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ABSTRACT

A STUDY OF THE EFFECTIVENESS OF AN IN-SERVICE MODEL FOR ELEMENTARY SUPERVISING TEACHERS BASED UPON THE PERFORMANCE OF THEIR STUDENT TEACHERS

By

Barbara Jean Sullivan

Teacher education is continually undergoing a process of study and evaluation in an effort to improve one of its products - the elementary school teacher. An area of weakness in teacher education programs was identified by a questionnaire sent to elementary principals and first year teachers. The results of these questionnaires indicated that providing for individual differences in elementary classrooms was an area in which teachers need additional help.

It was the purpose of this study to investigate one means of alleviating this shortcoming in the pre-service education of teachers. The researcher planned to work through supervising teachers during the student teaching experience in order to attempt to change student teacher behavior. During in-service sessions with supervising teachers in the experimental group a teaching model on providing for individual differences was used. The supervising teachers in turn worked with their student teachers to help them improve in this area.

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The results
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Additional
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(1) There
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(2) Compar-
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In order to evaluate this procedure a pre- and post-test for an experimental and a control group was used to measure the student teacher's provision for the individual differences in her classroom. Both the university coordinator and the supervising teacher used the evaluative instrument on the occasion of the coordinator's first and last observation of each student teacher during the term of student teaching. In the case of the second control group only the post-test was used.

The results of the study indicated that there was no significant gain in the experimental group of student teachers as rated by the supervising teacher. However, the university coordinators' ratings showed a gain in one area: providing proper time allotments to complete tasks.

Additional information was forthcoming from the study's data including:

(1) There was no difference in providing for individual differences of students by student teachers at various grade levels.

(2) Comparison of student teachers' use of varying materials with whether or not supplementary materials were available in the schools yielded no significant difference.

(3) Other information including the degree held by the supervising teacher, whether or not he had taken a course in supervising student teachers, how he perceived

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(4) The amount of time spent by each supervising teacher in the experimental group in follow-up activities did not correspond to the degree of improvement shown by the student teacher.

This study highlighted first the use of supervising teachers in teacher preparation programs in an effort to improve student teacher behavior and secondly the use of a teaching model in providing for individual differences during in-service sessions with supervising teachers.

**A STUDY OF THE EFFECTIVENESS OF AN IN-SERVICE
MODEL FOR ELEMENTARY SUPERVISING TEACHERS BASED
UPON THE PERFORMANCE OF THEIR STUDENT TEACHERS**

By

Barbara Jean Sullivan

A THESIS

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Michigan State University

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The completion of the study would not have been possible without the support of the writer's devoted family to whom much is owed.

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CHAPTER I

INTRODUCTION

In this introductory chapter a statement of the problem to be studied together with its purpose and scope are delineated in the general and specific statements given. The limitations which can be expected are enumerated. The importance of undertaking a project of this nature appears in the significance of the problem. What is assumed about the conditions relative to the setting of the study is reported under the assumptions of the study. The principal terms used throughout the study are defined in the last section of the chapter.

STATEMENT OF THE PROBLEM

Among his numerous responsibilities, the teacher educator must seek better ways of preparing prospective teachers. In the preparation program, the success of the experience designated as student teaching has not been adequately studied. It is necessary to investigate varied alternatives as means of improving the performance of student teachers. The persons in higher education institutions and those in elementary and secondary schools who are responsible for educating teachers should jointly assume the task for improving student teaching behavior. This study, which is based on such cooperation, sought to investigate one method of working

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through the supervising teacher in an effort to influence student teacher behavior.

In order to study this problem the first phase identified an area of weakness in teacher education programs through questionnaires sent to elementary principals and first year teachers. The results of the questionnaires established providing for individual differences as the area for the study.

During the second phase a teaching model was devised for use with the supervising teachers in the experimental group. These teachers then attended in-service sessions in how to provide for individual differences and in turn worked with their student teachers to help them improve in this area. It was the teaching model used with the supervising teachers during the in-service sessions which provided them the means for improving the performance of their student teachers. There was no prescribed procedure for these follow-up activities but the supervising teachers were asked to keep a record of the time spent and the type of the activity engaged in with the student teachers. How the supervising teacher chose to transmit the content of the in-service sessions was left to the discretion of the supervising teacher. Such a study could not be undertaken if the supervising teachers were not willing to assume the partnership role necessitated by the design of the study. Cooperation between

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If this method of working through and with supervising teachers to improve the teaching behavior of student teachers proved successful, the teaching model could be replicated for use with other groups of supervising teachers. This would, of course, be subject to the limitations of other universities, school districts, and areas where it would be used.

PURPOSE AND SCOPE OF THE STUDY

GENERAL STATEMENT

The general purpose of this study is to work through and with supervising teachers in an effort to improve the teaching behavior of the student teachers with whom they are working. How much difference, if any, was observable in the one group of student teachers in their ability to provide for individual differences if supervising teachers had attended in-service sessions in providing for individual differences as contrasted with two control groups whose supervising teachers had not attended such in-service sessions, is the basis for this study. The test of this procedure in working through and with supervising teachers is the crux of this study.

SPECIFIC STATEMENT

It was the specific purpose of this thesis to make

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comparisons among three groups of student teachers to determine how they provide for the individual differences in their classes. In the experimental group the student teachers whose supervising teachers had attended in-service sessions in providing for individual differences and in turn were to work with their student teachers in this area were compared with two control groups of student teachers whose supervising teachers had not participated in such sessions.

The following hypotheses were used to develop this study:

(1) That the strategy of working through the supervising teachers to aid student teachers does significantly change student teacher behavior.

(2) That the ability of student teachers to provide for individual differences can be increased by giving their supervising teachers special assistance in this area.

(3) That the university coordinator and supervising teacher using the same evaluative device for measuring the student teacher's provision for individual differences in a class would show similar results.

(4) That the strategy used for instructing supervising teachers to individualize instruction would be a beneficial one.

The data from the study will also convey other information including:

1. The difference in the provision for individual differences by student teachers at various grade levels.

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2. A comparison of the student teacher's use of varying materials with whether or not supplementary materials were available in the school.

3. Examination of degree earned by supervising teacher, whether or not the supervising teacher took a course in the supervision of student teachers, how he viewed the role of student teacher, and the number of student teachers he had.

4. A comparison of the student teacher's actual behavior in providing for individual differences with students' individual needs.

5. A comparison of the supervising teacher's attitude toward providing for individual differences with the student teacher's success in this area.

It is assumed that the study will demonstrate that both the university coordinator and supervising teacher can perceive the varying degrees of providing for individual differences using a percentage scale during the classroom observation of a student teacher.

LIMITATIONS OF THE STUDY

The study raised questions as to the mechanics for providing the in-service sessions with supervising teachers:

(1) Are supervising teachers permitted to leave their classrooms to attend in-service sessions?

(2) If so, are student teachers allowed to serve as substitutes or is it necessary for the school district to

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(3) Are supervising teachers given the choice to attend or not to attend in-service sessions called by the university coordinator?

(4) Can all supervising teachers be absent from the school district or building at the same time?

ASSUMPTIONS OF THE STUDY

It has been assumed that any differences in the make-up of the school populations where the student teachers were assigned did not influence the study. The emphasis of the study was upon the performance of student teachers in providing for individual differences in the classroom.

It would be impossible to establish groups of student teachers with identical backgrounds, grade point averages, experiences with children, etc. Therefore the assumption is made that the student teachers involved in the study were typical groups of student teachers: students from the same university, at the same level in their pre-service education, having fulfilled pre-student teaching experiences and with similar majors.

SIGNIFICANCE OF THE PROBLEM

Quality supervision of student teaching emerges from a superior education program which provides for continuous growth and improvement. By quality supervision is meant the utilization of personal and professional attributes and techniques on the part of the supervising teacher which enhance the optimal acquisition of teaching competency by the student teacher. This study is one step in this direction.

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When the supervising teacher who is professionally prepared works with student teachers in his classroom, he can be a vital resource in the development of a teacher education program. He can represent the single most influential force in shaping new teachers' professional behavior. The value of this professional worker has not yet been fully realized nor has he been fully used in the total program of teacher education. This study involves the supervising teacher in an effort to raise one competency of teacher preparation to a higher level of achievement.

The long-standing issue of fragmentation of authority and responsibility within teacher education is compounded today by the greater demands placed on teachers, requiring more sophisticated professional preparation, and by the consequent increase in resources needed for preparation programs.

The necessary combining of theory and practice in teacher education underscores the need for close and continuing cooperation among schools, colleges and universities preparing teachers, and state departments of education, based upon appropriate definitions of roles and responsibilities of each. However, the long neglect of meaningful school involvement has resulted in a current movement toward total assumption of professional preparation responsibilities by school systems.¹

This study, although not delineating roles of authority, does tend to draw the schools into this partnership with

¹The American Association of Colleges for Teacher Education, Crises in Teacher Education: A Dynamic Response to AACTE's Future Role (Washington, D.C.: The American Association of Colleges for Teacher Education, 1971), p. 4.

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²B.O. S
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³Ibid.,

universities by giving the supervising teacher a definite role in imparting special knowledge to the student teacher.

But there is no conclusive evidence that any program of teacher training is superior to another, just as there is no conclusive evidence of a superior way to train physicians or engineers. So it is the better part of wisdom to provide explicit programs, carefully designed training materials, and to rely as little as possible upon haphazard instruction and incidental learning. Systematic instruction is a far better basis for subsequent self-correction and growth in skills.²

All who deal with students and supervising teachers must, however, be aware that:

If teacher education is to meet the demand for teachers of professional quality, capable of meeting the challenge of an open society in these times, it must be based upon what is known about teaching behavior and learning and about the techniques and procedures of teacher training itself. The task of building this knowledge into instructional materials, and training the teacher educator to use them, is at the heart of teacher education today. This task is enormous, and the burden of coping with it increased by the fact that the personnel that must prepare the materials and train itself to use them must at the same time carry on a program to supply almost 200,000 new teachers per year.³

The majority of college and university personnel involved in teacher education are well aware of this challenge. This particular study involves the classroom teacher to a great degree in the partnership role of teacher education. In this partnership arrangement it is the school

²B.O. Smith, Teachers for the Real World (Washington, D.C.: The American Association of College for Teacher Education, 1968), p. 80.

³Ibid., 172-173.

system which provides training opportunities while the colleges and universities are responsible for additional training and academic preparation. Each component of the total process does play an important role in the total picture of teacher education. In the final analysis, the student teacher's development is determined by the quality of the student teaching experience which in no small part is due to the skills and attitudes of the supervising teacher. Improving the skill or increasing the ability of the supervising teacher through the use of the instructional model is a goal of this study.

In a U.S. Department of Health, Education, and Welfare Bulletin, is stated:

At the present time we have various plans for different teacher education programs, but relatively few opportunities to develop instructional materials which have a proven capability for helping a trainee learn and perform a particular teaching skill.⁴

An analysis of the data for the study will indicate the success of the use of the teaching model with supervising teachers in their follow-up work with their student teachers. In the final analysis teaching effectiveness must be translated into behavior. In order to modify teaching behavior of student teachers it is necessary to modify the teaching behavior of supervising teachers.

⁴U.S. Department of Health, Education, and Welfare, How Teachers Make a Difference, (Washington, D.C.: U.S. Government Printing Office, 1971), p. 103.

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DEFINITION OF TERMS

Throughout this study the use of the following terms imply the meaning as given.

COLLEGE OR UNIVERSITY SUPERVISOR OR COORDINATOR

A staff member of the college or university who regularly visits or observes student teachers; the college supervisor usually has additional responsibility for on-campus seminar or college courses.⁵

IN-SERVICE TEACHER EDUCATION

Activities on the part of employed teachers that contribute to their professional growth and qualifications, for example, travel, professional reading, participation in supervisory and curriculum development programs, attendance at summer-session courses, etc.⁶

INDIVIDUALIZED INSTRUCTION

Teaching undertaken in a manner that provides for each individual within a classroom. Consideration is given to the individual differences of the pupils insofar as emotional, social, physical, mental and moral growth are concerned.⁷

⁵Carter V. Good, Editor, Dictionary of Education, (New York: McGraw Hill Book Co., Inc., 1959), p. 240.

⁶Ibid., p. 550.

⁷Edward W. Smith, Stanley W. Krause, Jr., and Mark M. Atkinson, The Educator's Encyclopedia, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1961), p. 256.

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SUPERVISING OR COOPERATING TEACHER

The teacher to whom a student teacher is assigned is responsible for guiding and supervising his learning experiences as well as his initial teaching experiences.⁸

STUDENT TEACHING

That segment of a teacher's pre-service training which provides the beginner with classroom teaching experiences under the close supervision of an experienced teacher.⁹

SUMMARY

This chapter has defined the purpose and scope of the study and its importance for educational purposes. Also included were assumptions made by the writer regarding the project, the limitations and the definition of terms used.

⁸Ibid., p. 869.

⁹Kevin Ryan, "Student Teaching", The Teacher's Handbook, ed. Dwight W. Allen and Eli Seifman, (Glenview, Illinois: Scott Foresman and Company, 1971), p. 16.

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CHAPTER II

REPORT OF RELATED RESEARCH

This study did not have its conception in any previous research findings and thus the related research is rather limited. Only one study was found to have similar implications, but several related areas of research which are pertinent to the study are reported here. These areas include the importance of student teaching, the vital role of the supervising teacher, the partnership approach to teacher education, responsibilities of teacher preparing institutions, in-service sessions for supervising teachers, importance of classroom observations, teacher evaluation by elementary principals, and providing for individual differences.

RELATED RESEARCH

The report of a study conducted by Jay A. Monson and Aldon M. Beeb at the Westfield Public Schools, New Jersey, in conjunction with the Tri-University Project in Elementary Education at New York University 1968-69 has some areas of similarity with the study being reported. The college supervisors, serving as consultants, were responsible for in-service training seminars with supervising

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teachers for the purpose of identifying and acquiring supervisory skills. The supervising teacher, in this pilot program, was given major responsibility for guiding the professional growth of the student teacher.¹⁰

The means of utilizing the supervising teachers and providing in-service sessions for them are similar to those conducted in this study.

The conclusions of the pilot study in New Jersey were as follows:

(a) Supervising teachers can satisfactorily assume major responsibility in student teacher supervision provided they receive training for such. (b) College supervisors, supervising teachers, and student teachers all favor such a supervisory program and the results obtained therefrom. (c) College supervisors can make better utilization of their professional time and training by conducting in-service training sessions for supervising teachers rather than by directly supervising student teachers in classroom situations. (d) By using analysis systems developed to study teaching, supervising teachers can better provide analytical supervision for student teachers, and also can improve their own classroom instruction. (e) An on-site in-service training program provides for an immediate opportunity to try theoretical ideas in a real situation. (f) A college and local school district program of student teacher supervision, cooperatively planned and oriented, results in improved relationships between these two groups and enhances the overall student teaching program.¹¹

¹⁰Jay A. Monson and Aldon M. Beeb, "New Roles for the Supervisor of Student Teaching," Educational Leadership, XXVII (October, 1970), 44-47.

¹¹Ibid., p. 47.

THE IMPORTANCE OF STUDENT TEACHING

It is for the following reason that teacher preparing institutions have long considered teacher education their primary challenge.

Teacher education - both pre-service and in-service - has long been considered a necessary ingredient in any formula that effectively alters the conventional method of educating children.¹²

That portion of the pre-service teacher education called student teaching which provides practical teaching experience under the close supervision of an experienced teacher is perhaps more significant today than at any other time since the certification of teachers became accepted practice. It is the most common element of teacher education and is considered by many to be the most valuable of the pre-service professional courses.

In the early years following the creation of the North Central Association for Colleges and Secondary Schools in 1896, this association recommended that teachers should have some professional study including practice teaching in addition to academic course work. In 1956 another accrediting agency, the National Council for the Accreditation of Teacher Education was formed. The approval of these accrediting agencies has been sought by teacher

¹²A Newsletter of the Conference for Educational Development and Research, D & R Report, (Denver, Colorado 1972) Volume 1, No. 3, p. 1.

preparing institutions. Therefore, the standards which have been established by these agencies for student teaching have exerted considerable influence upon student teaching programs. As a result, the recent trends in student teaching have been toward:

An almost universal acceptance of this part of teacher education; allowing the student teaching to be the center of the professional core; full time student teaching; more off-campus student teaching; the awarding of more credit hours for student teaching; longer student teaching assignments; the use of higher standards in student teaching; the provision of more and higher quality supervision; and increased research activities in student teaching.¹³

The importance of student teaching is stressed in the Association of Student Teaching Bulletin No. 1.

Student teaching is almost universally accepted as the most dynamic phase of teacher education. While serious questions are being raised in many quarters about the effectiveness of student teaching as it is being practiced today, those responsible for the preparation of teachers see in the student teaching process a most valuable resource for helping the prospective teacher become a student of teaching.¹⁴

With the establishment of the fact that student teaching is an essential ingredient of any program of teacher education it behooves the teacher preparing institutions to guarantee such an experience. Laboratory experiences should be provided which enable the student to

¹³James A. Johnson, A Brief History of Student Teaching, (DeKalb, Illinois: Creative Educational Materials, 1968), p. 197.

¹⁴Pauline Hilliard and Charles L. Durrance, Guiding Student Teaching Experiences, (Washington, D.C.: Association for Student Teaching, 1968), p. 1.

broaden and deepen his understanding of principles and apply them to the practical problems of teaching.

Guiding student teaching experiences is a highly complex task for which no simple answers and certainly no prescriptive answers can be given. Admittedly, the quality of the student teaching experience depends upon numerous variables. Many of such variables can be controlled only by the cooperating college and its cooperating student teaching centers within the frame of reference of the college's philosophy of teacher education. Nevertheless, an analysis of the literature devoted to student teaching and of the shared perceptions of persons responsible for designing effective programs of teacher education does tend to identify a core of questions of continuing concern to college supervisors and to administrators and supervising teachers in the student teaching centers. There is evidence that the measure of success attained in guiding the student teaching experience is directly related to the ways in which these questions are resolved.¹⁵

THE VITAL ROLE OF THE SUPERVISING TEACHER

The vital position of the supervising teacher is stressed by Marvin A. Henry and W. Wayne Beasley.

There is no other sequence of study in teacher preparation which has a more profound impact upon a college student than the experience of student teaching. It is almost universally advocated by critics and friends of education alike as a necessary process for teacher certification and its practice is virtually unquestioned. One authority has stated that a student undergoes greater personality change during his student teaching experience than at any other equivalent period of time in his life. In a few short weeks he moves from college student to beginning teacher acquiring a whole new set of skills, attitudes, and responsibilities. This

¹⁵Ibid.

drama of change and development does not unfold on the college campus but takes place in our elementary and secondary schools under the primary direction of a public school teacher. The basic action is realized in the classroom and the supervising teacher is the key to the developmental process.¹⁶

This study acknowledges the key role of the supervising teacher in the student teaching experience.

In this study the supervising teacher was asked to teach the content of the teaching model to the student teacher. This is not a new role for the supervising teacher since it is during the student teaching experience that the supervising teacher becomes actively involved in the education of the student teacher. In the Association for Student Teaching Bulletin, No. 28 it is stated:

The teaching of the student teacher occurs primarily in the individualized teaching situation of the conference. It is during the conference between the student teacher and his supervisor that there is an opportunity to talk about the central concern of the student of teaching--the nature of teaching itself!¹⁷

Considering that the success of this study was dependent upon the supervising teachers, the report of the study conducted by Susan A. Gregory was useful. As background information on the teachers taking part in this study

¹⁶Marvin A. Henry and W. Wayne Beasley, Supervising Student Teachers the Professional Way, (Terre Haute, Indiana: Sycamore Press, 1972), p. vii.

