expressed purpose of improving teacher education. Although the teacher training program at Montana State University is accredited at the present, NCATE requires that an evaluation be made every ten years. The last evaluation of the Montana State University program was made in 1960. Preparation for the evaluating team entails collecting data and compiling a detailed report for the visitation committee.

NCATE Standards (NCATE) for accreditation are concerned with five major areas of the training program; namely, faculty, curriculum, students, resources and facilities, evaluation, program review, and planning. To meet the Standards, a systematic on-going program for the development of objectives, for improvement, and for long-range planning is necessary. It should be emphasized that "NCATE does not specify the precise courses or credits that one must have to secure accreditation; it formally proclaims a commitment to variation and experiment." (Conant, 1963)

Two areas related to NCATE accreditation in which the college staff has been working, but motivated by a desire for self-improvement,

are curriculum studies and determination of goals and purposes.

The first of these was a comprehensive study of the goals and purposes made on a university-wide basis in 1971. Each college prepared statements of their goals and purposes; the results were compiled into one document entitled, "Montana State University: Goals Report" (1970). One expressed goal of the College of Education that was of major concern and related to this study read, "The College should continuously evaluate its product, program, and teaching in an effort to better prepare our teachers--professionally and academically." A significant step toward the achievement of this concern was undertaken in the Fall of 1971, when the secondary and elementary education departments formulated specific written program objectives.

The second related area was the work done by the secondary education staff in the area of curriculum. They held several meetings during the 1970-71 school year to consider major changes in the secondary teacher training curriculum. Changes that were considered and proposed involved nearly all aspects of the curriculum. On several occasions, the staff members were confronted with a need for more information upon which valid decisions could be made.

In the process of preparing for the NCATE evaluation and for curriculum planning, the need for several different methods to determine the effectiveness of the training program and for the recovery of usable information was evident. Without such data, valid decisions were

difficult, if not impossible. As a result of these experiences, several staff members indicated a desire to see an organized plan instituted that would make available this type of information. This study was done to aid in supplying a portion of the information that was needed.

Statement of the Problem

The problem for this study was divided into several different parts. These included: (1) the development of a model that would provide guidelines for a systematic and ongoing evaluation of the undergraduate professional teacher training program offered in the Montana State University College of Education; (2) the development of an instrument or questionnaire that could be used as a part of the evaluation model to determine the adequacy of the undergraduate professional teacher training program as perceived by graduates of the program; (3) the determination of the adequacy of the undergraduate teacher training program objectives as perceived by the 1969 College of Education graduates--utilizing the instrument prepared for that purpose; (4) the execution of a survey of those people in the 1969 graduating class who did not elect to teach to determine their reasons for not doing so; and (5) the determination of the relative value of the required courses in the professional curriculum as perceived by the graduates from the teacher training program.

Purpose of the Study

The purpose of this study was to provide information for the staff of the Montana State University College of Education to better enable them to determine what changes, if any, were necessary in the professional teacher training program to adequately prepare its graduates to be effective teachers. In addition, the data to be collected through this study will assist the staff members in supplying the necessary data for the NCATE evaluation team who will visit the campus during the school year 1972-73.

An important objective of any training program, especially in a swiftly changing society such as ours, is a program that is current and responsive to the needs of its graduates. The design and the development of the model for a systematic collection of data from graduates of the teacher training program on an annual basis will help serve this purpose.

General Questions to Be Answered

Answers to four main questions were sought in this study. The first of these was: What system and what instrument would periodically gather valid and usable data from the graduates that could be used in an analysis of Montana State University's teacher training program effectiveness? Secondly, does the required professional education program

at Montana State University College of Education meet the needs of the graduates currently engaged in teaching? Thirdly, which professional education courses do the graduates feel are adequate or inadequate; and fourthly, why didn't a number of the graduates elect to enter the teaching ranks as practicing teachers?

General Procedures

The first phase of the study was a survey of the available and pertinent literature. It included a review of periodicals, textbooks, formal studies, unpublished studies, and association reports. Findings indicated that a number of evaluation studies of teacher training programs had been made similar in several respects to the present study. None of the studies reviewed, however, suggested a model for a broad evaluative system for a teacher training program.

Following the review of literature, a questionnaire was constructed to elicit information from the graduate about his educational job preparation, and about each of the required professional courses which he had completed while enrolled at Montana State University. Questions concerning the graduate and his job preparation requested information; such as age, sex, grade level in which the graduate was teaching, major, minor, size of school in which he was teaching or had last taught, and the number of years of teaching experience.

In other sections of the questionnaire, respondents were asked

to rate the adequacy of their training of selected knowledge, attitudes, and competencies received at Montana State University. In addition, they were asked to rate courses required as part of their professional teacher training program.

The questionnaire was mailed to all of the 1969 Montana State University graduates who were listed by the Director of Student Teaching and Teacher Certification as being qualified to teach. All completed questionnaires returned were classified and analyzed according to several variables; for example, grade level at which the respondent was teaching, age group, sex, size of school in which the respondent was teaching, majors, and minors.

Limitations

The total population for this study was limited to those people who graduated from Montana State University College of Education in the spring and summer of 1969. The evaluative sections of this study are further limited to that portion of the population that has been actively engaged in full-time teaching during one of the three academic school years since their graduation. All of the teachers meeting the above criteria and teaching in any of the grades kindergarten through twelve were included in the evaluative sections.

That portion of the study that dealt with unemployment and the reasons for unemployment concerned only those persons who did not hold

any type of a full-time teaching position during the period since their graduation in 1969, to and including the current academic school year, 1972-73.

Evaluation of the teacher training program is based only on the feedback from the 1969 graduates of the program and the statistics utilized were confined to their responses or information directly relating to them.

Minimum acceptable returns were limited to 70 per cent of the elementary teacher trained graduates and to 70 per cent of the secondary teacher trained graduates from the total population. Unless 100 per cent of the population responded, there was the possibility of some bias. According to Oppenheim (1966), "nonresponse is not a random process; it has its determinants, which vary from survey to survey." He pointed out that the problem could be reduced in severity by using follow-up letters as reminders to encourage higher rates of questionnaire return.

Although the individuals in the population were assured of anonymity and that their responses would be so used as to prevent them from being identified, the possibility existed that the reaction to the questionnaire was somewhat biased. The investigator believed that this was due primarily to the necessity of identification of the questionnaires by number for follow-up purposes. This in the thinking of some of the respondents was not complete anonymity. Also, opinions of graduates concerning knowledges, attitudes, or competencies may have been influenced

by the instructor of the course in which that particular attribute was to have been acquired rather than the content.

The questionnaire consisted of two types of questions: a closed question in which the respondent was asked to select one of several alternative replies, and a free response type of question which gave the respondent the opportunity to react in any manner that he wished regarding the program.

The resources and activities for the suggested model developed in this study were selected from those presently available, or those that could be developed within the present financial and personnel capabilities of the College of Education. Sources for this information were administrative personnel, professors, and non-professional employees from the College of Education.

In the fall of 1971, program objectives were formulated by members of the faculties of the elementary and secondary education departments of the College of Education for their respective levels. The objectives were prepared for the professional program as a whole and not for specific courses. These were used as a basis for the development of the questionnaire to collect the data for the study. In several instances during the development of the questions for the questionnaire, it was necessary for the investigator to interpret general objectives in order that specific questions could be formulated. These interpretations were submitted to members of the staff for approval before final use.

Definition of Terms

Professional education course. A course taught in the College of Education and listed in the current Montana State University catalog under the professional education curriculum.

Professional education program. The aggregate of all the professional education courses required to be eligible for teacher certification. Examples are Educational Psychology, Methods, and Tests and Measurements.

Graduate of the teacher training program. Those people who completed the requirements for graduation as a qualified teacher.

Program objectives. The goals that faculties within the College of Education have selected as desirable outcomes of the teacher training program.

Junior high school option. The pattern of selected courses that are prescribed by the College for prospective teachers who wish to teach at the junior high school level or at equivalent grade levels.

Music option in elementary education. The pattern of selected courses that prepare a prospective teacher to specialize in the teaching of music in the elementary school.

K-12. Grades kindergarten through twelve inclusive.

Vertical organization. The aspect of school organization that refers to the movement of students upward from a point of admission to a point of departure. Examples of vertical organization are a school

system graded one through twelve or a nongraded system (Goodlad and Rehage, 1962).

Horizontal organization. The aspect of school organization that divides students among available teachers. Examples are homogeneous groups, heterogeneous groups, or departmentalized classrooms (Goodlad and Rehage, 1962).

Self-contained classroom. A classroom which contains pupils, often one grade level, in which all the subject matter is taught by one teacher.

Nongraded classes. An arrangement of pupils in which grade labels are removed from some or all classes (Goodlad and Rehage, 1962).

Team teaching. A horizontal arrangement that combines consideration for children, curriculum, and teacher qualifications.

Multigraded classes. Classes that contain pupils from two or more grades.

Model. The term model as used in this study means a pattern or schemata that represents variables and their relationships in a graphic or outline form.

Evaluation. The process of assigning values to data which has been assembled.

Summary

The College of Education staff members at Montana State University need a variety of data to assist them in retaining NCATE accreditation, to assist them in program evaluation, and to assist them in possible revision of the teacher education curriculum. An important portion of the required data deals with program evaluation and revision and establishment of goals.

This study was designed to provide some of the needed data through collection of feedback from experienced teacher graduates of the College of Education. The system used in the initial data collection was designed to be utilized periodically as a source of information which will enable the staff to make decisions that will keep the teacher training program current.

CHAPTER II

REVIEW OF RELATED LITERATURE

In the years following World War II, particularly during the Sputnik era, teacher training programs were criticized by individuals and groups who doubted the value and effectiveness of the training given prospective teachers by teacher training institutions. Some of the more outspoken critics have been students and graduates of the various programs. Among other things, the critics have said that there was too much duplication, a lack of course content, and many unnecessary and useless courses are required.

Stiles, Barr, Douglas, and Mills (1960) have pointed out that because professional education programs have been subject to so much criticism, "It would seem sensible and desirable that educationalists reexamine many aspects of their programs." They conclude that the evaluation of teacher education programs "is plagued with the tendency of faculty and administrators to rely upon impressions, estimates, and guesses in assessing program strengths."

They go on to say that:

To teacher educators, the program may seem adequate, but there should be a challenge to the profession to array supporting data in such a manner as to be convincing to others. Mere argumentation and verbalization of frequently repeated claims will not be enough. The logic and the data should be in keeping with the best critical thinking.