¹⁷Aldon M. Beeb, Arlene F. Low, and Floyd T. Waterman, Supervisory Conference as Individualized Teaching, (Washington, D.C.: Association for Student Teaching, 1969), p. 9.

the survey asked whether or not they had taken a course in the supervision of student teachers. Gregory found that seven percent of the institutions responding to her survey required a course in supervision.¹⁸ In 1966 the Association for Student Teaching recommended that supervising teachers be certified.

Of the eighty institutions responding to Gregory's questionnaire on recognizing and providing for individual differences as a criterion for supervising teachers the rank order of importance in the responses were as follows with six not responding to the question:

<u>Important Criterion</u>		<u>Non-important Criterion</u>	
(1)	(2)	(3)	(4)
48	18	3	5

Recognizing and providing for individual differences reflects upon a democratically run classroom. It seems that the two would work together by recognizing individual differences as an integral part of such a classroom.¹⁹

The influence of the supervising teacher was crucial to the study being reported here. Research bears out this fact.

Of the human components of the student teaching experience, a survey of the research has revealed that the cooperating teacher is the single most potent figure in affecting the practical experience of the prospective teacher.²⁰

Dr. Leslie emphasized that when efforts were made to maximize the effectiveness of cooperating teachers they were often directed at the existing compatibility between them

¹⁹Ibid., p. 181.

²⁰Larry L. Leslie, "Matching Student Teachers with Cooperating Teachers: A Fruitful Effort?", The Journal of Teacher Education, XXII (Fall, 1971), 303.

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and their student teachers. He cited studies by Sorenson and Halpert, Curtis and Andrews, Lindsey and Monahan linking student teacher success with supervising teacher compatibility. Leslie also cited studies by Price and Stolfer which stressed the impact of the cooperating teacher upon the student teacher.²¹

James H. Young reported a study investigating a change in authoritarianism in elementary student teachers. The study attempted to investigate the relationships between supervising teachers and student teachers in this regard. It was found that student teachers did change significantly during student teaching. Many factors accounted for the change in student teacher behavior including the supervising teacher.²²

THE PARTNERSHIP APPROACH TO TEACHER EDUCATION

The joint publication by the American Association of Colleges for Teacher Education and the Association for Student Teaching entitled Partnership in Teacher Education reports on an accelerating movement toward more collaboration in teacher education during the laboratory phase. It reports on some already established cooperative ventures.²³

²¹Ibid., pp.303-308.

²²James H. Young "Authoritarianism in Elementary Student Teachers and Their Supervising Teachers," The Journal of Teacher Education, XXII (Spring, 1971), 70-71.

²³E. Brooks Smith, Hans C. Olsen, Patrick J. Johnson, and Chandler Barbour (ed.) Partnership in Teacher Education, (Washington, D.C.: The American Association of Colleges for Teacher Education, 1968 and Association for Student Teaching, 1968), p.v.

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The partnership role of supervising teachers and institutions of higher learning is reiterated in the following statement:

Student teaching is a joint responsibility of public schools and academic and professional divisions of teacher education institutions. Teachers cannot be educated in a vacuum nor can they be educated in isolation from the classroom. The total responsibility for the preparation of high quality teachers is shared by those who employ them as well as those who provide for their formal education, including academic and professional departments of institutions of higher education. Knowledge and method go hand in hand.²⁴

This study emphasizes the partnership role without spelling out the responsibilities simply because it has not yet been done satisfactorily. Paul H. Masover stated: "But, no one has yet provided appropriate answers that delineate clearly the partnership role."²⁵

IN-SERVICE SESSIONS FOR SUPERVISING TEACHERS

The importance of in-service sessions for supervising teachers was stressed by William A. Bennie and Patricia Ann Graham.

It is common knowledge that among the most persistent problems in the student teaching field is the lack of qualified supervising teachers. The literature concerned with student teaching supervision is replete with pleas for colleges to provide in-service education to classroom teachers in order that they might become better

²⁴Hilliard and Durrance, op. cit., p. 15.

²⁵Paul H. Masover, An Imperative: A National Policy For Teacher Education, (Atlantic City: International Reading Association and The Colleges for Teacher Education, April 1971), p. 19.

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supervisors.²⁶

Harold E. Turner concurs with the need for improved in-service training for supervising teachers.

The educator is constantly trying to find a better way to reach individual students and to provide for their needs in a relevant fashion. A more enlightened understanding of the training process and the steps involved in the teaching act itself is very much needed.²⁷

One means of in-service training for teachers is the use of a mini-course whereby the teacher teaches himself those classroom skills and approaches identified by researchers as being most effective. Wood reported on the effectiveness of such in-service.

Our research indicated that the mini-course brings about greater changes in specified teaching skills than does any approach that has been reported in the professional literature. Evidence to date indicates that the improvements become a permanent part of the teacher's repertoire.²⁸

This reference gives emphasis to the importance of in-service training.

The strategy of teaching teachers should result in improved teacher education programs. Edward L. Ruman has written:

Student teaching programs of desirable quality cannot be achieved unless we assist those who

²⁶William A. Bennie and Patricia Ann Graham, "In-Service Education of the Supervising Teacher," Contemporary Education, XLII (May, 1971), 295.

²⁷Harold E. Turner, "A Challenge for Supervisors," Clearing House, XLV (October, 1970), 116.

²⁸Walter Wood, "This Mini Seems Here to Stay," American Education, VII (December, 1971), 15.

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supervise student teachers to prepare themselves for this unique responsibility.

Effective in-service education programs will, however, focus upon providing opportunities for individuals to modify perceptions of themselves in relation to their responsibility in teacher education.²⁹

One objective of the teaching model for the in-service sessions with the supervising teachers was the intended change in the behavior of the participants.

To change another person's behavior, it is necessary somehow to modify his beliefs (and) perceptions. When he sees things differently, he will behave differently.³⁰

RESPONSIBILITIES OF TEACHER PREPARING INSTITUTIONS

Some research studies have spelled out responsibilities for teacher preparing institutions such as David E. Purpel's study on "Student Teaching" in which he states:

Teacher training institutions must face up to the responsibilities of finding and training qualified supervisors and putting the necessary resources at their disposal; in a word they must professionalize supervision.³¹

The study by Albert H. Yee reports that the attitudes of student teachers toward young people generally reflect the

²⁹Ruman, Edward L., "In-Service Education of Supervising Teachers and College Supervisors," Partnership in Teacher Education, ed. Smith and others (Washington, D.C.: The American Association of Colleges for Teacher Education and Association for Student Teaching), 1968, 272.

³⁰Ibid.

³¹David E. Purpel, "Student Teaching", The Journal of Teacher Education, XVIII, no. 1, (Spring, 1967), 20-23.

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predominant influence of their cooperating teachers. With these results the author stated that:

Teacher educators should continue their efforts to improve the conditions under which student teachers are influenced by their cooperating teachers.³²

The challenge to improve teacher preparation as postulated by Ronald Marso is one shared by both friends and foes of education.

The need for adequate teacher preparation becomes increasingly pressing as school systems grow larger and more complex, social problems more acute, and knowledge continues to explode. Newly prepared teachers, especially in urban schools, must be prepared to cope with students of diverse social backgrounds and values, and yet teach more knowledge effectively while operating within an extremely complex and often frustrating organizational structure. Preparing teachers to meet these demands is and will continue to be a most challenging task for the laboratory experience programs of the universities.³³

This study was an attempt to alleviate or lessen one area of weakness in teacher preparation programs. A study explaining another way of meeting deficiencies in teacher education programs was reported by James V. Mitchell, Elizabeth Z. Howard and Toni E. Santmire. This particular program was designed to follow the student teaching experience. While the student teacher's experiences were

³²Albert H. Yee, "Do Cooperating Teachers Influence the Attitudes of Student Teachers?" Journal of Educational Psychology, LX (August, 1969), 331.

³³Ronald M. Marso, "Project Interaction: A Pilot Study in a Phase of Teacher Preparation," The Journal of Teacher Education, XXII (Summer, 1971), 194.

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still recent and vivid it provided him with the opportunity to evaluate himself and his teaching. In a course following the student teaching experience, the student teacher assumed responsibility and was given the opportunity to plan his own activities and method of improvement. This procedure identified a strong student need at a critical point in the teacher education sequence.³⁴

If student teachers are capable of analyzing their strengths and weaknesses as reported by Mitchell, Howard, and Santmire so should first-year teachers be able to do this. In the study being reported first-year teachers were asked to identify areas of weakness in teacher education programs.

THE IMPORTANCE OF CLASSROOM OBSERVATIONS

Classroom observations of the student teachers by the university coordinator and supervising teacher were important to this study by providing necessary data. Howsam stressed this:

In education the classroom is the laboratory. Whatever the interest of the investigator -- be it students, teachers, administrators, the physical plant, the teacher -- learning process or any combination of these -- what goes on in the classroom and the results of the process constitute the most fundamental data.³⁵

³⁴James V. Mitchell, Jr., Elizabeth Z. Howard, and Toni E. Santmire, "A Terminal Individualized Instruction Program for Prospective Elementary Teachers," The Journal of Teacher Education, XX (Fall, 1970), 362-365.

³⁵Robert B. Howsam, New Designs for Research in Teacher Competency, (San Francisco: California Teachers Association, 1960), p. 10.

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Medley and Mitzel both asserted the role of the observer:

It is widely believed that a trained supervisor or expert of some type can assess the effectiveness of a teacher by watching him teach.³⁶

Within the past decade a number of classroom observation systems have become available to teacher educators.

Although much of the early developmental work in affective systems was done by H.H. Anderson and John Withall, the system developed by Ned Flanders has become the best known and most widely used of all observation systems. The Flanders system utilizing only ten categories, has been modified and expanded by other researchers. The Verbal Interaction Category System (VICS) developed by Edmund Amidon and Elizabeth Hunter is basically the Flanders system expanded to provide more detailed information. Affective systems have been developed by Robert L. Spaulding, Marie Hughes, and others.

Cognitive observation systems developed by Arno A. Bellack, B.O. Smith, and M.O. Muex are among the best known. Multi-dimensional systems have been developed by Robert L. Spaulding, Fred K. Honigman, Medley and Mitzel, David G. Ryans, and Psenshaw and Cyphert.

A common characteristic of all classroom observation systems, whether affective, cognitive or multi-dimensional, is that they require an observer who employs a systematic method of recording teacher and student behaviors.³⁷

³⁶Donald M. Medley and Harold E. Mitzel, "Measuring Classroom Behavior by Systematic Observation", Handbook of Research on Teaching, ed. N.L. Gage (Chicago: Rand McNally and Company, 1963), p. 249.

³⁷J.T. Sandefur and Alex A. Bressler "Classroom Observation Systems in Preparing School Personnel", Interaction Analysis ATE Research Bulletin No. 10, Association of Teacher Educators and ERIC Clearing House on Teacher Education, Washington, D.C. (November, 1971), p. 32.

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Since no available instrument could measure the student teacher's provision for individual differences it was necessary to devise an appropriate instrument.

Classroom observation systems provide the vehicle for measurement of teaching behavior - a measurement which has not long been available to the teaching profession.³⁸

In addition,

A major challenge of the next decade will be to develop more unanimity in the profession as to what constitutes effective teaching behavior and to develop the categories for observation systems which both quantify and qualify these behaviors.³⁹

TEACHER EVALUATION BY ELEMENTARY PRINCIPALS

Principals, for the most part, are competent in their evaluations of teachers. Fattu reported:

Available studies show that in general teachers can be reliably rated by administrators and supervisory personnel with a correlation of .70 or above.⁴⁰

This opinion is also shared by Brighton who reported:

As 'head teacher' in the school, the principal is usually in the best position to conduct teacher evaluations for (a) he holds the administrative authority, and (b) he is often the best qualified member of the entire system by reason of training and experience.⁴¹

³⁸Ibid., p. 31.

³⁹Ibid.

⁴⁰N.A. Fattu, "Can Principals Evaluate Teachers?" The National Elementary Principal, XLIII, No. 2, (November, 1963) 19.

⁴¹Stayner F. Brighton, Increasing Your Accuracy in Teacher Evaluation, (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1965), p. 20.

In the first phase of the study being reported here the elementary principals were asked to complete questionnaires identifying areas of weakness in teacher preparation as they saw them.

PROVIDING FOR INDIVIDUAL DIFFERENCES

A centuries old idea in education is that of the individualization of instruction. This was the content of the teaching model devised for use with the supervising teachers in the experimental group of the study. It was prepared from a variety of resources including the following:

Lloyd K. Bishop, Individualizing Educational Systems, Harper & Row, Publishers, New York, 1971.

Richard W. Burns, New Approaches to Behavioral Objectives, Wm. C. Brown Company Publishers, Dubuque, Iowa, 1972.

Belen Collantes Mills and Ralph Ainslee Mills, Designing Instructional Strategies for Young Children, Wm. C. Brown Company Publishers, Dubuque, Iowa, 1972.

Virgil M. Howes, Individualization of Instruction - A Teaching Strategy, The MacMillan Co., New York, 1970.

Bryce B. Hudgins, The Instructional Process, Rand McNally & Company, Chicago, 1971.

Paul D. Plowman, Behavioral Objectives - Teacher Success Through Student Performance, Science Research Associates, Chicago, 1971.

Sixty-first Yearbook of the National Society for the Study of Education - Individualizing Instruction, Part I Chicago, Illinois: The University of Chicago Press, 1962 ,

There is much material written today expounding the importance of providing for individual differences in elementary classrooms. It is one of the favorite concepts in American education. Likewise, it is consistent with the basic dream in America of helping each learner achieve his potentiality. The new instructional devices and materials also further this concept. Such is the thinking expressed by Karoree Yamamoto.⁴²

Postulating "New Goals for Individualization" Ronald Stodghill quoted John Childs.

All deliberate education is a moral undertaking. That morality, it seems to me, is acted out when we deal with individualized instruction not only as a sound educational strategy, but also as a process by which this nation begins to feel the joy and strength implicit in its moral commitment to respect the uniqueness of the individual.⁴³

Albert F. Eiss reiterated the need for learning activities and media to accomplish the objectives.⁴⁴

Individualized instruction has no well defined boundaries because each condition influences and is influenced by the other. This is the thinking expressed in a summary of individualized instruction by Patrick A. O'Donnel and

⁴²Karoree Yamamoto, "Better Guidance For the Individual", Educational Leadership, XXIX (January, 1972), 319-322.

⁴³Ronald Stodghill, "New Goals for Individualization", Educational Leadership, XXIX (January, 1972), 295.

⁴⁴Albert F. Eiss, "Individualized Learning", Science and Children, IX (April, 1962), 9-11.

Charles W. Lavaroni.⁴⁵

Mildred McQueen also pointed out and described the many facets of "Individualized Instruction."⁴⁶ One of these diagnosing the needs of students and doing something about them, is described by S. Samuel Shermis and John E. Bolen in "Creating Change Agents via Student Teaching Experiences."⁴⁷

An integral part of individualizing instruction has to do with the variety and availability of instructional resources. Arthur W. Combs has written:

Teachers-in-training need to be surrounded with rich opportunities to see the kind of methods and materials other people have found useful.⁴⁸

The important role of the teacher in any study of individual differences is very well defined by Harmon D. Burch and Robert C. Reardon.⁴⁹

⁴⁵Patrick A. O'Donnel and Charles W. Lavaroni, "Elements of Individualized Instruction", Education Digest, XXXVI (September, 1970), 17-19.

⁴⁶Mildred McQueen, "Individualized Instruction", Education Digest, XXXVI (April, 1971), 25-28.

⁴⁷S. Samuel Shermis and John E. Bolen, "Creating Change Agents via Student Teaching Experiences", Peabody Journal of Education, XLVII (May, 1970), 338-41.

⁴⁸Arthur W. Combs "The Personal Discovery of Ways to Teach", Selected Readings for the Introduction to the Teaching Profession, ed. Milton Muse (Berkeley, California: McCutchan Publishing Co., 1970), 29.

⁴⁹Harmon D. Burch and Robert C. Reardon, "Individual Differences and Learning Efficiency: A Re-examination and a Re-emphasis", Contemporary Education, XLI (January, 1970), 119-22.

Alan H. Wheeler concurs with the above report in his study. The role of the teacher is basic in creating a learning environment which will recognize and respond to individual needs and differences.⁵⁰

The teacher needs to have assistance in this all important task of individualizing instruction. Robert G. Scanlon and Mary V. Brown discuss this need in their report.⁵¹

An especially helpful resource in planning the teaching model was the report by Madeline Hunter.

Individualized instruction is no one way of conducting education, nor any one special program. It is the process of custom-tailoring instruction so it fits a particular learner. An individualized program is not necessarily different for each learner, but must be appropriate for each. It is based on the premise that there is no one best way for all learners, but that there are best ways for each learner, which may be different from those for another learner.⁵²

SUMMARY

In this chapter were reported the areas of related research which gave meaning and importance to this

⁵⁰Alan H. Wheeler, "Creating a Climate for Individualizing Instruction, Young Children, XXVII (October, 1971), 12-16.

⁵¹Robert G. Scanlon and Mary V. Brown, "In-service Education for Individualizing Instruction, Educational Technology, X (February, 1970), 62-64.

⁵²Madeline Hunter, "Tailor Your Teaching to Individualized Instruction, Instructor, LXXIX (March, 1970), 53-54.

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study by their emphasis upon the groups whose cooperation is vital to providing successfully for education: the student teacher and his institution of higher learning; the supervising teacher and his classroom and school. Such cooperation is necessary if in-service sessions are to achieve the goal of providing for individual differences among students as investigated in this study.

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CHAPTER III

DESIGN OF THE STUDY

In this chapter the hypotheses of the study are stated together with the design for collecting necessary data. The procedure followed in conducting this experimental study is explained along with a description of the population used, listing of the data, collecting instruments and how the statistical analyses will be applied to the data.

STATEMENT OF HYPOTHESES

As a means of developing this study the following hypotheses were used:

(1) That the strategy of working through the supervising teachers to aid student teachers does significantly change student teacher behavior.

(2) That the ability of student teachers to provide for individual differences can be increased by giving their supervising teachers special assistance in this area.

(3) That the university coordinator and supervising teacher using the same evaluation device for measuring the student teacher's provision for individual differences in a class will show similar results.

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(4) That the strategy used for instructing supervising teachers to individualize instruction would be a beneficial one.

When gathering the data to test these hypotheses other information of importance was also obtained:

(1) The difference in the provision for individual differences by student teachers at various grade levels.

(2) A comparison of the student teacher's use of varying materials with whether or not supplementary materials were available in the school.

(3) Examination of the academic degree earned by supervising teacher, whether or not the supervising teacher took a course in the supervision of student teachers, how he viewed the role of the student teacher, and the number of student teachers he had.

(4) A comparison of the student teacher's actual behavior in providing for individual differences with students' individual needs.

(5) A comparison of the supervising teacher's attitude toward providing for individual differences with the student teacher's success in this area.

The main problems raised in how to carry out the study centered around the mechanics for providing the in-service sessions with supervising teachers:

(1) Are supervising teachers permitted to leave their classrooms to attend in-service sessions?

(2) If so, are student teachers allowed to serve as substitutes or is it necessary for the school district to hire substitutes?

(3) Are supervising teachers given the choice to attend or not to attend in-service sessions called by the university coordinator?

(4) Can all supervising teachers be absent from the school district or building at the same time?

PROCEDURE

This particular study is basically an experimental study. Its design was nonrandomized control-group, pre-test - post-test.

	Pre-Test	Treatment	Post-Test
Experimental Group	T ₁	X	T ₂
Control Group	T ₁		T ₂
Control Group			T ₂

The subjects in each group were not assigned at random. The preassembled groups of student teachers with their supervising teachers were selected as similar as availability permitted. Pre-test means and standard deviations were then compared for similarity.

The design of this study utilized the procedure of a pre- and post-test administered to an experimental group and a control group. A second control group did not have pre-testing but took only the post-test. The same evaluation instrument for the pre- and post-test was used by both the

university coordinators and supervising teachers.

The treatment in the study given to the experimental group was in the form of a teaching model used with the supervising teachers during two in-service sessions.

For the statistical analysis of the data comparing the effect of the treatment upon the groups, the analysis of variance and multivariate conclusions were employed.

The data for the study were gathered by utilizing the following procedure:

- (1) Sent a questionnaire to all elementary principals in the Kalamazoo Valley Intermediate School District seeking an identification of an area of weakness in teacher education programs as evidenced by their evaluation of new teachers.

- (2) Sent a questionnaire to all first year elementary teachers in the Kalamazoo Valley Intermediate School District seeking an identification of an area of weakness in teacher education programs as evidenced by their short term of experience in the classroom.

- (3) Compiled the results of both questionnaires and selected the one area for the study which was providing for individual differences in the classroom.

- (4) Arranged for the experimental group of the study to be student teachers from the Michigan State University Teacher Education Center in Grand Rapids under the direction of Dr. John Phillips.

- (5) Arranged for the first control group taking both the pre- and post-tests to be student teachers from Michigan State University Teacher Education Center in Benton Harbor under the direction of Dr. Hugo David.
- (6) Arranged for the second control group taking just the post-test to be student teachers from Michigan State University Teacher Education Center in Battle Creek under the direction of Dr. John Cragun.
- (7) Prepared a teaching model in providing for individual differences in the classroom to be used with the supervising teachers in the Grand Rapids Center.
- (8) Devised the evaluative instrument for the pre- and post-test observations by the university coordinators and supervising teachers.
- (9) Devised the record sheet for the use of the supervising teachers in the Grand Rapids Center.
- (10) Prepared surveys for use by all the supervising teachers and student teachers involved in the study for the comparisons of group data.
- (11) Met with university coordinators and supervising teachers working on the study in each center when such a meeting could be arranged.
- (12) Presented the teaching model in providing for individual differences in the classroom to the supervising teachers in the experimental group in the Grand Rapids Center during two sessions.

(13) Arranged with the university coordinators in the three centers to administer the pre- and post-test observations of the student teachers and collect the necessary forms from the supervising teachers.

(14) Compiled and analyzed the data obtained in the study which resulted in the final conclusions, recommendations, implications, and further questions.

POPULATION FOR THE STUDY

The population for this study was the student teachers from Michigan State University for the Spring term 1972. The sample used from this population was not randomly selected. In order to have groups of comparable size, three centers where Michigan State University students are placed for student teaching were used. The choice of the three centers was made on the basis of travel convenience for the writer. All of the elementary student teachers in each of the three centers were included unless otherwise indicated. Therefore, there was no special selection of subjects since the student teachers were assigned prior to the writer's initial contact with the center coordinators to conduct the study. The student teachers' placement in these centers was based on their own choice.

The elementary student teachers and supervising teachers in the Grand Rapids Center during the 1972 Spring Term at Michigan State University numbered fourteen. Of this number, thirteen supervising teachers participated in the study by completing instruments and attending in-service sessions. Due to a death in the family one supervising

teacher was unable to attend the in-service sessions and was absent from school during the post-test. The students teaching in special education classes did not participate.

The schools to which the student teachers were assigned to work with one supervising teacher each were as follows:

Crestview School	Grand Rapids	1	Second Grade
Wellerwood School	Grand Rapids	1	First Grade
Lowell Intermediate School	Lowell	2	Fifth Grade
Runciman School	Lowell	1	First Grade
		3	Third Grade
		1	Fourth Grade
Lee Elementary School	Lee Sch. Dis.	1	Second Grade
Godfrey Elementary School	Lee Sch. Dis.	1	Kindergarten
		1	First Grade
		1	Third Grade

In addition to Dr. John Phillips, Mrs. Marie Neil served as a coordinator for Michigan State University.

The elementary student teachers and supervising teachers in the Benton Harbor Center during the 1972 Spring Term at Michigan State University numbered sixteen. Of this number, all supervising teachers who participated in the study completed the instruments. None of the students assigned to special education classes participated in the study.

The schools to which the student teachers were assigned to work with the supervising teacher were as follows:

Fairplain West School	Benton Harbor	1	Primary-intermediate
		2	Grades 4-5-6
Roosevelt School	Lakeshore	1	Kindergarten
Washington School	St. Joseph	1	Kindergarten
		1	First Grade
		1	Second Grade
		1	Third Grade
		1	Fourth Grade
		1	Fifth Grade
		1	Sixth Grade
Edwardsburg Elementary School	Edwardsburg	1	First Grade
		1	Second Grade
		1	Third Grade
		1	Fourth Grade
		1	Fifth, Sixth Grades

Representing Michigan State University as coordinators were Dr. Hugo David, Mrs. Mary Ann Robinson, Mrs. Helen Reinhardt, and Mr. Donald Bourdon.

The elementary student teachers and supervising teachers in the Battle Creek Center during the 1972 Spring Term at Michigan State University numbered thirteen. Of this number, eight supervising teachers participated in the study by completing the post-test instrument. None of the students assigned to teach in special education classes

took part.

The Battle Creek schools to which the student teachers were assigned to work with one supervising teacher each were as follows:

Level Park School	Battle Creek	1	Grades 1-2
North Pennfield School	Battle Creek	1	Second Grade
La Mora Park School	Battle Creek	1	Second Grade
Urbandale School	Battle Creek	1	Third Grade
Roosevelt School	Battle Creek	1	Third Grade
Franklin School	Battle Creek	1	Fourth Grade
Ann J. Kellogg School	Battle Creek	1	Sixth Grade
McKinley School	Battle Creek	1	Grades 5-6

Mrs. Laura Miller served as the university coordinator with Dr. John Cragun.

For comparison of the three centers where the student teachers were assigned the information about the schools in which they were teaching was important.

The following responses were tabulated from the supervising teacher survey regarding the number of student teachers, enrollment in the school, teaching staff, and whether or not teacher aides, volunteers, and supervising personnel were available.

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TABLE 3.1

Responses From Supervising Teacher's Survey in the
Experimental Group in Grand Rapids

<u>No. of Stu. Teachers Per School</u>	<u>Enroll- ment</u>	<u>GRAND RAPIDS CENTER</u>			
		<u>Staff</u>	<u>Teacher Aides</u>	<u>Volun- teers</u>	<u>Supervisory Personnel</u>
2	210	7	yes	yes	yes
5	450	15	no	yes	yes
1	220	7	yes	yes	yes
1	350	13	yes	no	yes
3	525	20	yes	no	no
1	260	9	no	no	yes

The majority of students in these schools were placed in the lower socio-economic level in the estimation of their teachers.

TABLE 3.2

Responses From Supervising Teacher's Survey in the
Control Group in Benton Harbor

<u>No. of Stu. Teachers Per School</u>	<u>Enroll- ment</u>	<u>BENTON HARBOR CENTER</u>			
		<u>Staff</u>	<u>Teacher Aides</u>	<u>Volun- teers</u>	<u>Supervisory Personnel</u>
1	442	15	yes	yes	yes
3	260	10	yes	yes	yes
7	355	13	yes	yes	no
3	471	19	no	no	no
1	187	10	no	no	no

The teachers in these schools checked the socio-economic level of their students to be middle class.

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TABLE 3.3

Responses From Supervising Teacher's Survey in the Control Group in Battle Creek

BATTLE CREEK CENTER

<u>No. of Stu. Teachers Per School</u>	<u>Enroll- ment</u>	<u>Staff</u>	<u>Teacher Aides</u>	<u>Volun- teers</u>	<u>Supervisory Personnel</u>
1	350	12	yes	yes	yes
1	540	48	yes	yes	no
1	525	17	yes	no	yes
1	---	9	yes	yes	no
1	430	17	yes	yes	yes
1	400	18	yes	yes	no
1	307	12	no	no	yes
1	270	9	yes	yes	no

The socio-economic level of most of the students in these schools was checked by the teachers as being low.

These data indicate that basically the schools in the three centers to which the student teachers were assigned had similar characteristics: size - both large and small elementary schools; socio-economic level of students - ranged from low to middle class; teacher aides - available in 14 schools, not in 5 schools; volunteers - available in 12 schools, not in 7 schools; supervisory personnel - available in 11 schools, not in 8 schools.

MAJOR AREAS OF CONCENTRATION FOR
TEACHER CERTIFICATION FOR STUDENT TEACHERS

The major areas of concentration for teacher certification of the student teachers were especially similar

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- 8 - Special
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- 1 - Language
- 1 - Fine Ar

Benton Harbor

- 11 - Special
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- 1 - Social
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Battle Creek

- 3 - Social
- 2 - Fine Ar
- 2 - English
- 1 - Special

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between the experimental group in Grand Rapids and the control group in Benton Harbor. Even though the majority of student teachers were majoring in special education this term was not their student teaching assignment in special education.

Grand Rapids Center

- 8 - Special Education
- 2 - Social Science
- 1 - Language Arts
- 1 - Fine Arts

Benton Harbor Center

- 11 - Special Education
- 3 - Mathematics - Science
- 1 - Social Science
- 1 - Fine Arts

Battle Creek Center

- 3 - Social Science
- 2 - Fine Arts
- 2 - English
- 1 - Special Education

SOURCES OF DATA FOR THE STUDY

The data for the study were obtained from the following sources:

- (1) Questionnaire sent to elementary principals and first year teachers in the Kalamazoo Valley Intermediate School District to identify an area of weakness in teacher preparation programs.
- (2) Survey distributed to all student teachers involved in the study for information for comparison of groups.

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- (3) Survey distributed to all supervising teachers involved in the study for information for comparison of groups.
- (4) Pre-test observation of student teachers by university coordinators.
- (5) Pre-test observation of student teachers by supervising teachers.
- (6) Post-test observation of student teachers by university coordinators.
- (7) Post-test observation of student teachers by supervising teachers.
- (8) Record kept by supervising teachers in the experimental group of the follow-up work done with their teachers after the in-service sessions.

The explanation of and use for these data collection instruments are essential to the understanding of the study.

Phase 1 of the study involved the distribution of a questionnaire to all elementary principals and first year teachers in the Kalamazoo Valley Intermediate School District. The purpose of the questionnaire was to determine an area of weakness in teacher education programs. It was the writer's opinion that elementary principals through their observations of first year teachers are in an advantageous position to be aware of any shortcomings of new teachers. The reports by Fattu and Brighton in Chapter II concur with this opinion.⁵³

⁵³ Fattu and Brighton, op. cit.

First year teachers during their first experience of being on their own in the classroom are likewise aware of their own deficiencies. One study reported that upon completion of student teaching the students were asked to enumerate their areas of weakness as they saw them at that time. This study by Mitchell, Howard, and Santmire cited in Chapter II gives credence to the writer's opinion that first-year teachers just as well as student teachers are in a position to know their strengths and weaknesses.⁵⁴ Therefore, a questionnaire was constructed to ascertain one area of weakness common to both of these groups.

The list of elementary principals was obtained from the current directory for the Kalamazoo Valley Intermediate School District. Procuring the list of first year teachers proved more difficult. Some school districts had a policy whereby they did not give out the names of staff members. In these cases, school secretaries agreed to distribute the questionnaire by means of the school mail. In cases where teachers' names were given, the questionnaire was mailed directly to them. All of the questionnaires sent included a stamped self-addressed envelope.

The respondents were asked to mark the first, second, and third areas of concern as they saw them. Samples of the questionnaires sent to elementary principals and

⁵⁴Mitchell, Howard, and Santmire, op. cit.

first year teachers appear in Appendices 1 and 2.

The results of the questionnaires were as follows:
Of the sixty-three principals to whom the questionnaire was sent fifty-one responded indicating areas in need of improvement in teacher education programs.

TABLE 3.4

Summary of the First Three Choices on the Elementary Principal's Questionnaire Receiving the Most Responses

<u>Disciplinary Matters</u>		<u>Providing for Individual Differences</u>	
First Choice	13	First Choice	7
Second Choice	8	Second Choice	10
Third Choice	4	Third Choice	3
Marked as other Choice	1	Marked as other Choice	4
	<u>26</u> Total		<u>24</u> Total

Motivation

First Choice	1
Second Choice	4
Third Choice	7
Marked as other Choice	1
	<u>13</u> Total

Of the one hundred teachers to whom the questionnaire was sent, fifty-nine responded indicating areas in need of improvement in teacher education programs.

TABLE 3.5

Summary of the First Three Choices on the First Year Teacher's Questionnaire Receiving the Most Responses

<u>Disciplinary Matters</u>		<u>Providing for Individual Differences</u>	
First Choice	7	First Choice	16
Second Choice	6	Second Choice	8
Third Choice	4	Third Choice	2
Marked as other Choice	4	Marked as other Choice	6
	<u>21</u> Total		<u>32</u> Total

Motivation

First Choice	8
Second Choice	8
Third Choice	5
Marked as other Choice	3
	<u>24</u> Total

TABLE 3.6

Summary of the First Three Choices on the Elementary Principal's Questionnaire and First Year Teacher's Questionnaire Receiving the Most Responses

Totals From Both Questionnaires

<u>Disciplinary Matters</u>		<u>Providing for Individual Differences</u>		<u>Motivation</u>	
Principals	26	Principals	24	Principals	13
Teachers	<u>21</u> 47	Teachers	<u>32</u> 56	Teachers	<u>24</u> 37

Since the greatest number of respondents indicated providing for individual differences as an area needing improvement in teacher education programs this was the area chosen for concentration in this study.

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The following information is the summary of the remaining responses on both questionnaires.

TABLE 3.7

Summary of the First Three Choices on the Elementary Principals Questionnaire For the Additional Responses

PRINCIPAL QUESTIONNAIRES

First Choice

Instructional Skill, Methods - 4

Student Participation - 2

Application - 2

Planning - 4

Objectives - 1

Pupil Work Habits - 2

Other - 4

Second Choice

Student Participation - 2

Application - 1

Preparation of Subject Matter - 3

Planning - 3

Objectives - 2

Time Schedule - 1

Pupil Work Habits - 2

Experimentation - 1

Student Evaluation - 2

Third Choice

Student Participation - 1

Assignment - 1

Planning - 3

Objectives - 3

Use of Resources - 1

Classroom Management - 2

Pupil Work Habits - 7

Student Evaluation - 5

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Other -

TABLE 3.8

Summary of the First Three Choices on the First Year Teacher's Questionnaire For the Additional Responses

FIRST YEAR TEACHER QUESTIONNAIRE

First Choice

Application - 2
 Preparation of Subject Matter - 1
 Planning - 2
 Objectives - 2
 Pupil Work Habits - 1
 Student Evaluation - 1
 Other - 4

Second Choice

Application - 1
 Preparation of Subject Matter - 1
 Planning - 2
 Objectives - 4
 Use of Resources - 1
 Classroom Management - 2
 Time Schedule - 1
 Pupil Work Habits - 5
 Experimentation - 2
 Records and Reports - 1
 Student Evaluation - 1
 Other - 2

Third Choice

Application - 1
 Preparation of Subject Matter - 1
 Planning - 3
 Objectives - 1
 Use of Resources - 5
 Classroom Management - 1
 Time Schedule - 2
 Pupil Work Habits - 3
 Experimentation - 4
 Records and Reports - 6
 Student Evaluation - 1
 Other - 4

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The second phase of the study was to make arrangements to work with student teachers and supervising teachers during the spring session of the 1971-72 school year. The original plan was to use the student teachers from Western Michigan University in its three centers in Kalamazoo, Portage and Comstock. This necessitated seeking the permission from the proper authorities. Such permission was granted without delay by all of the administrators involved. It was decided that the Kalamazoo center would serve as the experimental group since it constituted the largest number. When a letter was sent to each of the thirty-three supervising teachers in the Kalamazoo Public Schools requesting their voluntary participation in the study only five of them responded with a willingness to serve in the experimental group. With so few participants it was imperative to find other centers with student teachers.

In order to have student teachers from only one university and the three groups - one experimental and two control - it was deemed appropriate to secure participants from Michigan State University. The excellent cooperation from the university coordinators and supervising teachers in Grand Rapids, Benton Harbor, and Battle Creek enabled the study to be continued.

The next challenge at hand was the preparation of all the necessary forms. For background information and comparative data, both a supervising teacher survey and student

teacher survey were constructed and appear in the Appendix as numbers 3 and 4. This kind of background information for the study resembled in part the data elicited from the supervising teachers and student teachers in the Impact Study conducted by the Deans and Directors of Teacher Education in Michigan in 1969.⁵⁵ Of special importance on the supervising teacher survey was the information about whether or not they had taken a course in the supervision of student teachers. This provided an interesting comparison with the number of student teachers they had and how they perceived the role of the student teacher. Michigan State University does not require the course for their supervising teachers which is in agreement with the study by Gregory cited in Chapter II.⁵⁶

The open ended responses as to how they provided for individual differences in their classrooms were solicited from both groups. These responses were used for comparisons of how the supervising teachers perceived their roles in providing for individual differences with the progress made by the student teachers as judged on the pre- and post-test evaluations.

⁵⁵Deans and Directors of Teacher Education in Michigan, The Impact of Student Teaching Programs Upon the Cooperating Public Schools in Michigan, (Michigan Council of State College Presidents: Lansing, Michigan, June, 1970).

⁵⁶Gregory, op. cit.

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The student teacher survey, along with routine information for group comparisons, asked the amount of pre-student teaching experience each student had. This information, too, could then be compared with the student's success in providing for individual differences as judged by the university coordinator and supervising teacher.

The pre- and post-test evaluative instrument to be used by the university coordinator and supervising teacher were basically the same except for the title and place for signature. These appear in the Appendix as numbers 5,6,7, and 8. In its preparation stage, the instrument was given to a number of persons for their opinions as to clarity of content as well as for their overall comments and suggestions. These persons included university coordinators, supervising teachers and members from the Michigan State University Office of Research Consultation. Their suggestions were incorporated into the final instrument as used. It was decided that the most logical procedure was to use groupings of the percentages of students within a class for whom the student teacher was taking into consideration their individual differences.

To make sure that these observations were consistent in both the experimental and control groups it was important that:

- (1) The university coordinator and supervising teacher both observed the student teacher teaching the same class at the same time.

(2) That the same subject be taught by the student teacher during both the pre- and post-test observations.