It is generally recognized that the data upon which evaluations are made must be valid, reliable, and complete. Criteria against which data are appraised must be carefully defined. Thus, evaluation of programs of teacher education requires systematic plans

to insure the collection of adequate and reliable data and the definition of reference points that command respect. It must be remembered that the value placed on a program, or aspect of teacher education, must be acceptable to many individuals, including non-professionals as well as specialists in the field.

More recently, another educational trend has become very evident-- a demand for accountability in education. According to Thomas Giles (1971:255), this new trend will not "wax and wane as did teaching machines, student involvement in governance, and other similar movements." His reasons are: (1) that maintaining quality education and an efficiently managed educational institution are mutually compatible goals, and (2) that the emphasis on accountability has been stimulated by the "publics" education serves. Dr. Stephen Romine in a recent article on "Accreditation and the New Accountability in Higher Education" (1971:257) said that if education is to be held accountable for its product, then it must have improved goal definition at the institutional and classroom levels, and it must place a greater emphasis upon appraisal of the product.

As indicated in the preceding paragraphs, teacher training has been, and still is, the subject of considerable wide spread criticism. To fill the need to establish higher standards and uniformity for the teacher training programs, the American Association of Colleges for Teacher Education (AACTE) was formed in 1948. From that time until 1954, its members worked to develop an effective accrediting association for teacher education in all colleges and universities participating in

educating teachers (Joyol, 1963:1-3).

To further implement the purposes of AACTE, representatives from the American Association of Colleges for Teacher Education, the Council of Chief School Officers, the National Association of State Directors of Teacher Education and Certification, and the National Education Association met in November, 1952, to prepare a plan to organize an effective accrediting agency for teacher education programs. The new accrediting agency was named the National Council for Accreditation of Teacher Education (NCATE) and was scheduled to become effective on June 1, 1957.

Since its inception, NCATE has increased its membership and its influence on teacher education to a degree where a majority of the teacher education programs have been or are being influenced to raise their standards to conform to those of NCATE. In their "Standards for the Accreditation of Teacher Education" (1971:1), NCATE lists four major purposes for accreditation of teacher training institutions. They are:

1. To assure the public that particular institutions--those names in the Annual List--offer programs for the preparation of teachers and other professional school personnel that meet the national standards of quality.
2. To ensure that children and youth are served by well-prepared school personnel.
3. To advance the teaching profession through the improvement of preparation programs.
4. To provide a practical basis for reciprocity among the states in certifying professional school personnel.

As noted in Chapter I of this paper, the Montana State University College of Education has made application for full accreditation by NCATE. Two significant conditions for accreditation that the College must achieve are the maintenance of a continuing program of evaluation of its graduates and collection of information to identify areas in the program that need strengthening (NCATE, 1970:12). The fulfillment of these conditions will help to give direction for program development. With the goal of developing a continuous system of evaluation and an instrument to solicit feedback from graduates, the writer has investigated several methods and reviewed several studies that might offer assistance in fulfilling the College of Education's needs. A review of the results of that investigation is presented in the following pages.

Methods of Evaluation

A number of different methods and techniques for evaluation of a teacher training program have been investigated by this writer. Each method varies considerably in the ease of application, in the time involved, in the means of collection of the data, the number of participants with which it can be efficiently used, and in the validity of the data collected. In the following paragraphs, a few of the most common methods will be considered.

Measurement of pupil behavior change. Theoretically, measurement of behavior change in the "final product," the pupil in this case,

reflects the effect of the teacher upon the student and indirectly upon the teacher's training (Woodring, 1957:62). Though this is a theoretically valid assumption, in practice there are many difficulties. Too many factors other than the teacher effect are involved in the behavior change, or the lack of pupil behavior change, to be able to attribute any discernible change to a particular teacher's training. Examples of those factors: home and school environment, student personality, cultural conditioning, and the teacher's influence. The effect of these and other factors are highly unpredictable upon pupil behavior.

Direct observation. Another obvious source of information for teacher training evaluation is the observation of the teacher who is engaged in the actual process of teaching in the classroom (Medley and Mitzel, 1963:247). Classroom observation could be done on a one-to-one basis, one observer--one teacher. Such a technique would require well developed evaluative skills on the part of the observer. Medley and Mitzel point out that some researchers consider this process too expensive and time consuming. Another disadvantage listed by researchers is the reluctance of teachers and administrators to permit observers to enter their classrooms and disturb their privacy. Medley and Mitzel feel that most of these objections can be overcome. They contend that when teachers and administrators are convinced of the importance of the study utilizing this technique they are quite willing to cooperate. On the basis of these comments, it would appear that if a large number of

evaluations were required, that the observational technique is at a serious disadvantage due to the financial resources, training of the evaluator, and to the time required to collect the data.

Feedback from prospective teachers. A number of studies have been done to evaluate the training program utilizing feedback of the trainee either during the training period, during some phase of it, or at the completion of the training. This method of evaluation has the advantage of having its subjects immediately available and their training recent enough to insure a valid response.

However, if reactions from prospective teachers is the only method used in program evaluation, it has several disadvantages. A major one is that the people from which feedback is sought are not yet experienced enough to fully appreciate the usefulness of their learning in the teaching process (Herbert, 1970:18). A second is the difference that exists in student-teacher experiences from student to student. Often student-teachers do not have the opportunity to apply their skills and knowledges for a variety of reasons. Stagg (1968:224-225) found that many administrators and cooperating teachers from host schools lacked understanding and knowledge of the goals and objectives of the student-teaching program, consequently many of the student-teachers experiences left much to be desired.