According to Ryan:

In the observation and assessment of teacher behavior it is necessary to keep in mind that teacher behaviors occur in relation to pupil behavior and therefore may be expected to vary to some extent from one group of pupils to another, and also that teacher behavior is a function of the content or subject matter taught -- e.g., behavior manifested by an elementary teacher while engaged in arithmetic instruction may differ from those demonstrated during a class in music or rhythms. Although such conditions have an attenuating effect on assessments of teacher behavior, they are integral parts of the teaching situation, and, in the interest of preserving the naturalness of the behavior under study, it would seem desirable not to attempt to eliminate or control such conditions, but rather to replicate the observations and observational situations in order to provide as broad and comprehensive an assessment basis as possible.⁵⁷

The five main categories on the pre- and post-test evaluative instruments were the same behavioral objectives which constituted the basis for the teaching model used with the supervising teachers in the experimental group.

The ultimate goal of the teaching model is best expressed by John I. Goodlad emphasizing the importance of each individual when he wrote:

But even before looking toward what we want to be perhaps we should ask fundamental questions about where we are. To what extent is each individual being provided with opportunities to develop his unique potentialities? To what extent is each individual developing a deep sense

⁵⁷David G. Ryans, Characteristics of Teachers, (Washington, D.C.: American Council on Education, 1960), p. 76.

of personal worth--the kind of selfhood that is prerequisite to self transcendence? To what extent are our young people coming into critical possession of their culture? And to what extent are our people developing a mankind identity--an identity that transcends all men in all times and in all places?⁵⁸

The preparation of the teaching model to be used with the supervising teachers in the experimental group was crucial to the success of the study since this constituted the treatment. The teaching model is number 9 in the Appendix.

According to Esther Swenson, teachers in service can benefit from many of the activities in which student teachers participate.

Their better background of experience often makes it possible for them to get new insights from activities very similar to those in which they participated while at the pre-service level. Help with providing and making use of these representative activities may be given by a teacher-education institution or by a professional organization or other agency.⁵⁹

Some of these kinds of activities were provided in the teaching model planned by the writer.

Like all lesson plans, the teaching model needed to have objectives. These were determined as behavioral objectives for the student teacher to achieve and are listed separately in the Appendix number 10. How they could be

⁵⁸John I. Goodlad, "The Schools vs. Education," Select-ed Readings for the Teaching Profession, ed. Milton Muse (Berkeley, California: McCutchan Pub. Co., 1970), p. 22.

⁵⁹Esther J. Swenson, "Teacher Preparation", Individualizing Instruction, The Sixty-first Yearbook of the National Society for the Study of Education, Part I (Chicago, Illinois: The University of Chicago Press, 1962), p. 299.

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accomplished was explained during the in-service sessions with the supervising teachers. The teaching model was prepared with the assistance of the authorities in the field (p.27) guided also by personal experience of fifteen years of teaching in the elementary school and five years experience in teaching and supervising student teachers at the college level.

The central purpose of teacher education with respect to individualization of instruction is to prepare teachers and prospective teachers to teach in such ways that the learners for whom they have responsibility may derive optimum individual benefit from their learning experience.⁶⁰

Such was the goal of the teaching model used with supervising teachers in the experimental group of this study. The supervising teachers, in turn, were entrusted to transmit the content of the teaching model to the student teachers. Each session had follow-up suggestions for the teacher to use.

John I. Goodlad emphasized the importance of teachers observing a model in order to get them to change behavior.

Small wonder that teachers practice so little individualizing instruction, inductive teaching, non-grading, team teaching, or other recently recommended practices. They have not seen them. If teachers are to change, they must see models of what they are going to change to; they must practice under guidance the new behaviors called for in the exemplary models. If teachers are to change, the occupation itself must have built into it the necessary provisions for self-renewal.⁶¹

⁶⁰Ibid., 288.

⁶¹Goodlad, op. cit., p. 18.

In the follow-up activities of the in-service sessions it was planned that the supervising teachers would serve as models for the student teachers. It was assumed that the student teachers could benefit much from their observations.

The follow-up activity for the supervising teacher in the form of the supervisory conference does have much merit also.

By analyzing, studying, and practicing behavior through the conscious selection and examination of various aspects of interaction between teacher and students during a variety of teaching activities a student teacher can be helped to acquire teaching skills. Through the conference where the focus is on the study of the teaching act, student teaching becomes the laboratory in which new teaching behaviors can be discovered, practiced, and experimented with.⁶²

The success of the teaching model was dependent on this kind of conference between supervising teacher and student teacher. The planning of the teaching model in the area of providing for individual differences considered that there are many factors involved in the total teaching - learning environment in the elementary school and some of them are uncontrollable variables. It was necessary then to plan the sessions in the areas in which the teachers have control and not consider the broader spectrum of administration and other agencies. Therefore, the major emphasis is on the role of the teacher and does not include the organizational pattern within the school, the curriculum, physical

⁶²Beeb, Low, and Waterman, op. cit., p. 8.

facilities of the school, nor parents, Boards of Education, local community or state and federal government.

The phrase 'individual differences' refers to the dissimilarities among the various members of a class or age group in any characteristics that can be identified. It is common to speak of the individual differences in such things as problem-solving, reading ability, spelling, visual and auditory acuity, language skills, height and weight, dexterity, readiness to learn, interest, emotional stability, persistence, motivation, ability to work alone, co-operativeness, and many other social, personal, intellectual, and academic characteristics.

Far beyond the problems of the nature and extent of individual differences is the problem of the effect on various learners of the countless instructional stratagems to which they are subjected. Even more pertinent (and unfortunately more remote) is the whole question of devising educational procedures that are feasible enough to maximize the clusters of potentialities that make up the individual in any classroom, for good instruction will aim to increase differences rather than decrease them.⁶³

And, of course, the key to quality instructional programs is the effective teacher.

To provide this effective instructional program, teachers, must make a skillful blend of (a) their academic and professional knowledge, (b) their professional skills, and (c) their artistry in teaching. The development and skillful combining of these three aspects of teaching call for both science and art.⁶⁴

⁶³Theodore Clymer and Nolan C. Kearney, "Curricular and Instructional Provisions for Individual Differences," Individualizing Instruction, the Sixty-first Yearbook of the National Society for the Study of Education, Part III (Chicago, Illinois: The University of Chicago Press, 1962), p. 267-268.

⁶⁴Ibid., 271.

In order to begin to undertake a successful program of adjusting to individual differences it is imperative that the teacher have a knowledge of the students in his class. Included in this information are personal and social data as well as academic ability and achievement in the various skills being developed under the teacher's direction. There is no shortcut to gathering these data but a wide variety of methods are at the disposal of the alert classroom teacher.

A valuable source of information about a student's strengths and weaknesses is the cumulative record with recorded data of grades, test scores, attendance, health records, units carried out in previous grades, groupings in skill subjects, textbooks covered in content fields, and extra-curricular undertakings.

Conferences are extremely helpful in providing information about students, including conferences with students and parents as well as previous teachers.

Perhaps the most useful source of information about a pupil's probable success in school is that of the teacher's observation. Most often this takes the nature of informal observational procedures but may be systematized by a check list or rating scale. Informal testing, together with oral and written classwork constitute major opportunities for observation.

A summary of the first objective of the teaching model regarding the gathering of data about students appears in Appendix 11. Following the first session with the supervising teachers, this summary was compiled from the comments and suggestions discussed. It was distributed to the teachers at the second in-service session.

The individualization of instruction requires that the teacher attend to and utilize detailed information about each student in order to design appropriate instructional programs.⁶⁵

Careful planning of the work to be done, which is one of the major needs in adjusting to individual differences, was the second objective. If it is thoroughly done, careful planning involves a great deal more than class routine. It necessitates an evaluation and anticipation of any instruction which must be provided prior to the undertaking of any activity, project, or lesson. The foundation of a successful program has the full attention and efforts of devoted teachers to its careful planning coupled with hard work.

When curriculum is being planned every unit of work should be tested to see how many roads to success are built into it--how many ways for individuals to contribute diversely to the common whole.⁶⁶

The third objective of the teaching model having to do with the importance of the learning climate in the classroom was very aptly expressed by Fred T. Wilhelms:

⁶⁵Virgil M. Howes, Individualization of Instruction, (New York, New York: The Macmillan Company, 1970), p. 134.

⁶⁶Ibid., 46.

Nevertheless, the school and classroom can be blankly barren or vividly stimulating. The very texture and appearance of building and hall and room can invite exploration and adventure. So modest a matter as how charmingly and invitingly books are put in reach can make a great difference in how a child will venture into the worlds of thought and phantasy.⁶⁷

The entire school environment can be examined for opportunities to help each child learn in his private way. The main prerequisite is simply the recognition that in school--as in society-- it is all right to come at things in different ways and even to arrive at different destinations.⁶⁸

The diagnosis that the teacher makes about the needs of his students is not restricted but has now become an intrinsic part of the teaching act. A part of this diagnosis is the use of appropriate materials to meet the needs of each individual child which was the fourth objective of the teaching model.

Individualizing is a way to think about managing the classroom. It is not a method of instruction. It is the way a teacher arranges children, equipment, and materials so that each child can learn eagerly at the peak of his potential, without undue stress and strain.⁶⁹

It is a difficult task which calls for enormous resources in materials, ability, and skills on the part of the classroom teacher to adjust to the differences in ability, needs, and interests. Part of this in-service session was devoted to a sharing of materials appropriate to meeting individual needs.

⁶⁷Ibid., 38.

⁶⁸Ibid., 46.

⁶⁹Ibid., 90.

The fifth objective of the teaching model in individualizing of instruction was:

for the teacher to individualize his teaching behavior -- to decide what he must do to make each student's learning more efficient and more successful. To accomplish this, you must gear your teaching to the needs of the individual student rather than to the demands of the large group.⁷⁰

Teacher fairness and consistency do not imply identical treatment for each learner. Rather the teacher who has these qualities insures that each student receives the assistance and support that are necessary to further his learning.

Some teachers modify their teaching behavior unconsciously when he jokes with one student, praises one, scolds another, gives help to one, and insists that one work alone. For experienced teachers this behavior is not automatic but rather a genuine reflection of the needs of particular students. Dr. Hunter stressed that the sensitivity of the teacher to varying personality patterns and needs is an important factor in this aspect of individualization.⁷¹

It is left to the teacher to provide different types of activities so a student can participate in those that are best for him. This is how the teacher accomplishes a major objective of the individualizing of instruction, namely that of helping the student learn how to learn.

⁷⁰Hunter, op. cit., p. 59.

⁷¹Ibid.

Dr. Hunter further emphasized how important it is to realize that individualization of instruction is not limited to the intellectual skills. Other areas in which individualization can also be accomplished include the development of interests, attitudes, and appreciations as well as the psychomotor skills. These aspects as related to the teaching behavior in providing for individual differences constituted the fifth and last section of the teaching model.⁷²

During the in-service sessions, the supervising teachers expressed concern about being able to know all that is necessary about each student. Although it may be impossible to know everything about each child in a class, it is amazing how much teachers really know when they start to ask themselves questions about their students. Such thinking gives valuable and productive insights into possible ways to individualize teaching behavior. The teacher's purpose becomes one of finding out what behavior best helps the child to learn in his own style. This behavior is not constant but dependent upon many variables of which the teacher must be aware: the nature of the student's task, his state of health, progress of his maturity, his mood and even the weather. When the teacher has the added dimension of flexibility and can adjust to the situation, it is easier for each child to learn.

⁷²Ibid., p. 56.

For informational purposes the record sheet for supervising teachers in the experimental group was developed (Appendix 12). It was imperative to know how much time the supervising teacher spent in the follow-up activities after the in-service training sessions. It would seem that there would be a correlation between the time spent with the student teacher and the amount of progress made by the student teacher as evidenced by the pre- and post-test observations.

Upon completion of the needed forms, the next step in the study was to make further arrangements with the coordinators in the three centers being used for the study.

In the Grand Rapids Center which was designated as the experimental group all arrangements were made through Dr. John Phillips. The first order of business was to make plans for the in-service sessions with the supervising teachers. The dates were determined at a convenient time when the student teachers would be able to teach and the supervising teachers were given the necessary permission to attend the sessions. The teaching model was originally designed to provide for five one-hour sessions. However, it was deemed more advisable to meet twice in two-hour sessions considering that the teachers were being asked to come to the Center Office for the meetings where parking was a problem.

The evaluative instrument for the observations of the student teachers was explained to the coordinator who would

be making the observations.

At the Benton Harbor Center, Dr. Hugo David made contacts with the school districts involved to secure the needed administrative approval for such research. In this center, serving as the first control group, Dr. David discussed the evaluative instrument with his three coordinators.

A personal contact was made with each school involved in this group and the study was explained to each of the respective principals. When it was possible in the school schedule, a conference with the supervising teachers was held as well. Both the supervising teachers and student teachers completed their respective surveys.

In the Battle Creek Center, Dr. John Cragun made the contacts with the school districts' administrative personnel for the research approval. This Center served as the second control group for the study by completing only the post-test data. Prior to the coordinator's last observation of the term, when the evaluative device was to be used, a meeting at the Center Office with the supervising teachers and university coordinators was scheduled. Through this direct contact an opportunity was given to explain the research project and the means of gathering the data.

After the forms to be used were distributed and explained to all persons involved, the time sequence had to be synchronized. With the varying schedules for observations in the three centers, it was decided that the pre-test would constitute the first observation by the

university coordinator. The post-test observation occurred during the last observation of the term by the university coordinator. Thus the time span of the observation during the term varied in the centers, with the time between the pre- and post-tests varying from four to six weeks. For comparison purposes the student teacher taught the same subject during each observation. Following the post-test observations the coordinators returned all of the forms to the writer.

The final step of the study was the analysis of the data.

STATISTICAL ANALYSIS APPLIED TO DATA FINDINGS

In this study, with an experimental group and two control groups, a comparison was made between the groups to determine the effects of the treatment on the experimental group. The treatment in this study constituted two in-service sessions with the supervising teachers. This comparison utilized the analysis of variance and multivariate analysis for the statistical study of the data.

SUMMARY

The design of the study which was elaborated upon in detail in this chapter contained:

- (1) A statement of the hypotheses of the study and the additional information to be found.
- (2) The procedure in conducting the experimental study.

- (3) A definition of the population.
- (4) A thorough explanation of the data instruments.
- (5) The statistical analysis applied to the findings.

CHAPTER IV

STATISTICAL ANALYSIS OF DATA

All of the data together with the application of their statistical analyses are reported in Chapter IV. The analyses of the following data are included: (1) the pre- and post-test total evaluations by both supervising teachers and university coordinators (2) question five (teaching behavior of student teachers) (3) variations at different grade levels in providing for individual differences (4) the availability of supplementary materials in the schools compared with the student teacher's use of supplementary materials (question 4) on the pre- and post-tests. The F ratio was the statistic which has been used in all the instances to determine whether or not there was a significant difference between two or more means. The selection of the .05 significance level was decided because of the small sample size.

For the comparison between the results of the experimental and control groups the gain scores of each are reported. This was necessary due to the fact that for the repeated measures analysis there were problems encountered due to little or no variations in many of the pre- and post-test evaluations.

In the case of comparing the student teacher's success in providing for individual differences with the supervising teacher's attitude toward providing for individual differences in the classroom, the score on the pre- and post-test is reported on each subject with a brief summary of the teacher's comments.

The amount of time each supervising teacher spent on the follow-up activities after the in-service sessions is compared to the gain each student teacher in the experimental group made in providing for individual differences.

The test of all the hypotheses of the study were dependent upon the data obtained from the pre- and post-test evaluation instruments. These data are reported in Tables 4.1 through 4.19.

Analysis of the data which provided additional information important to the outcome of the study are reported in Tables 4.20 through 4.27.

ANALYSIS OF DATA

The following tables from 4.1 through 4.11 are all concerned with pre- and post-test evaluations of the student teacher in providing for individual differences in their classrooms. These evaluations of student teachers were done by both the university coordinator and the supervising teachers at the time of the first and last classroom observation by the university coordinator.

The basic content of the questions on the instruments (complete instruments in Appendix numbers 5,6,7,8) is as follows:

Question 1 - the written evidence gathered by the student teacher on the needs of his students

Question 2 - provision for these needs in the student teacher's written lesson plan

Question 3 - provision for an environment conducive to students' needs - intellectual, physical, emotional, social

Question 4 - use of a variety of materials to meet students' needs

Question 5 - evaluation of the actual teaching behavior of the student teacher in providing for the needs of all students.

TABLE 4.1

F Ratio for Multivariate Tests of the Difference between Experimental and Control Student Teacher Groups on All Sixteen Evaluation Pre-Test Scores for Both the University Coordinator and Supervising Teacher Ratings

<u>Rating Group</u>	<u>Degrees of Freedom</u>	<u>F</u>	<u>Approximate Significance Level</u>
University Coordinators	16, 12	3.44405	0.0179*
Supervising Teachers	16, 12	2.4074	0.0646

* = .05 significance level

In the preceding table across all sixteen measures of the pre-test, it is indicated that the multivariate F ratio shows that there is a significant difference between the experimental and control groups of student teachers at the .05 level as rated by the university coordinators but not as rated by the supervising teachers.

The F ratio is used to determine whether there is a significant difference between two or more means. In the following table 4.2 the F ratio is used for the questions on the pre-test observation form rated by both the supervising teachers and the university coordinators. With the value for $\alpha = .05$ the only significant difference to be noted by the supervising teachers' observation is in Question 4 and 5C; for the university coordinators there is a significant difference for all questions except Questions 1, 2 and 5G.

The results of Question 4 demonstrate the student teacher's ability to utilize instructional materials commensurate with the learning capabilities of each student. The results of Question 5C demonstrate the student teacher's ability to individualize the difficulty of the task.

Question 1 is concerned with the written data gathered by the student teacher about the students in the class. Question 2 deals with the written lesson plan to meet individual needs. Question 5G deals with student teacher behavior in seeking participation by all students.

TABLE 4.2

Analysis of Variance Tables for Differences Between the Experimental and Control Groups for Each Question on the Pre-Test Evaluation					
<u>QUESTION 1</u>					
Rating Group	Sources of Variance	Mean Square	Degree of Freedom	F	Approximate Significance
Supervising Teachers	Between Groups	3.4377	1	1.1783	0.2873
	Within Groups	2.9173	27		
Univ. Coordinators	Between Groups	14.5252	1	4.1316	0.0521
	Within Groups	3.5156	27		
<u>QUESTION 2</u>					
Supervising Teachers	Between Groups	0.0201	1	0.0200	0.8885
	Within Groups	1.0005	27		
Univ. Coordinators	Between Groups	5.5519	1	3.4694	0.0735
	Within Groups	1.6002	27		
<u>QUESTION 3A</u>					
Supervising Teachers	Between Groups	1.0346	1	1.3825	0.2500
	Within Groups	0.7483	27		
Univ. Coordinators	Between Groups	11.2933	1	12.3415	0.0016*
	Within Groups	0.9150	27		
<u>QUESTION 3B</u>					
Supervising Teachers	Between Groups	0.3210	1	0.4753	0.4965
	Within Groups	0.6752	27		
Univ. Coordinators	Between Groups	6.6313	1	9.3103	0.0051*
	Within Groups	0.7122	27		
<u>QUESTION 3C</u>					
Supervising Teachers	Between Groups	1.4032	1	1.2727	0.2692
	Within Groups	1.1025	27		
Univ. Coordinators	Between Groups	13.9432	1	12.5240	0.0015*
	Within Groups	1.1132	27		

TABLE 4.2 (Continued)

<u>Rating Group</u>	<u>Sources of Variance</u>	<u>Mean Square</u>	<u>Degree of Freedom</u>	<u>F</u>	<u>Approximate Significance</u>
<u>QUESTION 3D</u> <u>Supervising Teachers</u>	Between Groups Within Groups	1.0346 1.1187	1 27	0.9248	0.3448
Univ. Coordinators	Between Groups Within Groups	11.5544 1.0484	1 27	11.0206	0.0026*
<u>QUESTION 4</u> <u>Supervising Teachers</u>	Between Groups Within Groups	7.7347 1.7492	1 27	4.4217	0.0450*
Univ. Coordinators	Between Groups Within Groups	15.9317 1.7343	1 27	9.1861	0.0054*
<u>QUESTION 5A</u> <u>Supervising Teachers</u>	Between Groups Within Groups	0.1916 0.9992	1 27	0.1918	0.6650
Univ. Coordinators	Between Groups Within Groups	42.6142 1.7013	1 27	25.0467	0.0001*
<u>QUESTION 5B</u> <u>Supervising Teachers</u>	Between Groups Within Groups	6.8317 1.7469	1 27	3.9106	0.0583
Univ. Coordinators	Between Groups Within Groups	56.9290 0.9081	1 27	62.6689	0.0001*
<u>QUESTION 5C</u> <u>Supervising Teachers</u>	Between Groups Within Groups	7.2415 1.4891	1 27	4.8629	0.0362*
Univ. Coordinators	Between Groups Within Groups	51.4339 1.0375	1 27	49.5714	0.0001*

TABLE 4.2 (Continued)

<u>Rating Group</u>	<u>Sources of Variance</u>	<u>Mean Square</u>	<u>Degree of Freedom</u>	<u>F</u>	<u>Approximate Significance</u>
<u>QUESTION 5D</u> <u>Supervising Teachers</u>	Between Groups	3.8302	1	2.6996	0.1120
	Within Groups	1.4188	27		
Univ. Coordinators	Between Groups	52.1752	1	40.8157	0.0001*
	Within Groups	1.2783	27		
<u>QUESTION 5E</u> <u>Supervising Teachers</u>	Between Groups	1.8980	1	1.4701	0.2359
	Within Groups	1.2911	27		
Univ. Coordinators	Between Groups	37.2473	1	26.8594	0.0001*
	Within Groups	1.3867	27		
<u>QUESTION 5F</u> <u>Supervising Teachers</u>	Between Groups	0.8594	1	0.8379	0.3681
	Within Groups	1.0256	27		
Univ. Coordinators	Between Groups	28.6897	1	14.3448	0.0008*
	Within Groups	2.0000	27		
<u>QUESTION 5G</u> <u>Supervising Teachers</u>	Between Groups	0.0041	1	0.0100	0.9211
	Within Groups	0.4136	27		
Univ. Coordinators	Between Groups	0.1492	1	0.1006	0.7536
	Within Groups	1.4836	27		
<u>QUESTION 5H</u> <u>Supervising Teachers</u>	Between Groups	1.7931	1	1.6138	0.2148
	Within Groups	1.1111	27		
Univ. Coordinators	Between Groups	36.3103	1	20.8591	0.0001*
	Within Groups	1.7407	27		

TABLE 4.2 (Continued)

<u>Rating Group</u>	<u>Sources of Variance</u>	<u>Mean Square</u>	<u>Degree of Freedom</u>	<u>F</u>	<u>Approximate Significance</u>
<u>QUESTION 51</u> Supervising Teachers	Between Groups	0.1916	1	0.2071	0.6527
	Within Groups	0.9252	27		
Univ. Coordinators	Between Groups	43.1200	1	23.9196	0.0001*
	Within Groups	1.8027	27		

*05 significance level

1

TABLE 4.3

F Ratio for Multivariate Tests of the Difference Between Experimental and Control Groups on All Sixteen Evaluation Post-Test Scores for Both the University Coordinator and Supervising Teacher Populations

<u>Group</u>	<u>Degrees of Freedom</u>	<u>F</u>	<u>Approximate Significance Level</u>
University Coordinators	32, 38	3.1950	0.0004*
Supervising Teachers	32, 38	1.2883	0.2259

* = .05 significance level

In the preceding table across all sixteen measures of the post-test it is indicated that the multivariate F ratio shows that there is a significant difference between the experimental and control groups at the .05 level for ratings by university coordinators but not for ratings by supervising teachers.

Just as for the pre-test evaluation, the F ratio is used for the post-test. In the following table (Table 4.4) there is a significant difference in the supervising teachers' observations in questions 5B, 5C, 5D, and 5E. For the university coordinators there is a significant difference in all of the questions except 1, 3A, 3C, and 5G.

Questions 5B, 5C, 5D, 5E and 5G are concerned with the student teacher's demonstration of ability to provide for individual differences. Question 1 is regarding the written evidence gathered by the student teacher about the individual students in the class. Question 3A and 3C deal with the intellectual and emotional climate in the classroom.

TABLE 4.4

Analysis of Variance Tables for Differences Between the Experimental and Control Groups for Each Question on the Post-Test Evaluation

<u>QUESTION 1</u>		Sources of Variance	Mean Square	Degree of Freedom		F	Approximate Significance
Rating Group	Supervising Teachers			2	34		
		Between Groups	1.4720			1.5521	0.2265
		Within Groups	0.9483				
Univ. Coordinators		Between Groups	4.1355	2		2.0466	0.1448
		Within Groups	2.0206	34			
<u>QUESTION 2</u>		Sources of Variance	Mean Square	Degree of Freedom		F	Approximate Significance
Rating Group	Supervising Teachers			2	34		
		Between Groups	0.7090			1.8523	0.1724
		Within Groups	0.3827				
Univ. Coordinators		Between Groups	5.4278	2		13.5925	0.0001*
		Within Groups	0.3993	34			
<u>QUESTION 3A</u>		Sources of Variance	Mean Square	Degree of Freedom		F	Approximate Significance
Rating Group	Supervising Teachers			2	34		
		Between Groups	0.0730			0.1303	0.8784
		Within Groups	0.5600				
Univ. Coordinators		Between Groups	1.7407	2		2.3266	0.1130
		Within Groups	0.7481	34			
<u>QUESTION 3B</u>		Sources of Variance	Mean Square	Degree of Freedom		F	Approximate Significance
Rating Group	Supervising Teachers			2	34		
		Between Groups	0.0905			0.2436	0.7852
		Within Groups	0.3714				
Univ. Coordinators		Between Groups	2.4579	2		4.3543	0.0208*
		Within Groups	0.5644	34			

TABLE 4.4 (Continued)

<u>Rating Group</u>	<u>Sources of Variance</u>	<u>Mean Square</u>	<u>Degrees of Freedom</u>	<u>F</u>	<u>Approximate Significance</u>
<u>QUESTION 3C</u>					
Supervising Teachers	Between Groups	0.1127	2	0.2031	0.8172
	Within Groups	0.5545	34		
Univ. Coordinators	Between Groups	0.9678	2	1.4117	0.2577
	Within Groups	0.6855	34		
<u>QUESTION 3D</u>					
Supervising Teachers	Between Groups	0.3770	2	0.8814	0.4235
	Within Groups	0.4277	34		
Univ. Coordinators	Between Groups	2.4654	2	5.1386	0.0113*
	Within Groups	0.4797	34		
<u>QUESTION 4</u>					
Supervising Teachers	Between Groups	1.2220	2	2.4812	0.0987
	Within Groups	0.4925	34		
Univ. Coordinators	Between Groups	21.5520	2	20.5219	0.0001*
	Within Groups	1.0501	34		
<u>QUESTION 5A</u>					
Supervising Teachers	Between Groups	0.8981	2	2.7190	0.0803
	Within Groups	0.3303	34		
Univ. Coordinators	Between Groups	29.1461	2	33.6635	0.0001*
	Within Groups	0.8658	34		

TABLE 4.4 (Continued)

<u>Rating Group</u>	<u>Sources of Variance</u>	<u>Mean Square</u>	<u>Degree of Freedom</u>	<u>F</u>	<u>Approximate Significance</u>
<u>QUESTION 5B</u>					
Supervising Teachers	Between Groups	4.8105	2	4.6622	0.0163*
	Within Groups	1.0318	34		
Univ. Coordinators	Between Groups	42.4066	2	65.2239	0.0001*
	Within Groups	0.6501	34		
<u>QUESTION 5C</u>					
Supervising Teachers	Between Groups	2.6728	2	3.5310	0.0405*
	Within Groups	0.7569	34		
Univ. Coordinators	Between Groups	40.2605	2	55.4905	0.0001*
	Within Groups	0.7255	34		
<u>QUESTION 5D</u>					
Supervising Teachers	Between Groups	6.0004	2	6.2386	0.0050*
	Within Groups	0.9618	34		
Univ. Coordinators	Between Groups	28.5111	2	34.6147	0.0001*
	Within Groups	0.8236	34		
<u>QUESTION 5E</u>					
Supervising Teachers	Between Groups	2.2423	2	3.9614	0.0285*
	Within Groups	0.5660	34		
Univ. Coordinators	Between Groups	5.2968	2	4.1387	0.0247*
	Within Groups	1.2798	34		

TABLE 4.4 (Continued)

<u>Rating Group</u>	<u>Sources of Variance</u>	<u>Mean Square</u>	<u>Degree of Freedom</u>	<u>F</u>	<u>Approximate Significance</u>
<u>QUESTION 5F</u> <u>Supervising Teachers</u>	Between Groups	0.9150	2	1.8321	0.1756
	Within Groups	0.4994	34		
Univ. Coordinators	Between Groups	30.2200	2	29.1603	0.0001*
	Within Groups	1.0363	34		
<u>QUESTION 5G</u> <u>Supervising Teachers</u>	Between Groups	0.3931	2	1.5036	0.2368
	Within Groups	0.2614	34		
Univ. Coordinators	Between Groups	0.1409	2	0.7103	0.4987
	Within Groups	0.1983	34		
<u>QUESTION 5H</u> <u>Supervising Teachers</u>	Between Groups	1.2220	2	1.8267	0.1764
	Within Groups	0.6689	34		
Univ. Coordinators	Between Groups	17.9456	2	16.4542	0.0001*
	Within Groups	1.0906	34		
<u>QUESTION 5I</u> <u>Supervising Teachers</u>	Between Groups	0.6135	2	2.3066	0.1150
	Within Groups	0.2659	34		
Univ. Coordinators	Between Groups	31.4087	2	36.5934	0.0001*
	Within Groups	0.8583	34		

* .05 significance level

Tables 4.5 - 4.8 present the means and pooled standard deviations for the pre- and post-tests as rated by the university coordinators and by the supervising teachers. Inspection of these tables indicates, in general, the means for each question do tend to indicate greater agreement with choice options on the higher end of the scale (1's and 2's) rather than on the lower end (4's and 5's). The range of these means are given below.

These means demonstrate the equality of the two control groups in Benton Harbor and Battle Creek.

<u>Pre-Test - Benton Harbor</u>	<u>Post-Test - Benton Harbor</u>
Univ. Coordinators 1.3-2.5	Univ. Coordinators 1.0 -1.6
Supervising Teachers 1.3-2.0	Supervising Teachers 1.0-1.4

<u>Pre-Test - Grand Rapids</u>	<u>Post-Test - Grand Rapids</u>
Univ. Coordinators 1.7-4.6	Univ. Coordinators 1.2-4.4
Supervising Teachers 1.4-2.6	Supervising Teachers 1.1-2.3

<u>Post-Test - Battle Creek</u>
Univ. Coordinators 1.1-1.7
Supervising Teachers 1.0-1.5

TABLE 4.5

Means and Pooled Standard Deviations on
Pre-Test by University Coordinators

<u>Pre-Test</u>	<u>Location</u>	<u>Mean</u>	<u>Pooled Standard Dev.</u>
Question 1	Grand Rapids	3.9230	1.8750
	Benton Harbor	2.5000	
Question 2	Grand Rapids	2.6923	1.2650
	Benton Harbor	1.8125	
Question 3A	Grand Rapids	2.6923	0.9566
	Benton Harbor	1.4375	
Question 3B	Grand Rapids	2.4615	0.8439
	Benton Harbor	1.5000	
Question 3C	Grand Rapids	2.7692	1.0551
	Benton Harbor	1.3750	
Question 3D	Grand Rapids	2.7692	1.0239
	Benton Harbor	1.5000	
Question 4	Grand Rapids	3.6153	1.3169
	Benton Harbor	2.1250	
Question 5A	Grand Rapids	4.0000	1.3044
	Benton Harbor	1.5625	
Question 5B	Grand Rapids	4.6923	0.9530
	Benton Harbor	1.8750	
Question 5C	Grand Rapids	4.6153	1.0186
	Benton Harbor	1.9375	
Question 5D	Grand Rapids	4.3846	1.1306
	Benton Harbor	1.6875	
Question 5E	Grand Rapids	4.1538	1.1776
	Benton Harbor	1.8750	
Question 5F	Grand Rapids	4.0000	1.4142
	Benton Harbor	2.0000	
Question 5G	Grand Rapids	1.7692	1.2180
	Benton Harbor	1.6250	
Question 5H	Grand Rapids	4.0000	1.3194
	Benton Harbor	1.7500	
Question 5G	Grand Rapids	4.0769	1.3426
	Benton Harbor	1.6250	

TABLE 4.6

Means and Pooled Standard Deviations on Pre-
Test by Supervising Teachers

<u>Pre-Test</u>	<u>Location</u>	<u>Mean</u>	<u>Pooled Standard Dev.</u>
Question 1	Grand Rapids	2.6923	1.7080
	Benton Harbor	2.0000	
Question 2	Grand Rapids	1.6153	1.0003
	Benton Harbor	1.5625	
Question 3A	Grand Rapids	1.6923	0.8651
	Benton Harbor	1.3125	
Question 3B	Grand Rapids	1.4615	0.8217
	Benton Harbor	1.2500	
Question 3C	Grand Rapids	1.6923	1.0500
	Benton Harbor	1.2500	
Question 3D	Grand Rapids	1.6923	1.0577
	Benton Harbor	1.3125	
Question 4	Grand Rapids	2.5384	1.3226
	Benton Harbor	1.5000	
Question 5A	Grand Rapids	1.5384	0.9996
	Benton Harbor	1.3750	
Question 5B	Grand Rapids	2.5384	1.3217
	Benton Harbor	1.5625	
Question 5C	Grand Rapids	2.6923	1.2203
	Benton Harbor	1.6875	
Question 5D	Grand Rapids	2.2307	1.1911
	Benton Harbor	1.5000	
Question 5E	Grand Rapids	2.0769	1.1363
	Benton Harbor	1.5625	
Question 5F	Grand Rapids	1.8461	1.0127
	Benton Harbor	1.5000	
Question 5G	Grand Rapids	1.4615	0.6431
	Benton Harbor	1.4375	
Question 5H	Grand Rapids	2.0000	1.0541
	Benton Harbor	1.5000	
Question 5I	Grand Rapids	1.5384	0.9619
	Benton Harbor	1.3750	

TABLE 4.7

Means and Pooled Standard Deviations on Post-
Test by University Coordinators

<u>Post-Test</u>	<u>Location</u>	<u>Mean</u>	<u>Pooled Standard Dev.</u>
Question 1	Grand Rapids	2.6153	1.4215
	Benton Harbor	1.6250	
	Battle Creek	1.6250	
Question 2	Grand Rapids	2.3846	0.6319
	Benton Harbor	1.2500	
	Battle Creek	1.2500	
Question 3A	Grand Rapids	2.0000	0.8650
	Benton Harbor	1.3125	
	Battle Creek	1.5000	
Question 3B	Grand Rapids	2.1538	0.7513
	Benton Harbor	1.5000	
	Battle Creek	1.2500	
Question 3C	Grand Rapids	1.7692	0.8280
	Benton Harbor	1.2500	
	Battle Creek	1.5000	
Question 3D	Grand Rapids	2.0000	0.6927
	Benton Harbor	1.1875	
	Battle Creek	1.3750	
Question 4	Grand Rapids	3.6923	1.0248
	Benton Harbor	1.3125	
	Battle Creek	1.7500	
Question 5A	Grand Rapids	4.0000	0.9305
	Benton Harbor	1.3125	
	Battle Creek	1.5000	
Question 5B	Grand Rapids	4.4615	0.8063
	Benton Harbor	1.2500	
	Battle Creek	1.3750	
Question 5C	Grand Rapids	4.4615	0.8518
	Benton Harbor	1.3125	
	Battle Creek	1.5000	
Question 5D	Grand Rapids	3.8461	0.9076
	Benton Harbor	1.1875	
	Battle Creek	1.3750	

TABLE 4.7 (Continued)

<u>Post-Test</u>	<u>Location</u>	<u>Mean</u>	<u>Pooled Standard Dev.</u>
Question 5E	Grand Rapids	2.3846	1.1313
	Benton Harbor	1.1875	
	Battle Creek	1.5000	
Question 5F	Grand Rapids	3.9230	1.0180
	Benton Harbor	1.1875	
	Battle Creek	1.3750	
Question 5G	Grand Rapids	1.2307	0.4454
	Benton Harbor	1.0625	
	Battle Creek	1.2500	
Question 5H	Grand Rapids	3.3076	1.0443
	Benton Harbor	1.3125	
	Battle Creek	1.1250	
Question 5I	Grand Rapids	3.7692	0.9265
	Benton Harbor	1.0000	
	Battle Creek	1.2500	

TABLE 4.8

Means and Pooled Standard Deviations on Post-Test
by Supervising Teachers

<u>Post-Test</u>	<u>Location</u>	<u>Mean</u>	<u>Pooled Standard Dev.</u>
Question 1	Grand Rapids	1.7692	0.9739
	Benton Harbor	1.4375	
	Battle Creek	1.0000	
Question 2	Grand Rapids	1.6153	0.6187
	Benton Harbor	1.1875	
	Battle Creek	1.2500	
Question 3A	Grand Rapids	1.5384	0.7484
	Benton Harbor	1.4375	
	Battle Creek	1.3750	
Question 3B	Grand Rapids	1.1538	0.6095
	Benton Harbor	1.3125	
	Battle Creek	1.2500	
Question 3C	Grand Rapids	1.5384	0.7447
	Benton Harbor	1.3750	
	Battle Creek	1.3750	
Question 3D	Grand Rapids	1.4615	0.6540
	Benton Harbor	1.1875	
	Battle Creek	1.1250	
Question 4	Grand Rapids	1.7692	0.7018
	Benton Harbor	1.1875	
	Battle Creek	1.5000	
Question 5A	Grand Rapids	1.4615	0.5747
	Benton Harbor	1.0000	
	Battle Creek	1.0000	
Question 5B	Grand Rapids	2.3076	1.0158
	Benton Harbor	1.1875	
	Battle Creek	1.3750	
Question 5C	Grand Rapids	1.9230	0.8700
	Benton Harbor	1.0625	
	Battle Creek	1.3750	
Question 5D	Grand Rapids	2.3846	0.9807
	Benton Harbor	1.1250	
	Battle Creek	1.3750	

TABLE 4.8 (Continued)

<u>Post-Test</u>	<u>Location</u>	<u>Mean</u>	<u>Pooled Standard Dev.</u>
Question 5E	Grand Rapids	1.7692	0.7524
	Benton Harbor	1.0625	
	Battle Creek	1.0000	
Question 5F	Grand Rapids	1.5384	0.7067
	Benton Harbor	1.1250	
	Battle Creek	1.0000	
Question 5G	Grand Rapids	1.3846	0.5113
	Benton Harbor	1.0625	
	Battle Creek	1.1250	
Question 5H	Grand Rapids	1.7692	0.8179
	Benton Harbor	1.1875	
	Battle Creek	1.5000	
Question 5I	Grand Rapids	1.4615	0.5157
	Benton Harbor	1.0625	
	Battle Creek	1.1250	

The following table (Table 4.9) indicates the average gain on each question on both the pre- and post-test evaluations by both the supervising teachers and university coordinator in the Grand Rapids Center. It can be noted that there was a gain on all questions as observed by the supervising teachers with the exception of 2 and 5D. On the other hand, university coordinators show gains on fourteen of the questions. The two exceptions were questions 4 and 5A. Originally a repeated measures analysis had been planned to test differences between groups. However, this was found impossible due to a large redundancy between ratings on different scales. Therefore, it is the gain scores which are reported to show the comparisons.