Feedback from experienced teachers. A number of authorities feel that broader responsibility needs to be established for teacher education.

Among them, I. James Quillen, former Dean of the School of Education at Stanford University, who stated in an address to the Fourteenth Annual National Conference sponsored by the National Commission on Teacher Education and Professional Standards that, "Teacher education is a joint responsibility of colleges and universities, public schools, and the profession of education (1959:38)." Solon E. Haynes, Chairman of the Department of Secondary Education, and Charles E. Coyne, Dean of Education and Psychology at Missouri Western College, concur with his views in their statement:

If we are to prepare teachers to perform in the classroom to the extent that their students profit intellectually and socially, what has been the standard program of preparation will have to be changed.

Few teacher education institutions can adequately train teachers without the help from their local elementary and secondary schools (1971:71-2).

They cite E. Brooks Smith's (1968:19-20) statement from the National Education Journal, "The long desired goal of a truly clinical preparation for the professional jobs in education calls for school-university collaboration on a grand scale;" and Kimbal Wiles (1968:262-268), who wrote in the Journal of Teacher Education, "Public school personnel should become effective partners in the teacher education process."

Many teachers who are currently engaged in classroom teaching feel a professional obligation to work cooperatively with colleges and

universities to improve the teacher training program; and given the opportunity, they will contribute to that end. Herbert (1970:17) considers this a source from which useful and meaningful data can be obtained to evaluate the teacher training program. These people, he feels, have had the opportunity to apply skills and attitudes that they have acquired during their training and are able to evaluate its effectiveness. Herbert cautions, however, that the number of years experience a teacher has may have an adverse effect upon the validity of the responses. This, he feels, is due primarily to the loss of recall of specific characteristics of their training.

Other difficulties encountered in utilizing data from persons who have graduated from teacher training programs five to ten years previously are the recent changes in the training programs and recent changes in the faculty. Major changes in either of these areas would obviously bias the data used in an evaluation. Another difficulty in utilizing people from this category is the problem in locating a representative sample of the group.

Considering the advantages and limitations of the last two methods of evaluation, it would appear that studies designed to gather information through feedback from its graduates should gather data from people whose experience level ranges from two to five years. If a well designed instrument is used to collect the data, feedback from this source can be useful for evaluative purposes.

Studies Involving Evaluation Through Feedback

Evaluations of teacher training programs utilizing feedback from student teachers, inexperienced teachers, and experienced teachers have been done in a number of colleges and universities during the past few years. Some pertain to elementary programs, others to secondary programs, while still others involve both. Summaries of a representative sample of those studies are reported on the following pages.

First is one done by Thompson Moffit (1967) evaluating the elementary education program at Central Michigan University. It was concerned with two questions:

1. Does the elementary education program at Central Michigan University adequately prepare its students for teaching?
2. Do the opinions concerning programs for elementary education teachers at Central Michigan University change with more experience?

Data for the study was gathered through a questionnaire mailed to a group of prospective teachers, a group of first-year teachers, and a group of experienced teachers who had a background of elementary teacher training at Central Michigan University. The questionnaire included sections dealing with general education, professional education, subject matter background, and classroom teaching areas.

Moffit's population included 699 of the people trained at Central Michigan University. He reported a return of 65 per cent usable

responses. After analyzing his data, he drew several significant conclusions. Generally, he found that the respondents in his study considered the elementary teacher training program adequate. Seventy per cent of his population considered general education important, and 60 per cent felt that their professional education was important. Respondents indicated that they gained a greater feeling of adequacy as a result of their directed teaching experiences; i.e., student teaching.

Moffit found an opinion change from the graduating seniors, to the first-year teacher, to the experienced teacher. In general, the seniors rated their training highest, and experienced teachers rated their training lowest. However, he found that the experienced teachers rated theory courses higher than the less experienced groups did.

On the basis of his findings, Moffit recommended that directed teaching experiences be retained in the program, and that special sections of general education courses for prospective elementary teachers be taught. He felt that this was especially important in the areas of music, art, and physical education.

In future evaluations of the teacher training program at Central Michigan University, Moffit recommended that the sample population include the opinions of experienced teachers because their opinions vary significantly from first-year teachers and graduating seniors in relation to theory courses. He further recommended that an evaluation, such as his, be made frequently so that the program could reflect the needs

of the teacher practicing his profession in the field.

A second study involving teacher training program evaluation was one done by Richard Harmon (1966) at Long Island University. The stated purpose of his study was, "To measure effectiveness of the teacher education program of Long Island University through evaluation by experienced teachers of its usefulness in accomplishing selected practices." His secondary purpose was to ascertain whether teaching experience or grade-level of the instruction affected evaluations.

His population included 116 teacher alumni with experience ranging from two to fourteen years. He divided this group into three grade level categories and within those three experience levels. Grade levels were divided on a Kindergarten through six, seven through nine, and ten through twelve. Experience levels consisted of people with teaching experience ranging from two through five years, six through ten years, and eleven through fourteen years.