The items where there were the exceptions were question 2 about the student teacher's written lesson plan; questions 5A and 5D deal with the student teacher's behavior in providing expectations for the students and capitalizing on the students' individual interests and aptitudes. Question 4 was concerned with the student teacher's ability to utilize instructional materials commensurate with the learning capabilities of each student.

TABLE 4.9

Average GainonEach Questionin EvaluationGrand Rapids

		Pre-Test	Post-Test	Gain	Signif- icance
Question 1	Super. Teachers	2.69	1.76	-0.92	.104
	Univ. Coordinators	3.92	2.61	-1.30	.143
Question 2	Super. Teachers	1.61	1.61	0.00	1.00
	Univ. Coordinators	2.69	2.38	-0.30	.367
Question 3A	Super. Teachers	1.69	1.53	-0.15	.613
	Univ. Coordinators	2.69	2.00	-0.69	.022*
Question 3B	Super. Teachers	1.46	1.15	-0.30	.367
	Univ. Coordinators	2.46	2.15	-0.30	.303
Question 3C	Super. Teachers	1.69	1.53	-0.15	.656
	Univ. Coordinators	2.76	1.76	-1.00	.031*
Question 3D	Super. Teachers	1.69	1.46	-0.23	.570
	Univ. Coordinators	2.76	2.00	-0.76	.011*
Question 4	Super. Teachers	2.53	1.76	-0.76	.165
	Univ. Coordinators	3.61	3.69	0.07	.794
Question 5A	Super. Teachers	1.53	1.46	-0.07	.829
	Univ. Coordinators	4.00	4.00	0.00	1.000
Question 5B	Super. Teachers	2.53	2.30	-0.23	.553
	Univ. Coordinators	4.69	4.46	-0.23	.190
Question 5C	Super. Teachers	2.69	1.92	-0.76	.011*
	Univ. Coordinators	4.61	4.46	-0.15	.337
Question 5D	Super. Teachers	2.23	2.38	0.15	.721
	Univ. Coordinators	4.38	3.84	-0.53	.222
Question 5E	Super. Teachers	2.07	1.76	-0.30	.303
	Univ. Coordinators	4.15	2.38	-1.76	.004*
Question 5F	Super. Teachers	1.84	1.53	-0.30	.303
	Univ. Coordinators	4.00	3.92	-0.07	.794

TABLE 4.9 (Continued)

		<u>Pre-Test</u>	<u>Post-Test</u>	<u>Gain</u>	<u>Signif- icance</u>
Question 5G	Super. Teachers	1.46	1.38	-0.07	.584
	Univ. Coordinators	1.76	1.23	-0.53	.188
Question 5H	Super. Teachers	2.00	1.76	-0.23	.489
	Univ. Coordinators	4.00	3.30	-0.69	.201
Question 5I	Super. Teachers	1.53	1.46	-0.07	.837
	Univ. Coordinators	4.07	3.76	-0.30	.337

*.05 significance level

The following table (Table 4.10) indicates the average gain on each question on both the pre- and post-test evaluations by both the supervising teachers and university coordinators in the Benton Harbor Center. It can be noted that there was a gain on all questions as observed by the supervising teachers with the exceptions of 3A, 3B and 3C. The university coordinators, on the other hand, show a gain on all of the questions with one exception, 3B.

The items where exceptions were noted had to do with the learning environment in the classroom: 3A - intellectual climate, 3B - physical climate, 3C - emotional climate.

TABLE 4.10

Average GainonEach Questionin EvaluationBenton Harbor

		<u>Pre-Test</u>	<u>Post-Test</u>	<u>Gain</u>	<u>Signif- icance</u>
Question 1	Super. Teachers	2.00	1.43	-0.56	.227
	Univ. Coordinators	2.50	1.62	-0.87	.074
Question 2	Super. Teachers	1.56	1.18	-0.37	.083
	Univ. Coordinators	1.81	1.25	-0.56	.023*
Question 3A	Super. Teachers	1.31	1.43	0.12	.544
	Univ. Coordinators	1.43	1.31	-0.12	.544
Question 3B	Super. Teachers	1.25	1.31	0.06	.718
	Univ. Coordinators	1.50	1.50	0.00	1.000
Question 3C	Super. Teachers	1.25	1.37	0.12	.580
	Univ. Coordinators	1.37	1.25	-0.12	.697
Question 3D	Super. Teachers	1.31	1.18	-0.12	.544
	Univ. Coordinators	1.50	1.18	-0.31	.206
Question 4	Super. Teachers	1.50	1.18	-0.31	.352
	Univ. Coordinators	2.12	1.31	-0.81	.022*
Question 5A	Super. Teachers	1.37	1.00	-0.37	.029*
	Univ. Coordinators	1.56	1.31	-0.25	.362
Question 5B	Super. Teachers	1.56	1.18	-0.37	.054*
	Univ. Coordinators	1.87	1.25	-0.62	.020*
Question 5C	Super. Teachers	1.68	1.06	-0.62	.001*
	Univ. Coordinators	1.93	1.31	-0.62	.026*
Question 5D	Super. Teachers	1.50	1.12	-0.37	.054
	Univ. Coordinators	1.68	1.18	-0.50	.056
Question 5E	Super. Teachers	1.56	1.06	-0.50	.006*
	Univ. Coordinators	1.87	1.18	-0.68	.022*
Question 5F	Super. Teachers	1.50	1.12	-0.37	.083
	Univ. Coordinators	2.00	1.18	-0.81	.007*

TABLE 4.10 (Continued)

		<u>Pre-Test</u>	<u>Post-Test</u>	<u>Gain</u>	<u>Signif- icance</u>
Question 5G	Super. Teachers	1.43	1.06	-0.37	.083
	Univ. Coordinators	1.62	1.06	-0.56	.070
Question 5H	Super. Teachers	1.50	1.18	-0.31	.096
	Univ. Coordinators	1.75	1.31	-0.43	.110
Question 5I	Super. Teachers	1.37	1.06	-0.31	.055
	Univ. Coordinators	1.62	1.00	-0.62	.013*

*.05 significance level

The gain score comparison between Grand Rapids and Benton Harbor in the following table shows:

A gain as rated by the supervising teachers in Grand Rapids on 14 questions.

A gain as rated by the university coordinators in Grand Rapids on 15 questions.

A gain as rated by supervising teachers in Benton Harbor on 14 questions.

A gain as rated by university coordinators in Benton Harbor on 15 questions.

In the case of the supervising teachers ratings, it can be seen that the control group showed greater gains (i.e. greater gains in the negative direction) on nine of sixteen questions. For the university coordinator ratings, the split was even: eight greater gains for the experimental group and eight for the control group. In general, then despite fluctuations, the gains seem to be nearly equivalent across the two treatment groups.

The one area in which there was a significant difference as rated by the university coordinators was question 5E, adjusting time allotments for tasks.

TABLE 4.11
Comparison of Gain Scores Between
Grand Rapids and Benton Harbor

		<u>Grand Rapids</u>	<u>Benton Harbor</u>	<u>Signif- icance</u>
Question 1	Super. Teachers	-0.92	-0.56	0.60
	Univ. Coordinators	-1.30	-0.87	0.63
Question 2	Super. Teachers	0.00	-0.37	0.27
	Univ. Coordinators	-0.30	-0.56	0.51
Question 3A	Super. Teachers	-0.15	0.12	0.43
	Univ. Coordinators	-0.69	-0.12	0.09
Question 3B	Super. Teachers	-0.30	0.06	0.29
	Univ. Coordinators	-0.30	-0.00	0.48
Question 3C	Super. Teachers	-0.15	0.12	0.48
	Univ. Coordinators	-1.00	-0.12	0.09
Question 3D	Super. Teachers	-0.23	-0.12	0.80
	Univ. Coordinators	-0.76	-0.31	0.20
Question 4	Super. Teachers	-0.76	-0.31	0.44
	Univ. Coordinators	0.07	-0.81	0.05*
Question 5A	Super. Teachers	-0.07	-0.37	0.41
	Univ. Coordinators	-0.00	-0.25	0.62
Question 5B	Super. Teachers	-0.23	-0.37	0.71
	Univ. Coordinators	-0.23	-0.62	0.20
Question 5C	Super. Teachers	-0.76	-0.62	0.62
	Univ. Coordinators	-0.15	-0.62	0.14
Question 5D	Super. Teachers	0.15	-0.37	0.22
	Univ. Coordinators	-0.53	-0.50	0.93
Question 5E	Super. Teachers	-0.30	-0.50	0.54
	Univ. Coordinators	-1.76	-0.68	0.05*
Question 5F	Super. Teachers	-0.30	-0.37	0.84
	Univ. Coordinators	-0.07	-0.81	0.07
Question 5G	Super. Teachers	-0.07	-0.37	0.25
	Univ. Coordinators	-0.53	-0.56	0.96

TABLE 4.11 (Continued)

		<u>Grand Rapids</u>	<u>Benton Harbor</u>	<u>Signif- icance</u>
Question 5H	Super. Teachers	-0.23	-0.31	0.81
	Univ. Coordinators	-0.69	-0.43	0.64
Question 5I	Super. Teachers	-0.07	-0.31	0.52
	Univ. Coordinators	-0.30	-0.62	0.39

*.05 significance level

Tables 4.12, 4.14 and 4.15 compare the summed student teacher scores on the pre- and post-tests by the university coordinator and supervising teacher in each of the three Student Teaching Centers involved in the study.

Table 4.13 provided additional information about the experimental group: the student teacher average gain, the amount of time spent in follow-up activities by the supervising teacher and the number of student teachers with whom the supervising teacher had previously worked.

TABLE 4.12

Grand Rapids

Student Teacher Scores on Summed Total of the
Pre- and Post-Tests

<u>Subject</u>	<u>Pre-Test</u>		<u>Post-Test</u>	
	<u>Coordinator</u>	<u>Super. Teacher</u>	<u>Coordinator</u>	<u>Super. Teacher</u>
1	58	50	58	42
2	59	16	60	21
3	66	34	50	21
4	38	16	42	20
5	68	21	46	16
6	63	44	60	26
7	36	27	34	28
8	57	61	61	51
9	74	52	52	48
10	65	36	41	25
11	65	42	43	16
12	72	17	58	17
13	16	18	16	16

The scores in the above table were arrived at by giving the answers on the pre- and post-test observations a rating of from one to five and summing across all ratings. On this basis, the lower score is the more desirable one. For the comparisons of the ratings by university coordinator and supervising teacher, it can be noted from the above table that the coordinator, with one exception, consistently ranked the subjects lower than did the supervising teachers.

TABLE 4.13

Experimental Group

Average Gain, Number of Minutes for Follow-up Activities,
Number of Student Teachers Advised by a Supervising Teacher,
Course in Supervision of Student Teaching

<u>Subject</u>	<u>Av. Gain</u>	<u>No. of Minutes</u> <u>Follow-up Act.</u>	<u>No. of Stu.</u> <u>Teachers</u>	<u>Course in</u> <u>Supervision</u>
1	-4	0	3	-
2	+3	0	3	no
3	-14.5	0	1	no
4	+4	240	3	no
5	-13.5	300	2	-
6	-10.5	120	5	no
7	-0.5	30	4	no
8	-3.0	220	6	no
9	-13.0	70	2	-
10	-17.5	55	1	yes
11	-24.0	105	2	no
12	-7.0	40	1	yes
13	-1.0	345	1	no

In the above table when the average gain on the pre- and post-tests by both supervising teachers and university coordinators is compared with the time spent in follow-up activities by the supervising teachers, the indication is that the most time spent by the supervising teacher did not necessarily result in the greatest gain by the student teacher.

In the experimental group of thirteen supervising teachers, seven indicated that this student teacher was either their first or second. Two of the thirteen teachers had taken a course in the supervision of student teachers while eight had not. Three of the teachers did not answer the question.

Comments by the Supervising Teachers in the Experimental Group Regarding Their Attitudes Toward Providing for Individual Differences in the Classroom

- Subject 1 -Seeks the success of each student
- Subject 2 -Differentiates materials and assignments
- Subject 3 -Uses grouping to meet individual needs
- Subject 4 -Differentiates assignments and expectations
- Subject 5 -Uses varied methods and grouping procedures
- Subject 6 -Varied expectations; uses variety of materials
- Subject 7 -Varied materials
- Subject 8 -Use of varied materials, teacher aide, reading teacher, varied assignments and expectations
- Subject 9 -Use of grouping procedures, teacher aide
- Subject 10-Varied materials and volunteer help
- Subject 11-Varied assignments and student helpers
- Subject 12-Varied assignments
- Subject 13-Extra assignments for those who show the ability

The brief statements above by the supervising teachers in the experimental group indicate their means of providing for individual differences in the classroom.

Summary of Follow-up Activities by Supervising Teachers
in the Experimental Group

- 1 - no follow-up
- 2 - no follow-up
- 3 - no follow-up
- 4 - activities not listed
- 5 - planning time each day - 15 min. daily
- 6 - conference session weekly
- 7 - showing materials, discussion of individual children,
lesson plans
- 8 - conferences, planning lessons, preparing individual
activity cards
- 9 - assignments, dividing children into groups, ways to
help top group
- 10 - provide individual manipulative material, provide
graphs for reading, separate worksheets for individuals
in math
- 11 - studied data about children and discussed information
obtained; discussed ways to provide for individual
differences; discussed the 40 different teaching
methods and their application in providing for in-
dividual differences
- 12 - discussed all subject areas

13 - discussed sources of information about students and asked student teacher to write a profile on two students; began plans for taping lessons for slower students for social studies; discussed math regrouping to meet needs of individual students; individual math assignments; began devising tests to check comprehension.

Much of the follow-up activities was devoted to regular conferences with the student teacher and did not include the content of the teaching model.

TABLE 4.14

Benton HarborStudent Teacher Scores on Summed Total of the Pre- andPost-Tests

<u>Subject</u>	<u>Pre-Test</u>		<u>Post-Test</u>	
	<u>Coordinator</u>	<u>Super. Teacher</u>	<u>Coordinator</u>	<u>Super. Teacher</u>
14	28	28	17	17
15	32	31	29	26
16	30	16	24	16
17	17	17	18	17
18	34	23	32	30
19	16	16	16	16
20	39	40	17	17
21	32	32	18	18
22	22	20	17	16
23	63	32	18	17
24	33	32	17	17
25	24	15	22	19
26	19	16	18	19
27	20	21	25	22
28	19	16	19	21
29	23	24	17	16

The scores in the above table were arrived at by giving the answers on the pre- and post-test observations a rating of from one to five and by summing across all ratings. On this basis, the lower score is the more desirable one. For the comparisons of the ratings by university coordinator and

supervising teacher, it appears that the coordinators' ratings tend to be slightly higher. On the pre-test three subjects were rated higher by the supervising teacher, nine by the coordinator and four scores were the same. On the post-test two subjects were rated higher by the supervising teacher and nine by the coordinator with five scores the same by both coordinator and supervising teacher.

TABLE 4.15.

Battle CreekStudent Teacher Scores on Summed Total of the Post-Test

<u>Subject</u>	<u>Post-Test</u>	
	<u>Coordinator</u>	<u>Super. Teacher</u>
30	28	26
31	17	16
32	16	16
33	15	15
34	16	16
35	35	30
36	16	16
37	36	25

The scores in the above table were arrived at by giving the answers on the post-test observation a rating of from one to five and summing across all items. On this basis, the lower score is the more desirable one. For the comparisons of the ratings by university coordinator and supervising teacher, the table indicates that the coordinator rating on four subjects was higher than that of the supervising teacher and four scores were the same.

Tables 4.16 through 4.19 are concerned with the student teacher's actual teaching behavior in providing for individual differences in the classroom which was question five on the pre- and post-tests. These scores were compared with the scores on the total instrument and across grade levels.

The following tables (Tables 4.16 - 4.19) indicate that there is no significant difference between grade levels on either the rating of question 5 (teaching behavior) or on the total instrument by both the university coordinators and the supervising teachers.

The grade means and standard deviations for each grade level are given. The F ratio was used to determine if there were a significant difference between various grade levels in the student teachers' provision for individual differences in their classrooms. With the approximate significance level at .05, it can be noted that there is no significant difference observed at any grade level.

TABLE 4.16
University Coordinators' Grade Means and Standard Deviations for Question 5 and
the Total Instrument Post-Test Scores

Grade	QUESTION 5				Total Instrument	
	Frequency	Mean	Standard Deviation	Mean	Standard Deviation	
K	3	22.3333	16.6533	16.0000	6.5574	
1	4	18.5000	11.3284	12.5000	4.3588	
2	6	18.1666	13.4375	14.0000	8.7407	
3	8	21.6250	13.3730	15.7500	9.0198	
4	4	20.7500	14.2448	15.7500	7.9320	
5	3	16.0000	12.1243	11.3333	5.1316	
6	3	10.3333	2.3094	10.3333	2.5166	
1-2	2	19.0000	8.4850	17.5000	2.1213	
4-5-6	3	15.3333	2.5166	16.0000	4.3588	
1-2-3	1	9.0000	0.0000	10.0000	0.0000	

TABLE 4.17
Analysis of Variance Tests for Differences Between Grade Levels on Question 5 and
the Total Instrument-University Coordinator

Question 5	Sources of Variance		Mean Square	Degree of Freedom	F	Approximate Significance Level*
	Between Grades	Within Grades				
	53.5166	151.5725	9	27	0.35308	0.947

Total Instrument	Between Grades	18.7384	9		0.36370	0.943
	Within Grades	51.5216	27			

*.05 significance level

TABLE 4.18

Supervising Teachers' Grade Means and Standard Deviation for Question 5 and Total

Grade	QUESTION 5		Instrument Post-Test Scores		Total Instrument	
	Frequency	Mean	Standard Deviation	Mean	Standard Deviation	
K	3	18.3333	11.3724	14.0000	4.3588	
1	4	11.5000	5.0000	10.2500	2.2173	
2	6	13.3333	7.4206	11.6666	7.2018	
3	8	12.3750	7.2493	11.1250	5.5404	
4	4	10.0000	2.0000	11.5000	3.7859	
5	3	10.3333	1.5275	9.6666	0.5773	
6	3	9.6666	1.1547	9.6666	2.0816	
1-2	2	14.0000	2.8284	14.0000	1.4142	
4-5-6	3	12.0000	2.6457	11.6666	3.2145	
1-2-3	1	9.0000	0.0000	9.0000	0.0000	

TABLE 4.19

Analysis of Variance Tests for Differences Between Grade Levels on Question 5 and the Total Instrument-Supervising Teachers

Question 5	Sources of Variance		Mean Square	Degree of Freedom	F	Approximate Significance Level*
	Between Grades	Within Grades				
	20.9555	37.7114	20.9555	9	0.5556	0.820
				27		
Total						
Instrument	Between Grades	7.0857	7.0857	9	0.3178	0.962
	Within Grades	22.2947	22.2947	27		

*.05 significance level

The supervising teacher survey asked whether or not supplementary materials were available in their buildings. Question four on the pre- and post-tests evaluated the student teachers in their use of a variety of materials to meet individual needs. In tables 4.20 and 4.21 these responses are analyzed.