To collect data for his study, he used a questionnaire that directed teachers to rate on a one through five scale the influences of professional education courses upon 31 teacher practices. The seven professional courses used for the study, all required at Long Island University, were "foundation courses": Educational Psychology, History and Philosophy of Education, Current Problems in Education, Child Development or Adolescent Development; and "methods courses" consisting of Methods and Materials in Early and Late Childhood, Methods and

Materials in Teaching Specific Subjects, and Observation and Teaching. Teacher practices were described as those which were customary behavior of the teacher in and outside the classroom and had as their end result the improvement of the learning situation in the classroom. Teacher practices were defined as those that were translated from the college's teacher training program objectives.

After analyzing the data from his questionnaire, Harmon found that:

1. The "most salient factual outcome of this study" was that the teacher education program had little influence on teacher practices.
2. Teachers with two to ten years service credited the program with a greater influence than those with more experience.
3. There was no significant difference of evaluation among the three grade level categories.
4. Two courses entitled: Problems of American Education and History and Philosophy of Education had no discernable influence upon teaching practices.
5. The people in the eleven through fourteen year experience group rated Educational Psychology higher than those at other experience levels.
6. Field experience, student-teaching, was rated as being more influential than other foundation courses.
7. No course exerted more than a moderate influence upon teacher practices.

One of the most comprehensive evaluative studies reviewed by this writer was completed by Ira Hinckley (1967) for the Illinois Teachers College Chicago-North (I.T.C.C.-N.) elementary teacher training program.

The college was founded in 1961 and had been in existence for approximately four years at the time the data was collected for the study. Because of its relatively short existence and the concern of the faculty and administration with the effectiveness of its program, Hinckley stated that he received the encouragement and cooperation of the staff.

Hinckley's statement of the problem was, "To ascertain the status and competency of graduates of I.T.C.C.-N. through data provided by graduates' opinions regarding the adequacy of their preparation and determine the implications of the data for curriculum at I.T.C.C.-N." His population included all the graduates of the college of elementary teacher education who had completed 80 per cent or more of their work at I.T.C.C.-N. At the time of the survey, the institution had graduated three classes of elementary teachers--1963, 1964, and 1965--for a grand total of 498 elementary teachers.

He collected his data through a questionnaire mailed to all graduates. Its content was divided into the following four sections:

1. General information concerning: sex, year graduated, teaching experience, grade levels at which they were teaching, their academic achievement, and the type of school in which they were teaching (high status, main-line, common-man, inner-city, or special schools utilizing Havelock's typology).
2. Sections II and III concerned evaluation of credit hour requirements of thirty-nine required courses and the significance of the required course sequence in developing teacher competence.
3. Section IV dealt with the evaluation of the faculty advisory system and general recommendations for improving teacher education.

4. Section V was an adaptation of the California Statement of Teacher's Competencies, which the graduates used as a basis for self-evaluation of their teaching competencies. This questionnaire was developed by Dr. Evelyn Piper at the University of Oregon (1960).

On the basis of the data collected through his questionnaire, Hinckley was able to reach several conclusions and make a number of recommendations that could be utilized by I.T.C.C.-N. Following are perhaps the most significant of those conclusions and recommendations:

Conclusions

1. A majority of the graduates felt an increase in credit hours was desirable for Curriculum and Instruction in the Elementary School and in Student teaching.
2. Fifty per cent favored a decrease in American English: Structure and Function.
3. More than one-half of the respondents felt they were adequately prepared in ten of the fifteen teacher competencies listed on the questionnaire.
4. Graduates felt the least prepared for using remedial and diagnostic procedures, collecting, and using significant counseling data.

He recommended that:

1. More effort should be made to integrate theory and practice in all courses.
2. A coordinator of laboratory and field experience should be appointed to initiate and conduct an organized program of field experiences.

3. There should be an undergraduate course in Measurement and Evaluation in Public Schools.
4. More instruction was needed to inform students about problems and challenges unique to inner-city and special schools.
5. More adequate preparation in the following competencies:
 - a. Diagnostic and remedial procedures
 - b. collecting and using significant counseling data
 - c. using adequate procedures for evaluating the achievement of the child
 - d. using principles of child development and mental hygiene in guiding individuals and groups
 - e. helping children to understand and appreciate their cultural heritage.

Hinckley's study was the only one surveyed by this writer that demonstrated a concern with the socio-economic environment in which the teacher worked. Many of the graduates were teaching in main-line, common-man, inner-city, or special schools, where problems may be classed on a continuum from moderate on one hand to severe on the other. The data presented left this writer with the impression that there is a direct correlation between the feeling of adequacy on the part of the teacher and the socio-economic environment in which the teacher works.

Other examples of evaluations utilizing feedback from experienced teachers were two done at the University of Mississippi by Kathleen Pittman (1967) and James Henry (1967). Pittman's study was based on the teacher training program at McNeese State College of Louisiana and Henry's at Old Dominion College at Norfolk, Virginia.

The studies closely paralleled one another in their purposes and method of collecting their data. Essentially, the purpose of both studies was to determine to what extent the graduates were prepared: (1) professionally, (2) subject matter wise, and (3) in general education. Both used a questionnaire to gather their data from graduates of their respective institutions.

Both researchers found that the graduates generally considered their preparation adequate. Henry noted, however, that his population was concerned with the repetition in the professional curriculum at Old Dominion College.

Several studies were reviewed that utilized feedback from the teacher and from the teacher's supervisor or principal. One of these was an evaluation of the elementary teacher education program at Illinois State University done by Peppard (1966). The population included the University's graduates for 1962-1965. Data was collected utilizing an interview technique. Final conclusions indicated that the elementary teacher training program met the needs of the teachers in the classroom.