TABLE 4.20

Group Means and Standard Deviations on the Total Summed Evaluation Score for Availability of Supplementary Materials in Schools

<u>Supplementary Materials Available in Schools</u>	<u>Frequency</u>	<u>Mean</u>	<u>Standard Dev.</u>
Yes	31	1.419	.820
No	4	1.750	.957
No Response	2	1.500	.707

TABLE 4.21

Analysis of Variance Test for Showing the Effect of Available Supplementary Materials in Schools on the Total Summed Evaluation Test

<u>Sources of Variance</u>	<u>Degrees of Freedom</u>	<u>Mean Square</u>	<u>F</u>	<u>Approximate Sig. Level*</u>
Between Groups	2	0.1954	0.35342	0.705
Within Groups	34	0.5528		

* .05 significance level

The means on Question 4 are close and there is no significant difference in the use of varied materials by student teachers based on the question of whether supplementary materials were or were not available in their schools.

Questions on the supervising teachers' survey asked about the degree earned, whether or not teachers had taken a course in the supervision of student teaching and how teachers perceived the role of the student teacher. The supervising teachers' responses to these questions are analyzed in Tables 4.22 through 4.27.

TABLE 4.22

Groups Means and Standard Deviations on the Total Summed Evaluation Score for Degrees Earned by Supervising Teachers

<u>Degree</u>	<u>Frequency</u>	<u>Mean</u>	<u>Standard Deviation</u>
AB	27	11.5555	4.8145
MA	9	10.2222	2.3333
MA + 30 hrs.	1	14.0000	0.0000

TABLE 4.23

Analysis of Variance Test for Differences on Total Summed Evaluation Score for Degree of Education Achieved by Supervising Teachers

<u>Sources of Variance</u>	<u>Mean Square</u>	<u>Degrees of Freedom</u>	<u>F</u>	<u>Approximate Sig. Level*</u>
Between Groups	9.7537	2	0.51318	0.603
Within Groups	19.0060	34		

*.05 significance level

From the above tables indicating information about the degrees earned by the supervising teachers, it can be noted that there is no significant difference in total evaluation based upon the degree earned by supervising teachers.

TABLE 4.24

Group Means and Standard Deviations on Total Summed Evaluation Score for Course Taken by Supervising Teachers

<u>Course in Supervising Student Teachers</u>	<u>Frequency</u>	<u>Mean</u>	<u>Standard Deviation</u>
Yes	10	9.4000	2.3664
No	24	11.4166	3.7868
No Response	2	17.0000	12.7279

TABLE 4.25

Analysis of Variance Test for Differences on Total Evaluation Between Means of Groups Who Had a Supervisor with Course Work and Those Who Had Not

<u>Sources of Variance</u>	<u>Mean Square</u>	<u>Degrees of Freedom</u>	<u>F</u>	<u>Approximate Sig. Level*</u>
Between Groups	41.1654	3	2.50531	0.076
Within Groups	16.4313	33		

*.05 significance level

From the above tables indicating whether or not supervising teachers had taken a course in supervising student teachers, it can be noted that there is no significant difference in total evaluation.

TABLE 4.26

Group Means and Standard Deviations on Total Summed Evaluation Score Indicating Supervising Teacher's Perception of the Role of Student Teacher

<u>Role Perception</u>	<u>Frequency</u>	<u>Mean</u>	<u>Standard Deviation</u>
Aide	2	9.0000	1.4142
Team Member	34	11.5294	4.4054
Substitute	1	8.0000	0.0000

TABLE 4.27

Analysis of Variance Test for Differences on Total Summed Evaluation Score Based on the Responses to the Perception of Student Teacher's Role Question

<u>Sources of Variance</u>	<u>Mean Square</u>	<u>Degrees of Freedom</u>	<u>F</u>	<u>Approximate Sig. Level*</u>
Between Groups	11.6295	2	0.61545	0.546
Within Groups	18.8961	34		

*.05 significance level

From the above tables indicating the supervising teachers' perception of the role of the student teacher, it can be noted that there is no significant difference in total evaluation based on the supervising teachers' perceptions of student teacher role.

SUMMARY

This chapter comprises an analysis of all the data used in the study. The F test was used to analyze the variability among mean scores. Gain scores were reported on the data obtained from the experimental and control groups pre- and post-tests. The remaining data were reported in summaries from the surveys.

Much of the data recorded in this chapter had to do with an analysis of the pre- and post-test evaluations by supervising teachers and university coordinators. These data were reported in summary form as well as by individual items on the instruments. One area which indicated a significant difference was on the evaluation by university coordinators in the student teachers' adjustment of time allotments for tasks. There was one area which indicated a significant difference by the university coordinators in the control group. It was on question 4--the student teacher's ability to utilize instructional materials commensurate with the learning capabilities of each student.

Other data which indicated no significant difference included: provision for individual differences at various grade levels; use of varied materials by student teachers with availability of materials in buildings; academic degree held by supervising teacher, whether or not he had taken a course in supervising student teachers and how he perceived the role of student teacher.

CHAPTER V

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

The conclusions drawn from the analysis of the data are presented in this chapter with recommendations for further study and research in the light of the findings of this study. The implications which this study has for further educational research are also highlighted in this final chapter.

CONCLUSIONS

The conclusions which one can draw from the data are based upon the evidence presented in Chapter IV. With reference to the first hypothesis of the study, one would conclude that the strategy of working through the supervising teachers was not as successful a vehicle in changing student teachers' behavior as originally expected. The evidence presented indicated slight gains made by the student teachers on their pre- and post-tests. While a comparison of the gain scores between the experimental and control groups indicated no significant difference in the evaluations by the supervising teachers, those by the university coordinators showed a significant difference in one area: the teacher's adjustment of time allotments for tasks. Even though there was not complete success as evidenced by the

results, the gain in the one area did indicate the possibility of further success in the use of this strategy.

As a result of the fact that the student teachers did make some gain, one can conclude that the ability of student teachers to provide for individual differences can be increased as stated in the second hypothesis. The gain was made but was not a direct result of the in-service sessions with supervising teachers. Although it must be emphasized that there was a gain by the student teachers in the control group as well there was one area in which a significant difference was noted by the university coordinators: adjusting time allotments to complete tasks was an important area covered in the teaching model with supervising teachers. The evaluations of the student teachers in the control group by the university coordinators indicated a significant difference on question 4, the student teacher's ability to utilize instructional materials commensurate with the learning capabilities of each student.

The findings reject the notion that using the same evaluative device for measuring the student teacher's provision for individual differences in a class could be equivalently employed by both the university coordinator and

supervising teacher. The coordinators consistently rated the student teacher lower than did the supervising teacher. The fact that the difference in the rating of student teachers by the university coordinators and supervising teachers existed does not necessarily mean that they did not utilize the device the same way. The differences could have been due to the instrument itself as well as to how each rater viewed the situation.

The conclusions which can be drawn from the fourth hypothesis of the study that the strategy used for instructing supervising teachers would be a beneficial one converge upon the follow-up activities provided by the supervising teachers. Summaries of those activities indicate that when time was spent with the student teacher it involved primarily day-to-day planning. Thus the planning did not always present the suggestions and techniques advanced by the teaching model. Perhaps the supervising teachers were at a loss to implement the content of the teaching model for two reasons: (1) they lacked in experience in working with student teachers (for seven of the thirteen supervising teachers, this was their first or second student teacher); (2) only two of these supervising teachers had taken a course in the supervision of student teachers where they would have learned various procedures to use with student teachers.

The data reviewed in this study revealed additional

information. It was found that there was no difference in providing for the individual differences of students by the student teachers at various grade levels.

A comparison of the student teachers' use of varying materials with whether or not supplementary materials were available in the school yielded no significant difference.

Other information including the degree held by the supervising teacher, whether or not he had taken a course in supervising student teachers, how he perceived the role of the student teacher, all showed no significant difference.

When a comparison was made of the student teacher's actual behavior in providing for individual differences in the classroom (question 5 on the pre- and post-tests) with the total instrument scores by grade levels, the results indicated no significant difference between experimental and control groups.

The amount of time spent by each supervising teacher in the experimental group in follow-up activities did not correspond to the degree of improvement shown by the student teacher. For example, the student teacher who showed no gain but rather a loss between the scores on the pre- and post-test had a supervising teacher who indicated she spent 240 minutes in follow-up activities. The 240 minutes represented the third highest recording of minutes spent by the supervising teacher. The student teacher who demonstrated the most gain between the pre- and post-test scores

had a supervising teacher who recorded 105 minutes in follow-up activities. In this instance the 105 minutes represented the sixth highest recording of minutes spent by the supervising teacher in follow-up activities.

All of the supervising teachers in the experimental group responded on the Supervising Teacher Survey with their procedures for providing for individual differences in their classrooms. Their comments indicated that grouping, varying the assignment or objectives constituted providing for individual differences in their classrooms. The many facets of providing for individual differences which were utilized in the teaching model were not considered by many of the supervising teachers in the experimental group.

The limitations of the study raised questions relative to the mechanics of providing for in-service sessions with supervising teachers which remained unanswered:

(1) are supervising teachers permitted to leave their classrooms to attend in-service sessions?

(2) if so, are student teachers allowed to serve as substitutes or is it necessary for the school district to hire substitutes?

(3) are supervising teachers given the choice to attend or not to attend in-service sessions called by the university coordinator?

(4) is it possible for all supervising teachers from a building or school district to be absent at the same time?

IMPLICATIONS

Some implications were inferred from the data. Today's educators are interested in improving teacher education as evidenced by the response of elementary principals and first year teachers to the questionnaires.

Many teachers today feel pressures for one reason or another and are not willing to commit themselves to additional responsibilities such as in-service sessions.

Exactly how much of the outcome of the results of the study was due to the researcher and the research design or to other uncontrolled variables remains uncertain. Nevertheless they exist and raise questions to be considered. Why didn't the student teachers in the experimental group show more growth? How much of the growth achieved by the student teachers in providing for individual differences was due to:

- (1) the teaching model design
- (2) the supervising teacher's follow-up activities
- (3) the amount of time spent in the follow-up activities
- (4) the teaching experience of the supervising teachers
- (5) the experience of working with student teachers
- (6) normal growth during a student teaching experience
- (7) the innate competencies of the student teacher
- (8) personality conflict between supervising teacher and student teacher
- (9) differences within schools

For example, one of the variables in this study which may have been significant to the outcome was the fact that in the experimental group of thirteen supervising teachers, seven indicated that their present student teacher was

1

either their first or second. No supervising teacher had had more than six student teachers and only three teachers had had more than three student teachers. This leads to the question of the success of the more experienced supervising teacher in working with the student teacher. How much more influence does the experienced supervising teacher have over the less experienced? Also only two of these supervising teachers had taken a course in supervising student teachers. Of what value would such a course have been in their follow-up activities with their student teachers?

There was no significant difference in the student teacher's provision for individual differences at different grade levels as measured by the present evaluation instrument. This information is important in that often this is thought to be done more successfully at the early elementary level.

The fact that there was no significant difference in the student teacher's use of varying materials based on whether or not supplementary materials were available in the schools has implication for further research. Is this true for elementary classroom teachers as well as student teachers? Having a variety of materials is highly emphasized in most readings on individualized instruction. How necessary are the materials?

The results of this study did not rule out that the strategy of working through the supervising teachers to

improve an area of weakness in teacher education is a good procedure. According to Allen A. Schmeider:

The classroom teacher is probably the most under-utilized resource for change and improvement in American Education.⁷³

It would warrant trying this procedure again in different situations.

It is difficult to judge the actual effectiveness of the teaching model itself. This is due to the thoroughness of the follow-up activities conducted by the supervising teachers as well as the amount of time spent in the follow-up. These variables are difficult to control and have unknown effects on the results.

The fact that providing for individual differences was suggested as an area for concentration in this study indicates the concern of principals and first year teachers in this regard. This study sought one means to alleviate or lessen the problem for prospective teachers. Other means should be explored and investigated.

This study has another implication which has no means of reporting data available. It is the effect of the in-service sessions upon the supervising teachers themselves in the experimental group. Each teacher's involvement hopefully had meaning for him by changing his behavior.

⁷³Allen A. Schmeider, "Teaching Power and Local-to-Local Delivery," The Journal of Teacher Education, XXII (Summer, 1972), 115.

Another dimension which could be considered in replicating the study would be that of including the student teachers in the initial planning. It might also be advantageous to include them in the instructional procedures along with the supervising teachers. This, of course, would change the initial focus of the study.

RECOMMENDATIONS

In the light of the study's findings certain recommendations can be made. The in-service sessions with supervising teachers are basic to the study. In order to replicate the study, the researcher would need to find answers to the questions raised in the preceding section. If teachers are given a choice of attendance, it could be feasible that enough or not enough teachers would choose to participate to make the study worthwhile. On the other hand, when supervising teachers are not given an option to attend but are required to do so their attitudes may affect the result of the outcomes.

The teachers who would opt to participate should be involved in the planning. John Moffitt writing about in-service education points out that;

Only under those circumstances in which teachers find their own problems and want to do something about them can effective in-service education programs exist.⁷⁴

With this in mind the teachers who would be participating in the study should determine the area to be studied.

There should be a joint meeting of all coordinators

⁷⁴John Clifton Moffitt, In-Service Education for Teachers, (Washington, D.C.: The Center for Applied Research, Inc., 1963), p. 59.

participating in the study rather than in the individual centers. This lends to more uniformity. It is advantageous also that the supervising teachers meet in groups prior to conducting the study. When several coordinators explain the procedure and forms, this could account for variances in the results.

In considering replicating the study, it is the mechanics of conducting the study which need the thorough planning and prior investigations of the researcher. Establishing groups willing to participate is crucial to the success of the study.

How differently the teaching model could be utilized is a possibility for further investigation. Perhaps the five sessions originally planned would have been better than the two longer sessions used in the study. The supervising teachers, college coordinators, and the researcher felt that one of the most beneficial sections was the sharing of ideas and suggestions. More time could be allocated for this procedure in a similar teaching model.

Perhaps another area of study would be more conducive to a workable teaching model. At any rate the teaching model, in order to be effective, needs to present diversified activities and techniques as well as involvement of the participants.

In response to the unanswered questions regarding the mechanics of the study (p.118), a very recent study satisfactorily resolved the problem. Since the conclusion of the study being reported here, a similar study was reported by Dr. Miles A. Nelson with the formal evaluation presently under

study. He had as his purpose an in-service type of training program for cooperating teachers in which they would acquire and practice some necessary skills and also inform them of one role they might assume in supervising student teachers. The subjective evidence indicated the success of the program. One interesting aspect of Dr. Nelson's study was the means of providing for the in-service sessions with supervising teachers. These were held during the school day at a time when the student teacher could be left in charge. This parallels the procedure as reported in this study.⁷⁵

This particular study highlighted some voids in educational research which need further in-depth study. The investigations of related research revealed the lack of studies in in-service education, the availability of instruments to measure teacher behavior, and the evaluation of the student teaching experience.

This particular study stressed the role of the supervising teacher and included an added dimension to the role as a teacher of student teachers. In order to accomplish this, however, the need for in-service education for the supervising teacher was of paramount importance. This need which was accentuated by Dr. Gilfay still remains an unmet need of educational research. Dr. Gilfay wrote:

⁷⁵Dr. Miles A. Nelson, "Cooperating Teacher Training," The Journal of Teacher Education, XXIII (Fall, 1972), 367-370.

Recognizing that the most important influence in the professional preparation of the student teacher is the supervising teacher, teacher education institutions and public school administrators must move forward in developing an adequate in-service program for supervising teachers.⁷⁶

It has been indicated in this study that the need exists for better instruments which would stimulate educational research. Frederick R. Cyphert pointed out that teacher educators are reluctant to conduct research due to the unavailability of adequate instruments.⁷⁷

Historically, the student teaching or practice teaching experience has been the least criticized, and often the least researched part of the total education program.⁷⁸

Since this is true it would seem to indicate that further research is needed in this neglected area as well.

There is continuous pressure to improve people who are connected with schools which seems to be a part and parcel of the culture in which society finds itself today. Even though it is not always improvement, change is widely assumed to be good because standing still is to stagnate. American society has placed on education new and greater

⁷⁶Lewis W. Gilfay, "How Can Teacher Education Institutions and Public Schools Cooperate in Providing a More Effective In-Service Education Experience for the Supervising Teacher?" New Developments, Research, and Experimentation in Professional Laboratory Experiences, (The Association for Student Teaching; Cedar Falls, Iowa, 1965), p. 111.

⁷⁷Frederick R. Cyphert, "An Analysis of Research in Teacher Education," The Journal of Teacher Education, XXIII (Summer, 1972), 145-151.

⁷⁸Robert L. Ebel, Editor, Encyclopedia of Educational Research, Fourth Edition, (The Macmillan Company; Toronto, Ontario, 1969), p. 1417.

responsibilities. Schools must provide an education for increased numbers of people, for a longer span of productive life and at higher levels of skill and competence. As a result of these greater responsibilities education is not only concerned with large numbers of students but increasingly concerned with the individual as an individual. Education has been concerned with the individual in the past but not to the extent that it is today. One of the primary goals of education today is the personal development of the individual. Therefore, this area is one which educators need to study in greater depth in order to meet the challenge. This study sought one means to alleviate or lessen the problem for prospective teachers but other means should be explored and investigated.

What is important as a result of this study is the fact that a definite need in teacher preparation programs was identified and steps were taken in setting up a procedure to remedy the need. Two separate groups, both elementary principals and first year teachers identified an area of need which is not being adequately met in pre-service education. This experimental research study investigated one method of alleviating the weakness of providing for individual differences in elementary classrooms. Although this study did not provide a clear cut solution to the problem, it did investigate a method which does have merit and could be successful given the proper conditions.

The strategy of the in-service sessions with supervising teachers for a purpose other than increasing supervisory skills was likewise a worthwhile outcome of this study. Even though the hoped-for complete success was not achieved, the fact that some success was evident makes further study in this area important.

SUMMARY

The conclusions which can be drawn from the study were reported in this chapter along with the recommendations for replicating the study. The chapter concluded by suggesting the implications which the study has for additional educational research.

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A P P E N D I C E S

APPENDIX 1

QUESTIONNAIRE SENT TO ELEMENTARY PRINCIPALS

February 10, 1972

Dear

In an effort to improve the effectiveness of elementary teacher preparation programs, it would be to our advantage to know the areas which you feel are deficient in these programs today. I am of the opinion that you are in a decidedly advantageous position to have this information due to your thorough evaluation of new teachers.

The results of this survey sent to all elementary principals in Kalamazoo County will serve as the basis for a study to demonstrate one way in which elementary teacher education programs might be improved.

Would you please indicate in order of priority (1,2,3) the three areas below most in need of improvement in elementary teacher education programs at the undergraduate level?

- | | |
|---|-------------------------------|
| _____ 1. Disciplinary matters | _____ 4. Classroom management |
| _____ 2. Instructional skill, methods | _____ a. Time schedule |
| _____ a. Motivation | _____ b. Pupil work habits |
| _____ b. Providing for individual differences | _____ c. Experimentation |
| _____ c. Student participation | _____ d. Records and Reports |
| _____ d. Review | |
| _____ e. Application | _____ 5. Student Evaluation |
| _____ f. Assignment | _____ 6. Other _____ |
| _____ 3. Preparation of subject matter | _____ identify |
| _____ a. Planning | |
| _____ b. Objectives | |
| _____ c. Use of resources | |

I would appreciate your returning this survey to me in the enclosed stamp addressed envelope by February 17, 1972.

Thank you for your cooperation in this all important task of preparing qualified teachers.

Sincerely yours,



Miss Barbara Sullivan
Coordinator of Elementary Education
Nazareth College

APPENDIX 2

QUESTIONNAIRE SENT TO FIRST YEAR TEACHERS

February 10, 1972

Dear

In an effort to improve the effectiveness of elementary teacher preparation programs, it would be to our advantage to know the areas which you feel are deficient in these programs today. I am of the opinion that you are in a decidedly advantageous position to have this information due to your short term of classroom experience and very recent preparation for your present position.

The results of this survey sent to all first year teachers in Kalamazoo County will serve as the basis for a study to demonstrate one way in which elementary teacher education programs might be improved.

Would you please indicate in order of priority (1,2,3) the three areas below most in need of improvement in elementary education programs at the undergraduate level?

- | | |
|---|-------------------------------|
| _____ 1. Disciplinary matters | _____ 4. Classroom management |
| _____ 2. Instructional skill, methods | _____ a. Time schedule |
| _____ a. Motivation | _____ b. Pupil work habits |
| _____ b. Providing for individual differences | _____ c. Experimentation |
| _____ c. Student participation | _____ d. Records and Reports |
| _____ d. Review | _____ 5. Student evaluation |
| _____ e. Application | _____ 6. Other _____ |
| _____ f. Assignment | _____ identify |
| _____ 3. Preparation of subject matter | |
| _____ a. Planning | |
| _____ b. Objectives | |
| _____ c. Use of resources | |

I would appreciate your returning this survey to me in the enclosed stamp addressed envelope by February 17, 1972.

Thank you for your cooperation in this all important task of preparing qualified teachers.

Sincerely yours,

Barbara Sullivan

Miss Barbara Sullivan
Coordinator of Elementary Education
Nazareth College

APPENDIX 3
SUPERVISING TEACHER SURVEY

Name _____

School _____ Grade Level _____

Total years of teaching experience _____

Total years of teaching experience at present
grade level _____

Number of student teachers including the present one _____

Earned credit for a graduate course supervising
student teachers Yes(____) No (____)

Degrees earned _____
BA MA Ed.S Other

Probationary Teacher _____ Tenure Teacher _____

Briefly outline your procedure for providing for individual differences in your classroom.

How do you perceive the role of your student teacher?

- _____ 1. as an aide
 _____ 2. as a team member
 _____ 3. as your substitute

SCHOOL INFORMATION

The number of students in your school _____

The number of classroom teachers in your school _____

Socio-economic level of the students

_____ lower middle class

_____ middle class

_____ upper middle class

Do you have available in your school -

Supervisory personnel in subject matter areas

yes ____ no ____

Teacher aides

yes ____ no ____

Volunteer help

yes ____ no ____

Supplementary resources in your building yes ____ no ____

APPENDIX 4

STUDENT TEACHER SURVEY

Name _____ Age _____

Single _____ Married _____ Number of Children _____

School _____ City _____

Supervising Teacher _____ Grade Level _____

Approximate hours of pre-student teaching experience _____

Kinds of previous experience with children	Length of Service
--	-------------------

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Will complete student teaching experience _____ (date)

Will earn degree _____ (date)

Major _____

Minor _____

Briefly outline your proposed procedure for providing for individual differences in your classroom.

APPENDIX 5

PRE-TEST OBSERVATION OF EXPERIMENTAL GROUP OF STUDENT TEACHERS

Student Teacher _____

Supervising Teacher _____

School _____ Grade Level _____

Subject _____ Date _____

Evaluation of the Student Teacher in His/Her Ability to
Provide for Individual Differences

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
1.	The student teacher is able to evaluate the students in his/her class as to their capabilities and potentialities. For what per cent of the students has the student teacher gathered written data relative to understanding their basic needs? _____					
2.	The student teacher is able to compose an appropriate plan to provide for the needs of all the students in his/her class. For what per cent of the students has the student teacher written a lesson plan with a teaching method appropriate to their needs? _____					

		Per cent of students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
3.	The student teacher is able to provide the learning environment in the classroom which is conducive to each learner's needs.					
	a. For what per cent of the students has the student teacher provided an intellectual climate conducive to learning?					
	b. For what per cent of the students has the student teacher provided a physical climate conducive to learning?					
	c. For what per cent of the students has the student teacher provided an emotional climate conducive to learning?					
	d. For what per cent of the students has the student teacher provided a social climate conducive to learning?					
4.	The student teacher is able to utilize instructional materials commensurate with the learning capabilities of each student.					
	For what per cent of the students has the student teacher provided appropriate diversified instructional materials?					

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
5.	The student teacher is able to demonstrate his/her ability to individualize instruction by his/her teaching behavior in the classroom.					
	For what per cent of the students does the student teacher accomplish the following?					
	a. expectations not the same for all students					
	b. differentiates learning activities for all students					
	c. individualizes the difficulty of the task					
	d. capitalizes on individual interests and aptitudes					
	e. adjusts time allotments for tasks					
	f. is sensitive to varying personal and social needs					
	g. seeks participation by all students					
	h. gives each student the assistance and support appropriate for his needs					
	i. shows genuine concern for each student					

Comments:

Supervising Teacher

APPENDIX 6

PRE-TEST OBSERVATION OF EXPERIMENTAL GROUP OF STUDENT TEACHERS

Student Teacher _____

Supervising Teacher _____

School _____ Grade Level _____

Subject _____ Date _____

Evaluation of the Student Teacher in His/Her Ability to
Provide for Individual Differences

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
1.	The student teacher is able to evaluate the students in his/her class as to their capabilities and potentialities. For what per cent of the students has the student teacher gathered written data relative to understanding their basic needs? _____					
2.	The student teacher is able to compose an appropriate plan to provide for the needs of all the students in his/her class. For what per cent of the students has the student teacher written a lesson plan with a teaching method appropriate to their needs? _____					

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
3.	The student teacher is able to provide the learning environment in the classroom which is conducive to each learner's needs.					
	a. For what per cent of the students has the student teacher provided an intellectual climate conducive to learning?					
	b. For what per cent of the students has the student teacher provided a physical climate conducive to learning?					
	c. For what per cent of the students has the student teacher provided an emotional climate conducive to learning?					
	d. For what per cent of the students has the student teacher provided a social climate conducive to learning?					
4.	The student teacher is able to utilize instructional materials commensurate with the learning capabilities of each student.					
	For what per cent of the students has the student teacher provided appropriate diversified instructional materials?					

		Per cent of Students				
		90 to 10	75 to 89	50 to 74	25 to 49	24 to 0
5.	The student teacher is able to demonstrate his/her ability to individualize instruction by his/her teaching behavior in the classroom.					
	For what per cent of the students does the student teacher accomplish the following?					
	a. expectations not the same for all students					
	b. differentiates learning activities for all students					
	c. individualizes the difficulty of the task					
	d. capitalizes on individual interests and aptitudes					
	e. adjusts time allotments for tasks					
	f. is sensitive to varying personal and social needs					
	g. seeks participation by all students					
	h. gives each student the assistance and support appropriate for his needs					
	i. shows genuine concern for each student					

Comments:

University Coordinator

APPENDIX 7

POST-TEST OBSERVATION OF EXPERIMENTAL GROUP OF STUDENT TEACHERS

Student Teacher _____

Supervising Teacher _____

School _____ Grade Level _____

Subject _____ Date _____

Evaluation of the Student Teacher in His/Her Ability to
Provide for Individual Differences

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
1.	The student teacher is able to evaluate the students in his/her class as to their capabilities and potentialities. For what per cent of the students has the student teacher gathered written data relative to understanding their basic needs? _____					
2.	The student teacher is able to compose an appropriate plan to provide for the needs of all the students in his/her class. For what per cent of the students has the student teacher written a lesson plan with a teaching method appropriate to their needs? _____					

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
3.	The student teacher is able to provide the learning environment in the classroom which is conducive to each learner's needs.					
	a. For what per cent of the students has the student teacher provided an intellectual climate conducive to learning?					
	b. For what per cent of the students has the student teacher provided a physical climate conducive to learning?					
	c. For what per cent of the students has the student teacher provided an emotional climate conducive to learning?					
	d. For what per cent of the students has the student teacher provided a social climate conducive to learning?					
4.	The student teacher is able to utilize instructional materials commensurate with the learning capabilities of each student.					
	For what per cent of the students has the student teacher provided appropriate diversified instructional materials?					

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
5.	The student teacher is able to demonstrate his/her ability to individualize instruction by his/her teaching behavior in the classroom.					
	For what per cent of the students does the student teacher accomplish the following?					
	a. expectations not the same for all students					
	b. differentiates learning activities for all students					
	c. individualizes the difficulty of the task					
	d. capitalizes on individual interests and aptitudes					
	e. adjusts time allotments for tasks					
	f. is sensitive to varying personal and social needs					
	g. seeks participation by all students					
	h. gives each student the assistance and support appropriate for his needs					
	i. shows genuine concern for each student					

Comments:

University Coordinator

APPENDIX 8

POST-TEST OBSERVATION OF EXPERIMENTAL GROUP OF STUDENT TEACHERS

Student Teacher _____

Supervising Teacher _____

School _____ Grade Level _____

Subject _____ Date _____

Evaluation of the Student Teacher in His/Her Ability to
Provide for Individual Differences

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
1.	The student teacher is able to evaluate the students in his/her class as to their capabilities and potentialities. For what per cent of the students has the student teacher gathered written data relative to understanding their basic needs?					
2.	The student teacher is able to compose an appropriate plan to provide for the needs of all the students in his/her class. For what per cent of the students has the student teacher written a lesson plan with a teaching method appropriate to their needs?					

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
3.	The student teacher is able to provide the learning environment in the classroom which is conducive to each learner's needs.					
	a. For what per cent of the students has the student teacher provided an intellectual climate conducive to learning?					
	b. For what per cent of the students has the student teacher provided a physical climate conducive to learning?					
	c. For what per cent of the students has the student teacher provided an emotional climate conducive to learning?					
	d. For what per cent of the students has the student teacher provided a social climate conducive to learning?					
4.	The student teacher is able to utilize instructional materials commensurate with the learning capabilities of each student.					
	For what per cent of the students has the student teacher provided appropriate diversified instructional materials?					

		Per cent of Students				
		90 to 100	75 to 89	50 to 74	25 to 49	24 to 0
5.	The student teacher is able to demonstrate his/her ability to individualize instruction by his/her teaching behavior in the classroom.					
	For what per cent of the students does the student teacher accomplish the following?					
	a. expectations not the same for all students					
	b. differentiates learning activities for all students					
	c. individualizes the difficulty of the task					
	d. capitalizes on individual interests and aptitudes					
	e. adjusts time allotments for tasks					
	f. is sensitive to varying personal and social needs					
	g. seeks participation by all students					
	h. gives each student the assistance and support appropriate for his needs					
	i. shows genuine concern for each student					

Comments:

Supervising Teacher

APPENDIX 9

TEACHING MODEL FOR
IN-SERVICE SESSIONS WITH
SUPERVISING TEACHERS

SESSION I

OBJECTIVE I - The student teacher is able to evaluate the students in his/her class as to their capabilities and potentialities.

PROCEDURE - During this session the supervising teachers discussed with the writer the following means of evaluating the abilities of students in their classes:

1. How information is obtained relative to the individual differences of children
 - a. Test results
 - b. Records-health, scholastic, etc.
 - c. Observations
 - d. Conferences-parents, teachers
2. What data are available on students
 - a. Enumeration of the kinds of data available
3. Where such information is obtained
 - a. Enumeration of the sources of such information
4. What to do with such information
 - a. Action to be taken
5. How to have ready access to pertinent vital information
 - a. Means available and used by the supervising teachers

The material discussed during this session was compiled and distributed to supervising teachers at the second in-service session. It should prove helpful because of the variety of ways teachers deal with the topic in their own classrooms.

FOLLOW-UP BY SUPERVISING TEACHERS - When the supervising teacher had a conference with his/her student teacher, the compiled information could serve as a means of discussion with the student teacher. It is assumed that the student teacher will implement the suggestions.

OBJECTIVE II - The student teacher is able to compose an appropriate plan to provide for the needs of all students in his/her class.

PROCEDURE - The supervising teachers considered the role of planning in order to provide for individual differences in their classes:

1. Lesson plan format
2. Need for varied objectives, procedures, materials, and assignments
3. How to develop assignments with built-in flexibility in expectations for children
4. How varied teaching techniques can be appropriately matched with varying student abilities
 - a. Example of higher ordered questions-use of filmstrip Asking Questions by Bel Mort Films
 - b. Varied techniques-use of filmstrips
 - (1) Overview Methods of Teaching
 - (2) Teaching Types by Bel Mort Films
5. How to make use of specialized personnel and aides available within the school setting

FOLLOW-UP - When the supervising teachers had conferences with the student teachers they discussed the above material with them. The topic of planning is so important that it should be reviewed periodically during the term.

SESSION II

OBJECTIVE III - The student teacher is able to provide the learning environment in the classroom which is conducive to each learner's needs.

PROCEDURE - The supervising teachers discussed the entire learning environment as it relates to meeting the needs of all students:

1. Aspects of the physical, emotional, social, and intellectual environment
2. Individual or group work
3. Place and facilities in the classroom to accomplish fulfillment of task at hand
4. Open classroom concept-centers or stations for a variety of tasks

5. How to cope with peer relationships when different assignments are made
6. How to keep records of accomplishments simple and easy to maintain
7. Key to successful planning to activate a desire to learn by self-motivation - use of the filmstrip Motivation by Bel Mort Films

FOLLOW-UP - Much of the material in this session can be demonstrated by the supervising teacher's behavior. The supervising teacher by his/her teaching serves as an example of how to provide and maintain a desirable learning environment in the classroom.

OBJECTIVE IV - The student teacher is able to utilize instructional materials commensurate with the learning capabilities of each student.

PROCEDURE - The supervising teachers discussed the use of instructional materials which is the key to providing an individualized program that is both workable and economically feasible:

1. Procedure for obtaining and returning materials
 - a. Forms, length of time needed for ordering, etc.
2. Criteria used in making appropriate selection of materials
3. Where materials are available to peruse
4. Place to use in room for easy access
5. How to work within available funds
6. Samples of materials from various areas of the curriculum were displayed and shared by the teachers

FOLLOW-UP - The supervising teacher needs to give the student teacher time to select materials as well as offer suggestions and help in making selections.

OBJECTIVE V - The student teacher is able to demonstrate his/her ability to individualize instruction by his/her teaching behavior in the classroom.

PROCEDURE - The supervising teachers considered and discussed the kind of teaching behavior which demonstrates that the teacher is providing for the individual differences in the classroom:

1. Execution of the written lesson plan
2. Evidence of ability which provides for students' varied capabilities
 - a. Expectations not the same for all students
 - b. Differentiates learning activities for all students
 - c. Individualizes the difficulty of the task
 - d. Capitalizes on individual interests and aptitudes
 - e. Adjusts time allotments for tasks
 - f. Is sensitive to varying personal and social needs
 - g. Seeks participation by all students
 - h. Gives each student the assistance and support appropriate for his needs
 - i. Shows genuine concern for each student

FOLLOW-UP - The supervising teacher needs to use the above criteria in evaluating the daily lessons presented by the student teacher. How to improve and also maintain the success achieved needs to be brought to the student teacher's attention. Nothing succeeds like success.

APPENDIX 10

OBJECTIVES OF THE TEACHING MODEL

1. The student teacher is able to evaluate the students in his/her class as to their capabilities and potentialities.
2. The student teacher is able to compose an appropriate plan to provide for the needs of all the students in his/her class.
3. The student teacher is able to provide the learning environment in the classroom which is conducive to each learner's needs.
4. The student teacher is able to utilize instructional materials commensurate with the learning capabilities of each student.
5. The student teacher is able to demonstrate his/her ability to individualize instruction by his/her teaching behavior in the classroom.

APPENDIX 11

SUMMARY OF SUGGESTIONS PROPOSED AT FIRST IN-SERVICE
SESSION

OBJECTIVE: The student teacher is able to evaluate the students in his/her class as to their capabilities and potentialities.

In order to accomplish this objective the student teachers need to be aware of the procedures for gathering the data relative to the individual differences in the class. They need to know not only the sources of information in the schools to which they are assigned, but also, if any restrictions are placed on certain privileged information.

What data are available on students?

1. Test scores - achievement, IQ, diagnostic
2. Academic information - grades
3. Health records - physical, psychological
4. Parent-teacher conference reports
5. Observation reports
6. Home visit information
7. Anecdotal records
8. Special school personnel reports
9. Index cards and other sources of information gathered by the teacher
10. Extra-curricular activities of the students

Where is such information obtained?

1. Records in the school office
2. Special school personnel with whom the student teacher could consult
 - a. School nurse
 - b. Diagnostician
 - c. School social worker
 - d. Counselor
 - e. Reading consultant
 - f. Physically handicapped consultant
 - g. Principal
 - h. Other teachers-music, art, physical education

3. Information compiled by student teacher by
 - a. Observation
 - b. Correcting assignments
 - c. Attending parent-teacher conferences
 - d. Writing a case study
 - e. Keeping anecdotal records
 - f. Home visits and trips into the community
 - g. Working with individual students

What should the student teacher do with the compiled data?

1. It is expected that the student teacher will take any necessary action after first conferring with the supervising teacher, e.g. to talk with the appropriate personnel about the course of action which is best for the individual student.
2. The student teacher should utilize the appropriate information in working with the students in the class.

How can the student teacher have important information about the students readily available when necessary?

1. Card file
2. Notebook
3. In plan book
4. In substitute folder
5. Health records on special charts e.g. allergies
6. Listing of emergency numbers

What do supervising teachers expect from their student teachers about gathering data and using it in providing for individual differences in the class?

1. Fall student teachers should work as a team member with the supervising teacher in collecting the pertinent data.
2. Winter and spring term student teachers should avail themselves of compiled information; they should also have the experience of knowing how to use the procedures for gathering data by going through the process for a couple of students.

3. It is important that the student teacher not only knows how to evaluate the students in his/her class as to their capabilities and potentialities on the basis of thorough investigation, but also that he/she knows how to and does use it in planning for individual differences. The lesson plan objectives, procedures and materials should reflect the student teacher's awareness of the needs of each child in the class.

[illegible][illegible]

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