A second study was an evaluation of a secondary teacher training program done by Robert Appel (1966), while he was at the University of Colorado. His population included graduates from the classes of 1960, 1961, 1962, and 1963. He used a questionnaire that was distributed to teacher graduates and their employing principals to collect his data. The mean evaluation from graduates and principals indicated that they

considered the secondary teacher training somewhat above average. Major strengths included a strong program in general education, good quality candidates, and enthusiasm for teaching.

A third evaluation was one by Arthur Engel (1965) of an elementary and secondary program at Huron College at Huron, South Dakota. His population included teachers with three years of teaching experience who had graduated from Huron College between 1961 and 1964. Engel's findings showed that the graduates found their professional education courses were very helpful and that they were adequately prepared to teach. The teacher's administrators indicated that the graduates in the population were above average or superior in the use of vocational knowledge and information and in the use of other educational agencies. Engels recommended that the student teaching period be increased and that duplication of methods courses be eliminated.

A Montana evaluation study was done by Vernon Grosshuesch (1965) utilizing the supervisors of beginning teachers. His population included the graduates of Eastern Montana College for the 1960 through 1962 school years. To evaluate the beginning teachers effectiveness, he collected information from the supervisors about how successful the teachers were personally, professionally, and in classroom procedures. Findings indicated that graduates rated high in their personal qualities. Supervisors rated them as well qualified, well prepared persons who demonstrated a high level of performance in the classroom.

Teachers often criticized the repetition and questioned the value of the courses they have taken during their training. A few even indicated that none of their professional teaching courses, other than practice teaching, helped at all. Responses to a fairly recent survey conducted by Gustave Albrecht (1969) of secondary and junior college teachers in California indicated that teachers felt that the number of professional teaching courses should be reduced, that an alternate training route through an internship should be established, and that credentials should be issued for a specific field.

Several studies concerning teachers and teacher education completed at Montana State University were reviewed. Two of these, one by George Stagg (1968) and the other by Jack McMurchy (1969), contained short sections dealing with the evaluation of the teacher training program using feedback from student-teachers and experienced teachers.

The first study, by Stagg, researched the problems of student-teachers from all the teacher training institutions in the State of Montana, including the private colleges. Stagg reported that in response to the request to assess their academic preparation, 63.1 per cent of the elementary student-teachers reported their preparation as adequate and 12.7 per cent reported it as excellent. When the same question was posed concerning their professional education, 50.0 per cent said they felt that it was adequate, and 8.7 per cent felt that it was excellent.

At the secondary level, the responses to the same questions that were posed to the elementary student-teachers were somewhat different. Stagg found that 41.1 per cent of the secondary student-teachers felt that their academic preparation was excellent and 45.4 per cent felt that it was adequate. In the professional course sequence, 10.5 per cent indicated that they felt that it was excellent and 58.2 per cent thought it was adequate. Stagg summarized the results of the secondary student-teacher reactions by noting that, "Four times as many students believed their academic preparation in their major field was excellent as believed their educational course sequence was excellent preparation."

McMurphy's (1969) study was designed to determine what was happening to Montana State University College of Education four-year graduates and how those graduates thought their preparation could have been improved. He selected as his population the people from the graduating classes of 1966, 1967, and 1968. That portion of his study dealing with the graduate's opinions concerning their professional training program was limited in scope. It was confined to a "most valuable" and "least valuable" evaluation of courses, and to recommendations for changes of the program.

To determine the opinion of the graduates concerning their preparation for teaching, McMurphy asked the following questions:

Which education course do you feel was most valuable based on your experience?

Which education course was least valuable?

What changes do you recommend in the professional program at Montana State University?

Returns from the above questions were considered on the basis of elementary teachers and secondary teachers in separate categories.

In response to the above questions, 37 per cent of the elementary teachers considered Teaching of Reading the most valuable. Next in terms of importance was Subject Methods followed closely by Student Teaching with 25 per cent and 23 per cent, respectively.

Of the secondary teachers, 30 per cent considered Student Teaching as the most valuable course followed by Principles of Secondary Education with 25 per cent and Subject Methods with 18 per cent.

Rated as their least valuable courses by elementary teachers were: Educational Psychology by 41 per cent, teaching of Language Arts by 15 per cent, and School Curriculum by 9 per cent. Fifty-eight per cent of the secondary teachers listed Educational Psychology as the least valuable. Six per cent said that none of the professional courses had any value.

In considering the above data, attention should be called to the distinct possibility that many graduates who felt a bias toward a particular instructor may have been rating their instructor rather than the value of a specific course.

Models for Evaluation

In surveying the literature concerning the development of models for evaluation in education, little information could be located that had a direct application to teacher training programs. Barro (1969) had this to say, "The methodology of 'effectiveness' modeling is relatively undeveloped both in education and in other fields."

Erik Lindman (1967), Professor of Educational Administration, University of California at Los Angeles, has pointed out that the requirement and need for a framework for evaluation educational innovation is as follows:

Clearly, the evaluation process must be more than a comparison of achievement-test scores, it must recognize the many dimensions of education. During this period of ferment in education, we need, above all, an innovation in process by which educational practices and innovations are evaluated Each decision maker needs information relevant to the choices he must make.

A review and evaluation system which provides continuously for each decision maker the evidence he needs to make his decision would do much to improve education. To some extent such a process functions now, but major improvements are possible and sorely needed.

Troyer and Pace (1944) state that certain tasks are involved in the process of evaluation. Among them, the formulation of objectives, identification of the sources from which evidence can be obtained, development of methods for obtaining the evidence, and an interpretation of the results gathered in terms of the goals or objectives. Completion of the tasks as outlined and arranging those tasks in a systematic

manner such that the results can be interpreted in light of the goals and objectives of the program suggests a model for evaluation.

Summary

Generally, the survey of different methods of evaluation involving graduates of the program indicates that the most practical means of gathering data is through feedback from the graduates. If this technique is used, several researchers advise that experienced teachers be included in the sample.

A questionnaire was used in all of the studies examined by this researcher. These varied from one of a general rating type to one that asked for specific information concerning specific courses. Considered with the responses from the questionnaire in several of the studies were such factors as grade-point average, Graduate Record Examination scores, age, and as previously mentioned, teaching experience. In addition, one of the studies queried administrators about the teaching ability and success of the teacher involved in the study.

The type of information elicited from the majority of the questionnaires helped determine how the respondents valued a particular course. However, questions concerning their reasons for valuing a course in that manner were not answered. For example, Educational Psychology was selected as the least valuable course in the professional curriculum at Montana State University by both elementary and secondary

teachers who participated in the study. To gather meaningful data that could be helpful in developing a curriculum that fulfilled the needs of its graduates, it would appear that the questionnaire used should solicit information about specific objectives of each course or of the program.

Several of the studies recommended that similar studies be done on a continuing basis. Considering these recommendations and the variety of methods for evaluation, it appears that a systematic plan or model can be designed for an effective evaluation of a teacher-training program.

CHAPTER III

PROCEDURES

This study had a dual purpose; the first, to develop an instrument and a systematic program to evaluate annually the undergraduate professional curriculum required at the Montana State University College of Education. A second purpose was to determine the adequacy of the present professional teacher-training curriculum as perceived by the graduates of the college utilizing the instrument developed for the systematic evaluation.

This chapter describes the approaches used for developing the instrument, the system used in collecting the data for evaluation, and the population and sampling procedures for the study. Methods used to organize the data and analyze the data are also outlined.

Population

The population for this study consisted of those graduates of the Montana State University College of Education, who were members of the 1969 Spring and Summer graduating classes; and who, according to the records in the Student-Teaching and Certification Office, qualified for a Montana Teaching Certificate. University records indicated that the two graduating classes included 110 persons who received degrees in elementary teacher education and 218 persons who received degrees in secondary teacher education, or a grand total of 328. Samples for the

study included the entire population as defined above.

Categories

Due to differences in the job and in the curriculum for their preparation, the members of the sample were divided into three major categories: (1) elementary school teachers; (2) junior high school teachers; and (3) secondary school teachers. Training for junior high school was either elementary teacher training or secondary teacher training. Frequently, junior high school teachers were recruited from both groups; consequently, in this study, it was possible to find people in this classification with either elementary or secondary teacher training.

Within each major classification (that is, elementary teacher, junior high school teacher, or secondary school teacher), additional categories were used. Among elementary teachers, the categories were either: the grade level at which the person was teaching; or the number of years of teaching experience. At the junior high school level, the categories were: teaching major; teaching minor; area of subject matter concentration for those who have elementary teacher training; grade level; and number of years of teaching experience. For secondary teachers, categories include: teaching major; teaching minor; subject or subjects the person is teaching; and number of years of teaching experience.

Method of Collecting Data

Two different questionnaires were used to collect the data from the persons included in this study. Generally, formats for both were similar. They differed only in that the content of the questions posed was appropriate for the level of the person's training; i.e., elementary or secondary.

The questionnaires were divided into essentially three different parts. The first requested general information such as sex, age, employment, grade level at which respondent taught, and type and size of school. The second part involved an evaluative response to the adequacy or inadequacy of selected objectives of the University's teacher-training curriculum as he perceived them, in relation to his effectiveness for his teaching position.

The statements of objectives were those that had been formulated by the secondary and elementary education staff members as program goals. To achieve specific statements which could be interpreted easily by respondents, it was necessary in some cases to translate the more general program objectives into several specific ones. Staff members aided the researcher where this was done and gave their approval to the final result.

Responses to the second and third part of the questionnaire were recorded on a five-point Likert-type scale (1932) extending from a highly adequate type of rating to a highly inadequate type of rating.

The third section of the questionnaire requested the respondents to rate required and elective professional education courses that constituted the professional education programs at Montana State University as outlined in the Montana State University Bulletin (1968). Again, due to variation in the teacher-training professional curriculums, differences existed between the secondary teacher and the elementary teacher questionnaires. For the most part, this variation consisted of differences in the methods courses directed toward appropriate training for elementary teachers and secondary school teachers. In addition, the secondary professional curriculum permitted two electives, whereas the elementary professional curriculum allowed none within the professional course block.

To assure the investigator of maximum reliability and content validity of the questionnaire, several steps were taken. Content validity of the items in the questionnaire, and the questionnaire as a whole, was determined as suggested by Sax (1968) and Downie and Heath (1965). This is, a rough draft of the questionnaire was submitted to a group of "experts," in this instance four College of Education professors, to rate the extent to which each item and the questionnaire appeared to measure what was intended. This procedure was followed on four separate occasions, or until the group felt that the instrument was valid for the purpose for which it was designed.

When these steps had been completed, 100 copies of the revised

and edited questionnaire were prepared by mimeographing for use in determining reliability of the instrument. The test-retest method was used to achieve this objective. With this technique, the instrument to be tested for reliability was administered to a pilot group of people, whose characteristics are similar in most respects to those for which the instrument is to be used; then, at a later date, the same instrument was administered to the same individuals. Scores were computed for each individual; a Pearson product-moment correlation coefficient was then computed between the two sets of scores (Downie and Heath, 1965). Those portions of the questionnaire used in this study, Part II and Part III, for which a reliability check was necessary, lent themselves to such an approach. According to Sax (1968), the Test-Retest technique was applicable for scales similar to those used in this questionnaire.

After having made the preparations outlined above, one group of 20 elementary education students and one group of 20 secondary education students who had completed their student teaching were asked to respond to the questionnaires. The elementary teacher questionnaire and the secondary teacher questionnaires were given twice to the appropriate groups in a classroom situation with ten days intervening between each administration. For the second administration of the questionnaire, three students from the elementary group and two students from the secondary group were absent, leaving 17 and 18 students, respectively, in each of the pilot groups. In addition to responding to the

questionnaire items, the pilot groups of students were asked to identify items that they felt were ambiguous and needed clarification.

The two sets of responses to the questionnaires were punched on punch cards and a computer program prepared to determine the Pearson product-moment correlation for Part II and Part III scores for both the elementary and the secondary instruments. The program with the data on the punch cards was run on the University computer. For the elementary questionnaire, Part II, the computer printout indicated a Pearson product-moment correlation coefficient of 0.90, and for Part III, 0.90. For the secondary questionnaire, Part II, the coefficient was 0.92, and for Part III, 0.80. Minor alterations in directions were then made, and the finalized questionnaires (Appendices A and B, pages 135 through 146 were multilithed.

A cover letter to accompany the questionnaires was prepared and submitted for critiquing to the four professors utilized in validating the questionnaire. From the suggestions received and the original letter, a final copy was prepared and multilithed (Appendix C, page 147.

To determine the residence and mailing address of individuals of the study sample, a list of all the graduates from the 1969 spring and summer quarter graduation rolls was developed and compared with Montana State University Alumni Office files. From the Alumni Office files, a list of the addresses for all living 1969 College of Education graduates was compiled.

On March 13, 1972, a questionnaire appropriate to the area of the individuals' teacher preparation, a self-addressed envelope and a copy of the cover letter were mailed to all the members of the study population at the addresses from the compiled mailing list. By March 31, a return of 68 per cent of the elementary portion of the population and 60 per cent of the secondary portion had responded. To achieve the pre-set return level of 70 per cent, another questionnaire, a self-addressed envelope and a follow-up letter (Appendix D, page 149) were mailed on April 5 to those members of the population who had not responded. The goal of 0.70 per cent return was reached for both elementary and secondary groups by April 19.

To gather information concerning data that could be used in the development of a systematic program or model for evaluating the teacher training program, informal interviews were conducted with department heads, professors, and non-professional staff members from the College of Education. Several sources of accessible data for such a purpose were suggested.

Method of Organizing Data

The data collected from the sample's members was organized according to several different variables. Major classifications were elementary and secondary school teachers. Within each of these classifications, the data was arranged to correspond to the three major

divisions of the questionnaire used to collect the data for the study.

The first division included items such as sex, age, major field of study, minor field of study, grade level at which the respondent last taught, subjects last taught (for departmentalized schools), number of years experience, and the size of school in which the respondent last taught. The second division was rating of the effectiveness of teacher training program objectives; and the final division was a rating of required courses in the teacher training program curriculum.

For the purpose of discussion and analysis frequency distribution tables with means and standard deviations were developed for those parts of division one of the questionnaire that lent themselves to such a treatment. Division two and three were both presented in the same manner. To reduce the number of variables with which this researcher had to contend, the data from Part II of the questionnaire was subjected to a principal component factor analysis. Factor analysis is a process which groups the related variables in a test or questionnaire, identifies constructs, and permits the reduction of statistical computations.

Additional comments concerning the teacher training program were solicited from questionnaire respondents. Summaries of these statements were compiled and were presented in the form of tables with the frequency with which each occurred. These tables are presented in Chapter IV, pages 46 through 116 of this dissertation.

Analysis of Data

Both a descriptive and a statistical approach were used to analyze and present the data from this study. Frequency distribution tables, percentages, and narration were used in the analysis and presentation of the collected data.

To limit the number of variables and to aid in the statistical analysis, the data in Part II of the questionnaire (that section dealing with the rating of knowledges, attitudes, and competencies), a factor analysis was performed upon the ratings assigned by the respondents. The Montana State University computer services were utilized to perform the tasks involved with this process.

After the separate factors had been identified for the elementary and the secondary teacher respondents, scores for each individual were compiled for each factor. To test the relationship between the variables within the categories of sex, age, grade level at which the respondent last taught, teaching experience, size of school and teaching major (secondary respondents only); null hypotheses of no difference among the means were formulated. An analysis of variance was used to perform this test.

Following are the null hypotheses that were formulated and tested:

