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THE IMPACT OF TEACHER EXPERIENCE ON THE ACHIEVEMENT  
OF THIRD-GRADE STUDENTS IN INNER-CITY SCHOOLS

DISSERTATION

Presented to the Graduate Council of the  
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For the Degree of

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By

Rita Gray Newman, B.A., M.A.

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This study investigated the impact of the years of teaching experience of classroom teachers on the achievement of third-grade students in inner-city Title I Schools; on the achievement of those third-grade students who were defined as high achievers, average achievers, and low achievers; and on the achievement of boys and girls in the third grade of inner-city Title I schools.

Nine inner-city Title I schools in a subdistrict of an urban independent school district in the north Texas area participated in the study. A total of 868 students from forty-two self-contained classrooms was included. The Iowa Test of Basic Skills (ITBS) was used to measure the achievement of the students. The ITBS Level 7 was administered in the spring of 1977, and the ITBS Level 8 in the spring of 1978.

A four-group experimental design was utilized in the study. Analysis of covariance technique was used to analyze statistically the scores derived from the administration of the two tests. The ITBS Level 7 score was used as the covariate. This technique was chosen in order to control for

possible initial differences between classroom groupings. Classroom mean scores, ITBS Level 8, were used as the basis of analysis. The scores were grouped for analysis in this manner because major independent variables were teacher characteristics rather than student characteristics.

The .05 level of significance was used as the level of rejection or acceptance of the null hypotheses. If the overall F ratio was determined to be statistically significant at the .05 level, then Tukey's test was used as the multiple comparison method between cells.

The experimental variable was the number of years of teaching experience. Forty-two teachers were grouped according to their years of teaching experience.

Group A.--Eight teachers in their first year of teaching;

Group B.--Sixteen teachers in their second, third, and fourth years of teaching;

Group C.--Nine teachers in their fifth through ninth years of teaching; and

Group D.--Eight teachers in their tenth year or more of teaching.

An analysis and interpretation of the data revealed that there were no significant differences in reading and mathematics achievement of the third-grade students when the number of years of experience of the teacher was examined. Reading achievement of third-grade boys and third-grade

girls did show significant differences. The more-experienced teacher appeared to have the greater increase in reading scores of the students.

In addition to data concerning the hypotheses, information about other teacher variables was collected through a teacher self-report questionnaire. One hundred per cent of the teachers in the participating schools responded to the questionnaire. Data were tabulated by frequency of response in groups according to years of teacher experience. Variables included years of teaching experience in Title I schools, classroom size, and demographic data.

Analysis of the data indicated that teachers having more years of experience in Title I schools appeared to have a greater increase in the reading and mathematics scores of students. Students in larger classes appeared to show greater gains than students in smaller classes in reading and mathematics. The majority of the teachers indicated that they felt the teacher, parent involvement, and class size had the most impact on achievement of students and staff development had the least impact.

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## CHAPTER I

### INTRODUCTION

Education in any country is dependent on the men and women who are working as teachers in the school systems. About 2.2 million teachers were employed in public schools in the United States in 1976 (20, 25). Teachers, like the pupils and parents they serve, are a heterogeneous group.

The National Education Association profile of the American public school teacher in 1976 noted that more than 26 per cent of all teachers teach in a city compared to 28 per cent who teach in suburban areas. The largest proportion of teachers, 42.4 per cent, reported that a majority of their pupils were from lower middle-class families, 18 per cent reported a majority from lower class, and 23 per cent from mixed economic classes (8, 20). Nearly one in three of all teachers has entered the profession within the last five years and about 5.5 per cent taught for the first time during the 1975-76 school year. The collective years of experience of teachers decreased from a mean of twelve to a mean of 10 years during the past decade. The proportion of older teachers has decreased and there is a correlation between age and experience (18, 20).

The achievement gains of students has been the subject of educational literature. Research on the achievement of

students includes studies concerned with heredity, race, and family background (3, 14). Randolph (19) also identified the community, legislation, and administrative leadership as factors affecting the achievement of students. He indicated that many forces could have future impact on professional practices in the field of education.

Several studies concluded that the achievement gains of students are mainly the result of the teaching staff (9, 23, 26). The impact of the individual teacher has been a subject that has been continuously reviewed (10, 16, 17). Smith (24) indicated that little research has been done on the effectiveness of the teacher based on the years of teaching experience.

A recent review by Gage indicated a lack of consistency in research findings on the results of teaching. Gage stated that more studies of specific variables in teacher behavior in relation to pupil achievement are necessary. Gage questioned specific research designs and the inability of researchers to draw valid conclusions (6, p. 233).

The importance of the teacher as a factor in the achievement of students has been the subject of many articles. The present study investigated whether years of experience of the teacher are an important factor in the achievement of students.

#### Statement of the Problem

The problem of this study was the impact of teacher experience on the achievement of third-grade students in

inner-city Title I schools as measured by the Iowa Test of Basic Skills (ITBS).

#### Purposes of the Study

The purposes of the study were

1. To determine the impact of teacher experience on the achievement of the third-grade students in inner-city Title I schools;
2. To determine the impact of teacher experience on (a) high achievers, (b) average achievers, and (c) low achievers in inner-city Title I schools; and
3. To determine the impact of teacher experience on boys and girls in inner-city Title I schools.

#### Hypotheses

In order to carry out the purposes of this study, to determine the impact of teacher experience on achievement, the teachers were grouped as follows:

Group A.--Teachers in their first year of teaching;

Group B.--Teachers in their second, third, and fourth years of teaching;

Group C.--Teachers in their fifth, sixth, seventh, eighth, and ninth years of teaching;

Group D.--Teachers in their tenth year or more of teaching.

The following hypotheses were formulated.

1. There will be no significant difference in the reading and mathematics adjusted mean scores of students as measured by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

2. There will be no significant difference in the reading and mathematics adjusted mean scores of high-achieving third-grade students as measured by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

3. There will be no significant difference in the reading and mathematics adjusted mean scores of average-achieving third-grade students as measured by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

4. There will be no significant difference in the reading and mathematics adjusted mean scores of low-achieving third-grade students as measured by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

5. There will be no significant difference in the reading and mathematics adjusted mean scores of third-grade boys

as measured by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

6. There will be no significant difference in the adjusted mean scores of third-grade girls as measured by the ITBS when comparing (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

#### Background and Significance

Studies show that teachers do have an impact on student learning and that they are a valuable resource to the school (1, 10, 22). Klein (15) concluded, following the experimental project Planned Variation, that the teacher was the deciding factor in the classroom. She stated that in most classrooms the teacher plays a central role and is a crucial variable in the education of young children.

Hanushek (11), in his study to identify the teacher role in education, concluded that teachers generally do count in education. The study showed that individual differences (as college preparation, years of experience, or age) have greater effect on the achievement of white students as compared to the achievement of minority students. The author viewed the study as suggestive and a prototype to encourage further questions concerning effective placement of teachers.



Little research has been conducted on the first years of teaching experience of teachers and this relationship to the achievement of the child. Fuchs (5) reported that most young teachers went to their first teaching assignment with feelings of excitement and dedication. Later studies (4, 12, 21) showed a high dropout rate of beginning teachers. Bush (2) stated that over half of those teaching in their first year were not committed to teaching more than five years. Hymes (13) says that survival and success in teaching involve stages of experience that include reaching out to others, finding allies, and holding on to dreams.

The scores of inner-city students on achievement tests have reinforced the fact that experienced as well as inexperienced teachers have not been effective in raising academic levels in inner-city schools. Moleska (19) noted that a problem of all urban school officials was in the staffing of the inner-city school. Many new and inexperienced teachers were placed in classrooms with students who appeared to need the most-experienced staff possible. One of the major criticisms of the inner-city school was the large number of inexperienced teachers (5). Levine and Doll (16) reported that problems were created by requests for transfers by experienced teachers from inner-city schools and by their replacement with inexperienced teachers.

Statements by researchers seemed to indicate a need for research on years of experience of teachers related to

achievement of students in inner-city schools. This study was significant since it added to the research needed in the following areas.

1. It added to previous research on the teacher on achievement;
2. It provided data on the years of teaching experience as a significant factor in academic achievement of pupils;
3. It provided guidelines for matching teachers and pupils to increase academic achievement; and
4. It could be used to determine the need for individualized staff-development programs.

#### Definition of Terms

High achievers.--Those students who scored more than one-half standard deviation above the mean for this sample on the ITBS Level 7 composite.

Average achievers.--Those students who scored in the range of one-half standard deviation above or below the mean for this sample on the ITBS Level 7 composite.

Low achievers.--Those students who scored more than one-half standard deviation below the mean for this sample on the ITBS Level 7 composite.

Self-contained classroom.--A classroom in school organization where classes are composed of groups of students which remain in one location, with one teacher, for all or

nearly all instructional activities; to be distinguished from a departmentalized classroom (7).

Title I schools.--Those schools serving areas with concentrations of children from low-income families; established under Public Law 89-10; federal funds supplemented state and local funds (27).

#### Basic Assumptions

It was assumed that all examiners administering the ITBS test followed the instructions for testing which were provided in the manual. It was assumed that the ITBS is an accepted measure of achievement of third-grade students.

#### Procedures for the Collection and Analysis of Data

The following procedures were employed in the study.

1. The ITBS was the instrument chosen for use in measuring achievement.
2. The population in this study was forty-two classes of third-grade students in self-contained classrooms from Title I schools in an urban independent school district in north Texas.
3. The experimental variable was the number of years of teaching experience.
4. All hypotheses were tested with the analysis of covariance using the Level 7 as the covariate in order to control statistically for initial differences.

5. Further analysis of the data included separate examinations of the reading and mathematics scores of third-grade boys and girls; separate examinations of the reading and mathematics scores of third-grade students when comparing years of teacher experience in Title I schools; and examinations of class size and the effect on achievement of students.

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## CHAPTER II

### REVIEW OF LITERATURE

The related literature for this study is grouped under three categories: (1) the teacher as a factor of change in the educational system, (2) the years of experience of the teacher as a factor affecting the achievement of students, and (3) related research on the staff of the inner-city school.

#### The Teacher

A thorough review of literature of research studies and surveys indicates that the educational community must look carefully at the single most influential element of the school--the teacher (18, 21, 30, 43, 75). Research concludes that teachers can and do make a difference in the development of children. Chaffee (17) reported that in the Nineteen School Effectiveness Studies teachers were the most important element in the school. Quality of facilities, quantity of materials and equipment, and level of financial aid had secondary effects on pupils. Silberman (91) also reported that aids may help in the educational process, but in the final analysis there was no substitute for the teacher.



Coleman (23) concluded in 1966 that family background and peers have a greater effect on children than teachers or physical surroundings. The Coleman Report or Equality of Educational Opportunity Report was the result of a specific request by Congress for social research that might provide a basis for policy decisions in the field of education. A study by social scientist Jencks and his associates indicated that schools have modest effects on the degree of cognitive and noncognitive inequality among adults (47). In contrast, recent studies by Clark, Mosteller, and Moynihan showed differences in influence of the teacher-effect on the education of students (20, 70).

Later Coleman (22) analyzed the International Education Association studies and concluded that reading achievement was more an outgrowth of home influences. These studies indicated that home background was a more powerful influence than school influences in measuring achievement in specific subjects. In an earlier report Coleman stated that standard variables--teacher experience, class size, quality of textbooks, and school plant--had little effect on cognitive skill development (23). Further examination of the variables were recommended.

Research evaluating learning in early childhood education includes investigations of environment and materials (1, 7, 28, 92, 100). The teacher is described as the most important single factor in determining the nature of the

child's experiences together with the goals and values that are stressed in the educational setting (26, 106). The central role of the teacher was reported by Klein (54) in a project implemented in 1969-70. Eleven sponsors were selected through the offices of Head Start and Follow Through to be involved in a study on the impact of diverse curriculum models in thirty-seven communities. In each model the teacher did play a central role. Individual teacher variables seemed to be the main factors in determining the success or failure of the model (54).

Research conducted by Brophy (9) focused on the effectiveness of the elementary school teacher. Individual differences of students as well as teachers were considered. Statistically significant results indicated relative differences in teacher effectiveness and suggested the feasibility of identifying highly consistent teachers. A study initiated in 1955 attempted to report on teaching effectiveness focusing on the interaction of teacher and student (8, 9). Hughes (46) stated that the content of instruction was always initiated through the teacher. Later studies investigating teacher influence indicated the need for further study of individual factors which had been considered in these studies (24, 28, 32, 33).

Randhawa and Lewis (79) examined classroom variables that promoted effective learning experiences for children and investigated teacher performance in different classrooms

among various grade levels. The effect of sex differences of the teachers on pupil learning was examined in rural and urban school settings.

In 1969, findings by Harris (38) indicated that the teacher was the crucial variable in reading instruction in elementary and secondary schools. A study by Hanushek (36) examined the educational process used to identify the role of the teacher in education and concluded that teachers do generally count in education. New evidence on the effectiveness of the public school was reported using data from educational resources in all fifty states in the United States. The conclusion was that higher levels of educational expenditures in public schools were related to lower rates of test failure (103). Disparities in expenditures, resources, and outcomes were noted within states and from one state to another. A major factor involved in educational expenditures indicated was the teacher. A later study by Sorensen (93) indicated that new research is needed to evaluate the impact of the instructional resources of the school.

The effectiveness of the teacher was rarely used to measure the learning of the pupils. Limited research showed that although many investigators believe that the teacher may be the most important factor in educational achievement for most children, this belief is based on judgment and requires more theoretical data (12, 69, 84). Veldman and Brophy (102) used a sample of 115 second- and third-grade teachers with a

minimum of five consecutive years of experience to study the effect of teachers on achievement. The conclusion was that teachers do affect the achievement of students to a degree that is practically and statistically significant.

Three studies investigating school effects on the achievement of pupils in California obtained findings about the impact of teachers as a school-related factor. Hanushek (37) reported that differences in teachers and classrooms did affect the achievement of some students, but that teaching experience did not contribute to student achievement. The work of Hanushek is part of a larger effort by the Rand Corporation to examine the relationship between inputs, as teachers and facilities, and outputs as measured by achievement scores and change in attitudes. Results obtained indicated a need for further research to further identify teachers' attributes and their effect on achievement.

A major study conducted in 1971-72 and 1972-73 reported profiles of performance of school districts in California. Characteristics of school districts were described through twenty-three input factors that included tax rate, class size, and salaries of teachers. Indicators of school quality in terms of products of the educational system were referred to as output factors and considered pupil scores on achievement tests. Findings showed high achievement scores associated with high expenditures per pupil, low percentages

of minority-group pupils, and higher income and educational levels of the district population (16).

A study conducted by the Department of Research of the Federal Reserve Bank of Philadelphia investigated which school resources promote learning and how these should be allocated to maximize learning of individual students. Data were detailed sufficiently to match pupils with their specific teachers. Standardized tests in basic skills were used to measure student achievement as the single most important function of formal education. Summers and Wolfe, economists, conducted the Federal Reserve Bank of Philadelphia Study with the primary intent to provide an objective analysis of the use of school resources: (1) to improve learning of school children, (2) to provide more-efficient use of the money of the taxpayer, and (3) to provide essential information leading to educational equity. The investigation involved 627 students between the end of the third and sixth grades in 103 elementary schools, 553 students between the end of the sixth and eighth grades in 42 schools, and 716 students between the ninth and twelfth grades in 5 senior high schools. Socioeconomic data, school resources, and school climate were examined for all three levels. In this study the output of the school system was regarded as growth in achievement over a period of years. The assumption was that test results would convey some important information about what these schools were accomplishing.

The school inputs considered included class sizes, years of experience of the teachers, and different sizes of schools (96, 97).

Summers and Wolfe found that differences in the years of experience of the teacher did have an impact on the achievement growth of students. Twenty-seven per cent of the teachers in the Philadelphia study had three or fewer years of experience, and 37 per cent had taught more than three years but fewer than ten years. Thirty-six per cent of the teachers had taught ten or more years. Targeting teacher experience to appropriate students appeared to raise student achievement and offset initial learning handicaps. High achievers appeared to do best with more-experienced teachers. However, these teachers slowed the learning growth of low achievers who appeared to do best with new, relatively inexperienced teachers. In junior high, an experienced English teacher appeared to be most effective with high-ability students, but English teachers having experience of ten or more years appeared to be effective with all students (96, 97).

Coleman (86) stated that the study by Summers-Wolfe was an important step in investigating strategies for learning about how school resources affect achievement of students. One of his recommendations was that data collected about the results of student achievement with teachers in different years of experience should be a subject for future research.

### Years of Experience of the Teacher

Katz (50) identified at least four developmental stages for teachers and noted that individual differences would account for the length of time spent in each developmental stage. The first stage involves, in some cases, the entire first year of teaching. Inadequate feelings of most beginning teachers were described as the teachers experienced conflict between what they had been taught about the art of teaching and what they experienced in their first year in the classroom. Reports showed that the first year involved tension or lowering standards.

The second year of teaching experience, consolidation, found that teachers exchanged ideas with more-experienced teachers, and shared feelings with other teachers in the same stage. The day-to-day struggle during the first and second year of teaching showed personal and professional growth that resulted in finding a stable routine acceptable to self and to the administration.

The third and fourth years of teaching were a renewal period. Katz describes the teacher in the third stage as an individual ready to benefit from experience at professional workshops and conferences. Teachers in this stage were ready to share ideas and to relearn skills.

Maturity, or the fourth stage, was a level some teachers could reach within the first three years of teaching, and

other teachers, within five years or longer. The experienced teacher begins to develop wider reading interests, to interact with educators, and to work toward a higher degree.

Studies and surveys continuously focus on the years of experience of a teacher as a factor in the achievement of students and the stability of a school (30, 33, 71, 78). This body of research appears to be contradictory and inconclusive. Clifford (21) suggested that the experience of teachers be objectively viewed, and concluded that people, as individuals, profit differently from experience; financial rewards for length of service can be justified on the grounds of competence; experience may vary in its value according to other factors involved; and some inexperienced teachers may be more highly effective than veteran teachers. A study conducted by the National Institute of Education (32) provided further information on classroom processes that effectively promote learning. The number of years of experience of the teacher was examined. A more detailed analysis of data was recommended to obtain more definitive results concerning the factor of years of experience of the teacher related to classroom instruction results.

Economists and educators have studied the financial considerations involved in salaries of inexperienced teachers as compared to those of experienced staff members. A study of cost effectiveness summarized by Heim (44) found that teacher experience did not affect student achievement in



kindergarten through the third grade, but that the opposite was true in grades three through six. Levin (59) also suggested that school districts should not pay more for the seniority factor of teachers if no difference is shown in achievement of students due to seniority of teachers. Two studies, investigating effective allocation procedures in New York State school districts, found weak relationships between teacher experience and student achievement (53, 73). Recommendations were made to investigate characteristics that were rewarded through salary schedules. Similar studies were conducted applying cost-effectiveness techniques to decisions on teacher recruitment and retention (34, 35, 77). Studies indicated that additional investigations were needed that would relate the cost factor of experience to the present methods of financing education (18, 59).

Hawkins and Stoops (43) used training and experience as objective evaluation measures to identify outstanding elementary teachers. Years of experience were not significant for evaluating teacher competency. Further research was recommended concerning the years of experience of the teacher as a factor in educational growth of students.

In a study by Seefeldt (88), experience was one of the few teacher characteristics that made a difference in achievement of young children. An earlier study by Hudson (45) indicated an inexperienced primary or secondary teacher might be a better choice as a teacher in a child-development center

since the more-experienced elementary level teacher may be more resistant to change.

Studies concerned with achievement of students have been conducted at state and local levels and included the factor of years of experience of the teacher (15, 60, 67). A follow-up study of teachers without experience, the Secondary Mathematics Evaluation Project, showed significant differences among teachers during the first three years of the Minnesota project (28). Extensive data in the Pupil Evaluation Program conducted by the New York State Education Department are organized so that analysis may be made at local building or district levels (74). Findings indicated that the cluster of teacher variables--experience, age, education, and salary--was positively related to achievement. A later study in Pennsylvania, Educational Quality Assessment Program, included the years of experience of the teacher as a factor. Initial reports stated that teachers with the least experience--two to four years--reported the most frequent use of innovative practices together with the highest percentage of disciplinary problems. The study was continued to assess quality education based on specific teacher factors (56).

Studies by the New York City Board of Education provided a statistical overview of each of the elementary, intermediate, junior high, academic, and vocational high schools in the New York City public school system. In an attempt to

identify factors that can be attributed to the level of pupil achievement, information concerning staff cost was reported. Pupil-teacher ratio, teacher absence rate, and percentage of teachers with five or more years of total teaching experience appeared to influence educational gains of students (71, 72).

An extensive study in Los Angeles was reported by Martyn (64). The characteristics of schools included evaluating the quality of teacher personnel on the basis of years of experience, using the assumption that if factors of vitality, intelligence, motivation, and training are equal, then increased experience should have a direct correlation with increased teacher effectiveness. The summary of data indicated that better-prepared teachers taught in schools considered advantaged and that those schools also had the greater proportion of permanent teachers. Experienced teachers were applying for assignments to inner-city schools that provided the best possible learning situations. Further study was recommended to investigate student gains related to experience of staff.

Studies were conducted in Fresno City and Santa Monica, California, investigating whether significant differences exist among the staffs in the schools in the district. Some major conclusions were that higher percentages of inexperienced teachers taught in compensatory schools, the experienced teacher who transferred from the compensatory school was replaced by an inexperienced teacher, and rapidly growing

noncompensatory schools filled positions with experienced teachers. In most cases the experienced teacher was identified as one who, because of the years of teaching experience, would be better able to educate students. These studies indicated that teacher turnover was a problem and suggested that the major relationship between experience and achievement was the placement of experienced teachers in schools with high achievers (51, 52, 65).

The Texas Teacher Effectiveness Study involved fifty-nine teachers selected from 165 urban second- and third-grade teachers in the Austin Independent School District (10, 11, 24). Teachers were representative of teachers at the respective grade levels but were somewhat older and more experienced. All were selected for the observational study purely on the basis of consistency in their ability to produce gains in student learning. Findings indicated that the factor of the teacher's years of experience appeared to be an influence on relative achievement gains made by students.

A report by Rhodes (80) indicated achievement of both black and white students was affected by family background indicated by income, occupation, and education of father and mother. Achievement gains of students were also affected by teacher quality measured by number of years of teaching, highest academic degree, and race. A study by Johnson (48) concluded reading improvement was related to grade assignments and teachers' experience and not related to teachers'

knowledge of reading. The studies noted that years of teaching experience might reasonably affect learning situations.

A report by Harrison (39) on class achievement and teachers concluded that no one theory can explain cognitive development and that further research was needed to include selected teacher characteristics and to expand classroom variables. Burnham (13) indicated in a study of reading and mathematics achievement of third-grade pupils it was impossible to control all of the variables that might have affected the learning situations. Years of teaching experience were noted as important factors that were not controlled. A study by Anthony (2) reported years of teaching experience not related to pupil achievement. The recommendation was to investigate a new approach to identify effective teachers based on factors the teacher could control.

Investigators reported that the teacher is an important factor in the classroom and that the years of teaching experience are a factor to be considered in selecting a school staff. The effect of the years of teaching experience on the achievement of the students is not conclusive and shows a need for further study.

#### The Staff of Inner-City Schools

Resources in any elementary school should include a stabilized and experienced staff (27). An effective staff

of a school was an important consideration of affluent suburbs as well as of large-city school districts. Staff stability was considered desirable, but reports showed that teacher inexperience and staff transiency were characteristic of most schools (19, 42, 85). A major criticism of inner-city schools has been that the staff is composed of large numbers of inexperienced teachers. A primary concern of principals, boards of education, and community groups has been to create staff stability and to maintain a desirable index of experienced to inexperienced teachers (58).

The passage of the Civil Rights Act of 1964 (Public Law 88-352) began the end of segregation that had been considered legal. A massive effort of federal support for public education at the elementary and secondary school levels began with the enactment of the Elementary and Secondary Education Act of 1965 (Public Law 89-10). A period began when educational leaders turned their efforts to the problems of schools and school programs in the inner city (61, 63, 105).

In all major cities in the 1960's, a predicament arose concerning the assignment of new teachers. Residential areas of the cities attracted enough personnel to staff their schools adequately. Schools in business districts and inner-city areas had staffing problems due to increased enrollment of students and requests for transfers by experienced teachers (63, 90, 94). Many new teachers were given their

first teaching assignments in the most troubled schools in major cities (61).

A study by Stone (95) indicated that younger teachers were inclined to express views that were more liberal and demanded more changes in teaching inner-city students. The study indicated, however, that young teachers held similar views in any type of school setting. Young and inexperienced teachers had reactions that were very similar to their more experienced colleagues when making an effort to improve teaching in inner-city schools.

A study of fifteen major cities reported that 17 per cent of the teachers had been in inner-city schools for one year and 63 per cent had been in their present positions for a maximum of five years. The number of staff members remaining after five years dropped off radically (82). Ryan (83) stated that over half of the first-year teachers did not intend to teach five years later.

Problems of maintaining a stable staff were reported in inner-city schools where many inexperienced or temporarily licensed teachers replaced experienced teachers who obtained transfers to more desirable neighborhoods. Wayson (104) recommended (1) an administrative change that would assure teachers that assignment in an inner-city school would not have to be a lengthy tenure, and (2) procedures that would be put into effect to assign only experienced teachers to

inner-city schools and inexperienced teachers to schools in outlying zones of the city.

The tendency for younger and less-experienced teachers to be assigned to inner-city classrooms was reported in several studies (6, 41, 76, 87). Kohl (55) and others attempted to describe the culture shock experienced by the beginning teacher coming from the academic world into a world of reality in the big city.

Studies reported that beginning teachers appeared to have two sets of problems: (1) the set of problems involved in the process of becoming teachers and (2) the problems of adjusting to the foreign environment of the inner-city school (104).

Lortie (62) suggested that the teacher passes through a series of stages throughout a teaching career: struggling daily, branching out and innovating, drawing back, settling into a stable routine, becoming more conservative after the first five years, opposing change, and settling into a routine--dull or otherwise.

Kevin Ryan (83) reported observations of beginning teachers and concluded that preparation of teachers attempted to deal with what ought to be going on in the classroom and not what is actually happening. As a result, the beginning teacher appears to be in conflict between what should be and what really is. Ryan cited four categories of resources new teachers appear to use as they grow into the teaching



profession. The first tendency was that individuals learn from each other; the second was to learn from examples of past experiences; the next was to learn from formal education courses and student teaching in a classroom; and fourth was the actual experience of the first year of teaching. Ryan concluded that further research studies should investigate the first year of teaching and the effect it has on students and teachers.

Projects that focused on programs to give additional support to beginning teachers were developed. Great Britain began a new instructional plan for first-year teachers in 1976 that included courses and teacher-tutors (49). A New York City project was developed by Hunter College and the Center for Urban Education and involved all first-year teachers (98). Legislation in Illinois focused on the beginning teacher and extended school-site training (31). Shane (89) also emphasized the importance of teacher preparation and concluded with specific suggestions for research in education during the 1980's. The first year of teaching was indicated as critical and coordinated efforts between the school district and the teacher-training institute were recommended.

A broad study of urban school systems in 1972 investigated selection, employment, and assignment of prospective teachers. Trachtenberg (99) indicated that success of the educational process must ultimately be judged by how well

children are educated and that nothing affected the education of children more directly than who their teachers were. A report by Havighurst and Levine (61) also indicated that teachers with four to nine years of experience are most likely to show success in inner-city teaching, and teachers with little experience have not learned to cope with situations that are related to inner-city schools. Three studies investigating teacher effectiveness in big city schools showed a need for continued research on effective staffing (40, 81, 101). Dentler (25) concluded that school staffing in inner-city schools should be a major focus in research as a contribution to success of schools.

Bradley (5) reported that the present state of research concerning the achievement of black students and the underlying factors that affect their performance cannot be explained using conventional theories. His study concluded that the academic performance of the black students may be increased more effectively by reviewing situational factors in classrooms of both predominantly black and predominantly white schools.

Studies by Lambert (57) and McDonald (66) stressed identifying the effect of beginning teachers that show significant influence on academic growth of students. Sheldon (90) also attempted to describe the educational status of the inner-city child and recommended certain factors for further study.

A review of studies, concluded in 1957 by Mitzel and Medley (68), reported that very little is known about what can distinguish the effective teacher of reading from the ineffective teacher. Findings indicated that there were substantial differences among beginning teachers that could not be attributed entirely to differences among the schools, differences in the learning ability of the students, or previous achievement. Further research was suggested which would investigate influence of the beginning teacher on achievement of inner-city pupils.

Later studies by Bertolaet and Nystrand (4) identified problems associated with teachers in large urban cities and indicated that success of educational programs is dependent on the ability and skill of teachers. Experienced teachers transferring out of the inner city, teachers with temporary classifications, and beginning teachers who were not prepared for inner-city teaching were cited as major factors in the stability of a school staff. Studies by Finn (29) and Duff (27) examined the relationship between beginning teachers and student performance. Teacher retention and teaching experience appeared to be factors that influenced student achievement in inner-city school systems.

The teacher, the years of teaching experience, and the staff of the inner-city school appear to have an effect on success of students involved. Further research is needed to

investigate achievement of boys and girls in classrooms with teachers of varying years of experience in teaching.

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## CHAPTER III

### PROCEDURES FOR COLLECTION AND TREATMENT OF DATA

This chapter delineates the research design, selection of subjects, the instrumentation, the experimental variable, and the description of controls. Statistical procedures to be used in the analysis of data are also included.

#### Research Design

A four-group experimental design was utilized in this study. This experimental design was chosen because, according to Campbell and Stanley (3, pp. 13-16), the control of the main effects assures the internal validity of the design. Interaction effects of external validity (3, pp. 16-21) were also controlled through research design. The time interval between the administration of the two tests eliminated the interaction effects of testing. The spring, 1977, Iowa Test of Basic Skills (ITBS) Level 7 test, administered by the school district to second-grade students, was used as the initial level of achievement. The entire population of third-grade students was administered a second achievement test in April, 1978, on Level 8 of the ITBS. Reactive arrangements did not pose a threat to this study because the tests for each class were administered by the homeroom



teachers. The children and teachers were unaware of the experiment; therefore, external validity was controlled.

#### Selection of Subjects

The subdistrict of the large metropolitan school district in this study was created by a court order in April, 1976, and is comprised of twenty-eight schools. The current enrollment of the subdistrict is over 26,000 students with a 98 per cent black population. The goal of the subdistrict is to develop a viable educational program for the students. A need for competent and committed leadership to implement an effective educational program has been established.

Nine elementary schools in the subdistrict were involved in this study. The schools had a concentration of students from low-income families and were designated Title I schools. The population included in this study were third-grade students in self-contained classrooms during the 1977-78 school year. The test scores of the students included in the study were ITBS Level 7 test scores recorded in the spring of 1977 and ITBS Level 8 test scores recorded in the spring of 1978. Students remained with one teacher from the fall of 1977 through the spring of 1978.

Permission was granted from the research department, the general superintendent of the metropolitan school district, and the assistant superintendent of the subdistrict to conduct the study. In the spring of 1978, the principals of

the schools in the study were informed by letter that permission had been granted to conduct the study. Appointments were made with third-grade teachers in each of the nine schools. Meetings were conducted in May, 1978, and the teachers were asked to complete a self-report questionnaire. One hundred per cent of the teachers responded to the questionnaire, and a tabulation of the results is presented in Chapter Four.

In June, 1978, the ITBS scores were collected from each school. Scores of the individual students were recorded.

#### Instrumentation

The instrument chosen for measuring the achievement of students was the ITBS. The major purpose for measurement in testing was to provide information which can be used to improve instruction. The ITBS provides for measurement of skills involved in reading, language, work-study, and mathematics. The first four forms of the multi-level edition of the ITBS were constructed to reflect the continuous nature of development of skills (9).

The ITBS Level 7 was administered to students at the end of the second grade. The ITBS Level 8 was administered to students at the end of the third grade. Each level represented the range of achievement at each grade level. For the purposes of this study, only the reading and mathematics subtests of the ITBS test battery were used. A composite

score is provided in the area of mathematics that includes mathematics concepts and problem solving.

The ITBS test batteries are concerned with general intellectual skills and abilities. Final evaluation of the test must rest primarily on critical item-by-item inspection of the test itself and analysis of content in relation to the appropriateness of objectives for pupils, teachers, school, and community (9).

The validity of the ITBS test batteries is based on extensive research and construction procedures. The validity is supported by Herrick in the Mental Measurement Yearbook (2, pp. 30-36). Criteria for item selection placement and distribution of emphasis for each item included in the subtests are based on (a) instructional material, (b) recommendation of authorities, (c) frequency of need or occurrence and studies of frequency of errors, (d) cruciality of item content, (e) technical consideration of psychometric theory, and (f) feedback from users.

The ITBS reading comprehension test consists of diverse selections that vary in length from a few sentences to a full page. The passages represent all types of materials that students encounter in everyday reading. The items in all levels of the test place importance on understanding and drawing inferences from the passages (1, 10).

The ITBS mathematics skills test emphasizes understanding, discovery, and quantitative thinking. Competencies in

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problem solving represent a functional setting of practical problem situations.

The test battery should be scrutinized to determine situational differences that may occur. The ITBS, however, is considered a highly valid and well-constructed battery.

The ITBS manual describes the use of two methods of estimating reliability for standardizing items in the instrument (9, p. 56). The first method used was the split-halves method of estimating reliability. The reliability coefficients were based on responses by a representative sample of the participants. The second method used concerned a set of reliability data based on administration of equivalent forms. Thirty-three school systems were chosen to represent the variability in school achievement. All participating school systems reported reliability coefficients above .81. This level is well within the accepted range (13).

Remmers (2, pp. 36-37) summarized the following characteristics of the test: excellent manuals for teachers, pupils, and parents; low cost involved in testing; flexible testing arrangements; and functional nature of the curriculum content.

#### Experimental Variable

The experimental variable was the number of years of experience of the classroom teachers. The teachers were graduates of accredited universities or colleges and had

valid elementary teaching certificates. The four experimental groups were

Group A.--Nine teachers in their first year of teaching,

Group B.--Sixteen teachers in their second through fourth year of teaching,

Group C.--Nine teachers in their fifth through ninth year of teaching, and

Group D.--Eight teachers in their tenth year or more of teaching.

Group A is, according to Katz (11), the beginning teachers in their first year of teaching. The first year of teaching is described as a year filled with conflict and inadequate feelings. The teacher goes through processes that involve tension while reaching for goals. The inexperienced or beginning teacher has been the subject of many studies that focus on staff of inner-city schools and the teacher as a factor in the stability of the school (1, 6, 7).

Teachers in their second through fourth years of teaching, Group B, are described by Katz (11) in a continuous struggle in which the teacher goes through stages of growth that result in a more stable position. This includes attendance at professional conferences and workshops that are personally rewarding and beneficial. Both professional and personal growth are obvious during this period.

Group C includes teachers in their fifth through ninth years of teaching. Katz (11) described this level as one of

maturity in which the experienced teacher begins to expand interests while participating in educational activities and possibly continuing with graduate-level study. Statistical studies by the New York Board of Education reported that teachers with five or more years of total teaching experience appeared to influence educational gains of students (12).

Group D are teachers in their tenth or more years of teaching. Studies focus on the older and more-experienced teacher in an effort to show gains in student learning (4). Research on achievement gains in inner-city schools contrasts the inexperienced teachers and the experienced teachers when discussing school staffing and stability of an older and more-experienced staff (8, 12, 13, 14).

#### Procedures

The following procedures were used to collect and analyze the data.

1. Principals in participating schools were notified that permission had been granted to conduct a study that involved teachers and students in the third-grade self-contained classrooms.

2. Teachers, who had previously received in-service training on proper procedures for administering the test and who had administered the tests, were informed that permission had been granted by the school district to conduct a study and that their names would remain anonymous.

3. Teachers completed a self-report questionnaire (Appendix A) during the first week in May, 1978.

4. The achievement scores were recorded by the researcher from the Spring, 1977, ITBS test data in the school district, to be used as the covariate as a measure of the initial achievement level.

5. In the spring of 1978, the ITBS was administered to third-grade students in the school district by the classroom teachers. These results were recorded by the researcher.

6. Data were gathered in accordance with policies of the school district.

Analysis of covariance as described by Ferguson (5, pp. 288-295) was used to test the statistical hypotheses. If significance was obtained, Tukey's multiple comparison tests were conducted to determine these differences.

Further analysis of the data included separate examinations of the reading and mathematics scores of third-grade boys and girls, separate examinations of the reading and mathematics scores of third-grade students when comparing years of teacher experience in Title I schools, and examinations of class size and the effect on achievement of students.

#### Summary

This chapter presented an overall view of the research design, selection of subjects, instrumentation, and methods

of data collection. The test instruments, experimental variables, and control procedures were discussed.



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## CHAPTER IV

### PRESENTATION AND ANALYSIS OF DATA

This chapter includes the statistical data and treatment used to test the null hypotheses that were considered experimental hypotheses. Additional data are included that were collected from a teacher self-report questionnaire administered to all of the teachers involved in the study.

#### Statistical Analysis

This section details the statistical treatment used to test the null hypotheses and contains the results of the statistical analysis. The hypotheses in this study pertained to possible differences between the number of years of teacher experience and the impact of this experience on specific classroom variables. The experimental variable was the number of years of experience. Forty-two teachers of third-grade self-contained classrooms were placed into groups that were defined according to number of years of experience.

Group A contained nine teachers in their first year of teaching; Group B contained sixteen teachers in their second, third, and fourth years of teaching; Group C contained nine

teachers in their fifth, sixth, seventh, eighth, and ninth years of teaching; and Group D contained eight teachers in their tenth year or more of teaching.

Analysis of covariance techniques were used to test for additional differences in relation to the stated hypotheses. In all cases the ITBS Level 7 score was used as the covariate. This technique was chosen in order to statistically control for possible initial differences between classroom groupings. The main idea of the analysis of covariance technique is that the covariate is used as a measure of statistical control when possible initial differences between groups may exist and randomization of subjects into experimental groups is not possible. This is a common design for educational research where intact classrooms comprise the experimental groups (1).

Analysis of covariance is an advanced technique of analysis of variance. In analysis of variance, if an experimental manipulation has been influential then it should show the differences between means above and beyond the differences that arise by chance alone. The between-groups variance should show influence by becoming greater than expected by chance. Variance between is used, then, as a measure of experimental influence and variance within as a measure of chance variation. Between-groups variance can be evaluated with within-groups variance and experimental information can be weighed against error or chance.

Classroom mean scores were used as the basis of analysis. The scores were grouped for analysis in this manner because the major independent variables were teacher characteristics rather than student characteristics. As such, a teacher characteristic should impact on the entire classroom grouping.

The .05 level of significance was used as the level of rejection or acceptance of the null hypotheses. If the overall F ratio was determined to be statistically significant at the .05 level, then Tukey's test was used as the multiple comparison method between cells (1).

The first statistical analysis was a one-way analysis of covariance. The dependent variables were the classroom mean ITBS reading scores and ITBS mathematics scores, Level 8, collected at the end of the third-grade years. Corresponding Level 7 ITBS reading and mathematics scores were used as the covariate. The independent variable in all the following analyses was Groups A, B, C, and D defined above.

#### Hypothesis One

The first hypothesis stated that there will be no significant difference in the reading and mathematics adjusted mean scores of students as measured by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D. The results are found in Table I.

TABLE I

RESULTS OF ANALYSIS OF COVARIANCE FOR YEARS OF TEACHER  
EXPERIENCE AND CLASSROOM MEANS FOR ITBS READING  
SCORES AND ITBS MATHEMATICS SCORES

| Source     | DF | Reading |      |     | Mathematics |       |     |
|------------|----|---------|------|-----|-------------|-------|-----|
|            |    | SS      | MS   | F   | SS          | MS    | F   |
| Total      | 40 | 2837.8  |      |     | 6016.3      |       |     |
| Within     | 37 | 2596.0  | 70.2 |     | 5699.0      | 154.0 |     |
| Difference | 3  | 241.8   | 80.6 | 1.5 | 317.2       | 105.7 | 0.7 |

$P \leq .05.$

The F ratios for this analysis are not significant at the .05 level. Analysis was discontinued at this point, and no multiple comparisons were made since the overall F ratio did not reach the accepted level of significance. Therefore, null Hypothesis One is accepted.

#### Hypothesis Two

Hypothesis Two stated that there will be no significant difference in the reading and mathematics adjusted mean scores of high-achieving third-grade students as measured by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

The significant differences of classroom mean scores of high-achieving students were recorded. The results of the analysis are found in Table II.

TABLE II

RESULTS OF ANALYSIS OF COVARIANCE FOR HIGH-ACHIEVING STUDENTS AND CLASSROOM MEANS OF ITBS READING SCORES AND ITBS MATHEMATICS SCORES

| Source     | DF | Reading |       |     | Mathematics |       |     |
|------------|----|---------|-------|-----|-------------|-------|-----|
|            |    | SS      | MS    | F   | SS          | MS    | F   |
| Total      | 8  | 1307.2  |       |     | 2800.3      |       |     |
| Within     | 5  | 1139.1  | 227.9 |     | 2375.3      | 475.1 |     |
| Difference | 3  | 168.2   | 56.1  | 0.2 | 425.0       | 141.7 | 0.3 |

$P < .05.$

Hypothesis Two pertained to the statistically significant differences in the classroom mean scores for high-achieving students within the class. The dependent variables were the mean scores for the ITBS Level 8 reading scores for the high-achieving students in the classroom. The corresponding ITBS Level 7 scores were used as the covariate and Groups A, B, C, and D were the independent variables. The ITBS mathematics scores were treated in the same manner. The resultant F ratios are not statistically significant at the .05 level, and no multiple comparisons were made. Hypothesis Two is accepted.

#### Hypothesis Three

Hypothesis Three stated that there will be no significant difference in the reading and mathematics adjusted mean scores of average-achieving third-grade students as measured

by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

The results of the analysis are included in Table III.

Hypothesis Three pertained to the statistically significant differences in the classroom mean scores for average-achieving students within the class. The dependent variables were the mean scores for the ITBS Level 8 reading scores for the average-achieving students in the classroom. The corresponding ITBS Level 7 scores were used as the covariate and Groups A, B, C, and D were the independent variables. The ITBS mathematics scores were treated in the same manner. The resultant F ratios are not statistically significant at the .05 level, and no multiple comparisons were made. Hypothesis Three is accepted.

TABLE III

RESULTS OF ANALYSIS OF COVARIANCE FOR AVERAGE-ACHIEVING STUDENTS AND CLASSROOM MEANS ON ITBS READING SCORES AND ITBS MATHEMATICS SCORES

| Source     | DF | Reading |      |     | Mathematics |       |     |
|------------|----|---------|------|-----|-------------|-------|-----|
|            |    | SS      | MS   | F   | SS          | MS    | F   |
| Total      | 19 | 722.7   |      |     | 2087.0      |       |     |
| Within     | 16 | 652.9   | 40.8 |     | 1559.0      | 97.4  |     |
| Difference | 3  | 69.8    | 23.3 | 0.6 | 528.0       | 176.0 | 1.8 |

$P \leq .05.$



## Hypothesis Four

Hypothesis Four stated that there will be no significant difference in the reading and mathematics adjusted mean scores of low-achieving third-grade students as measured by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

The results of the analysis are found in Table IV.

TABLE IV

RESULTS OF ANALYSIS OF COVARIANCE FOR LOW-ACHIEVING STUDENTS AND CLASSROOM MEANS ON ITBS READING SCORES AND ITBS MATHEMATICS SCORES

| Source     | DF | Reading |      |     | Mathematics |      |     |
|------------|----|---------|------|-----|-------------|------|-----|
|            |    | SS      | MS   | F   | SS          | MS   | F   |
| Total      | 9  | 514.6   |      |     | 475.4       |      |     |
| Within     | 6  | 256.7   | 42.8 |     | 350.6       | 58.4 |     |
| Difference | 3  | 257.9   | 86.0 | 2.0 | 124.8       | 41.6 | 0.7 |

$P < .05.$

Hypothesis Four pertained to the statistically significant differences in the classroom mean scores for low-achieving students within the class. The dependent variables were the mean scores for the ITBS Level 8 reading scores for the low-achieving students in the classroom. The corresponding ITBS Level 7 scores were used as the covariate and Groups A, B, C, and D were the independent variable. The ITBS mathematics

scores were treated in the same manner. The resultant F ratios are not statistically significant at the .05 level, and no multiple comparisons were made. Hypothesis Four is accepted.

#### Hypothesis Five

Hypothesis Five stated that there will be no significant difference in the reading and mathematics adjusted mean scores of third-grade boys as measured by the ITBS when examining (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

The results of the analysis are found in Table V.

TABLE V

RESULTS OF ANALYSIS OF COVARIANCE FOR YEARS OF TEACHER EXPERIENCE AND CLASSROOM MEANS FOR ITBS READING SCORES AND ITBS MATHEMATICS SCORES OF BOYS

| Source     | DF | Reading |       |      | Mathematics |       |      |
|------------|----|---------|-------|------|-------------|-------|------|
|            |    | SS      | MS    | F    | SS          | MS    | F    |
| Total      | 40 | 2837.7  |       |      | 6016.1      |       |      |
| Within     | 37 | 2031.7  | 54.9  |      | 4920.4      | 133.0 |      |
| Difference | 3  | 805.9   | 268.6 | 4.9* | 1095.7      | 365.2 | 2.75 |

\* $P < .05$ .

Hypothesis Five relates to statistically significant differences in the classroom mean scores for boys. The

dependent variables, therefore, were the classroom mean scores for the ITBS Level 8 reading and the ITBS Level 8 mathematics scores for boys within a classroom. The corresponding ITBS Level 7 scores were used as covariates and the independent variable was Groups A, B, C, and D.

The resultant F ratio for the mathematics scores is not statistically significant at the .05 level. Therefore, analysis is completed on the mathematics scores of the boys.

The resultant F ratio for the reading scores is statistically significant. Multiple comparisons, using Tukey's test, were conducted. The results of the comparisons are in Table VI.

TABLE VI

RESULTS OF TUKEY'S TEST FOR COMPARING CLASSROOM MEANS OF BOYS FOR ITBS READING SCORES AND YEARS OF TEACHER EXPERIENCE

| Group | (Years Experience) | vs | Group | (Years Experience) | Equal |
|-------|--------------------|----|-------|--------------------|-------|
| A     | (0-1)              |    | B     | (2-4)              | 0.62  |
| A     | (0-1)              |    | C     | (5-9)              | 3.92* |
| A     | (0-1)              |    | D     | (10-Over)          | 4.40* |
| B     | (2-4)              |    | C     | (5-9)              | 3.30  |
| B     | (2-4)              |    | D     | (10-Over)          | 3.78  |
| C     | (5-9)              |    | D     | (10-Over)          | 0.48  |

\*P < .05.

The tabled critical difference between means for Tukey's test was 3.79. Therefore, the statistical differences are between teachers in their first year of teaching, Group A; and teachers in their fifth or more year of teaching, Groups C and D. It appears from inspection of these comparisons that the more-experienced teachers have a greater increase in reading scores of their students.

#### Hypothesis Six

Hypothesis Six stated that there will be no significant difference in the reading and mathematics adjusted mean scores of third-grade girls as measured by the ITBS when comparing (a) Group A to Group B, (b) Group A to Group C, (c) Group A to Group D, (d) Group B to Group C, (e) Group B to Group D, and (f) Group C to Group D.

The results of the analysis are found in Table VII.

TABLE VII

RESULTS AND ANALYSIS OF COVARIANCE FOR YEARS OF TEACHER EXPERIENCE AND CLASSROOM MEANS FOR ITBS READING SCORES AND ITBS MATHEMATICS SCORES OF GIRLS

| Source     | DF | Reading |       |       | Mathematics |       |      |
|------------|----|---------|-------|-------|-------------|-------|------|
|            |    | SS      | MS    | F     | SS          | MS    | F    |
| Total      | 40 | 3432.1  |       |       | 6749.8      |       |      |
| Within     | 37 | 2754.9  | 74.5  |       | 5502.1      | 148.7 |      |
| Difference | 3  | 677.2   | 225.7 | 3.03* | 1247.7      | 415.9 | 2.80 |

\* $p \leq .05$ .

Hypothesis Six relates to statistically significant differences in the classroom mean scores for girls. The dependent variables, therefore, were the classroom Level 8 mean scores for the ITBS reading and the ITBS mathematics scores for girls within a classroom. The corresponding Level 7 scores were used as covariates and the independent variable was Groups A, B, C, and D.

The resultant F ratio for the mathematics scores is not statistically significant at the .05 level. Therefore, analysis is completed on the mathematics scores of the girls.

The resultant F ratio for the reading scores is statistically significant. Multiple comparisons, using Tukey's test, were conducted. The results of the comparisons are found in Table VIII.

TABLE VIII

RESULTS OF TUKEY'S TEST FOR COMPARING CLASSROOM MEANS OF GIRLS FOR ITBS READING SCORES

| Group | (Years Experience) | vs | Group | (Years Experience) | Equal |
|-------|--------------------|----|-------|--------------------|-------|
| A     | (0-1)              |    | B     | (2-4)              | 0.88  |
| B     | (0-1)              |    | C     | (5-9)              | 3.32  |
| A     | (0-1)              |    | D     | (10-Over)          | 3.79* |
| B     | (2-4)              |    | C     | (5-9)              | 2.44  |
| B     | (2-4)              |    | D     | (10-Over)          | 2.84  |
| C     | (5-9)              |    | D     | (10-Over)          | 0.39  |

\*P < .05.

Tukey's test was used as the multiple comparison method. The tabled critical difference is 3.79. Table VIII contains the results of these comparisons. The difference is between teachers in their first year of teaching, Group A, and those in their tenth year of more of teaching, Group D. The more-experienced teacher appears to have greater increase in reading scores of the students.

#### Discussion

This section includes the results of the statistical analysis. The hypotheses pertain to possible differences between numbers of years of teacher experience and the impact of this experience on specific classroom variables. No significant difference seems to appear in the reading and mathematics adjusted mean scores of third-grade students or high-achieving, average-achieving, and low-achieving students as measured by the ITBS when examining years of teaching experience. No significant difference seems to appear in the mathematics adjusted mean scores of third-grade boys and girls as measured by the ITBS when examining years of teaching experience.

A significant difference seems to be indicated in the reading adjusted mean scores of boys and girls as measured by the ITBS when examining years of teaching experience. The more-experienced teachers appeared to have the greater increase in reading scores of students.

### Further Analysis of Data

In addition to the data concerning the experimental hypotheses, information concerning other teacher variables was collected and analyzed. These data were collected through a teacher self-report questionnaire. One hundred per cent of the teachers in the participating schools responded to the questionnaire.

Data were tabulated by frequency of response in groups according to years of teacher experience. Variables included years of experience of the teachers in Title I schools, classroom size, and demographic variables. Further analysis of the data explored differences in variables mentioned previously.

In the following analysis the groups were Group A, containing nine teachers in their first year of teaching in Title I schools; Group B, containing sixteen teachers in their second, third, and fourth years of teaching in Title I schools; Group C, containing nine teachers in their fifth, sixth, seventh, eighth, and ninth years of teaching in Title I schools; and Group D, containing eight teachers in their tenth year or more of teaching in Title I schools. Analysis of covariance was used to test for statistical significance. The classroom mean ITBS Level 8 scores were used as dependent variables and the corresponding Level 7 scores were used as the covariate. The independent variable was the number of years of experience of teachers in Title I schools.

Teacher Experience in Title I Schools

The results of the analysis of reading scores of third-grade students, when comparing years of teacher experience in Title I Schools, are found in Table IX.

TABLE IX

RESULTS OF ANALYSIS OF COVARIANCE FOR YEARS OF TEACHER  
EXPERIENCE IN TITLE I SCHOOLS AND CLASSROOM  
MEANS FOR ITBS READING SCORES

| Source     | DF | SS     | SS    | F    |
|------------|----|--------|-------|------|
| Total      | 40 | 2837.8 |       |      |
| Within     | 37 | 2032.1 | 54.9  |      |
| Difference | 3  | 805.7  | 268.6 | 4.9* |

\* $p < .05$ .

The resultant F ratio for the ITBS reading scores is significant at the .05 level of significance. Therefore, multiple comparisons using Tukey's test were computed. The results of these comparisons appear in Table X.

The critical difference for Tukey's test in Table X is 3.79. The statistically significant differences for ITBS reading scores are between teachers in their first year of experience in a Title I school, Group A, and teachers in their fifth or more year of teaching in a Title I school, Groups C and D.



TABLE X

RESULTS OF TUKEY'S TEST FOR COMPARING CLASSROOM MEANS FOR  
ITBS READING SCORES AND YEARS OF TEACHER  
 EXPERIENCE IN TITLE I SCHOOLS

| Group | (Years Experience) | vs | Group | (Years Experience) | Equal |
|-------|--------------------|----|-------|--------------------|-------|
| A     | (0-1)              |    | B     | (2-4)              | 0.62  |
| A     | (0-1)              |    | C     | (5-9)              | 3.92* |
| A     | (0-1)              |    | D     | (10-Over)          | 4.40* |
| B     | (2-4)              |    | C     | (5-9)              | 3.30  |
| B     | (2-4)              |    | D     | (10-Over)          | 3.78  |
| C     | (5-9)              |    | D     | (10-Over)          | 0.48  |

\*P  $\leq$  .05.

The results of the analysis of the mathematics scores of third-grade students, when comparing years of teacher experience in Title I schools, are found in Table XI.

TABLE XI

RESULTS OF ANALYSIS OF COVARIANCE FOR YEARS OF TEACHER  
 EXPERIENCE IN TITLE I SCHOOLS AND CLASSROOM MEANS  
 FOR ITBS MATHEMATICS SCORES

| Source     | DF | SS     | MS    | F    |
|------------|----|--------|-------|------|
| Total      | 40 | 6016.3 |       |      |
| Within     | 37 | 4920.6 | 113.0 |      |
| Difference | 3  | 1095.7 | 365.2 | 2.7* |

\*P  $\leq$  .05.

The resultant F ratios for the ITBS mathematics scores is significant at the .05 level of significance. Therefore, multiple comparisons using Tukey's test were computed. The results of these comparisons appear in Table XII.

TABLE XII

RESULTS OF TUKEY'S TEST FOR COMPARING CLASSROOM MEANS FOR  
ITBS MATHEMATICS SCORES AND YEARS OF TEACHER  
EXPERIENCE IN TITLE I SCHOOLS

| Group | (Years Experience) | vs | Group | (Years Experience) | Equal |
|-------|--------------------|----|-------|--------------------|-------|
| A     | (0-1)              |    | B     | (2-4)              | 0.12  |
| A     | (0-1)              |    | C     | (5-9)              | 2.23  |
| A     | (0-1)              |    | D     | (10-Over)          | 3.32  |
| B     | (2-4)              |    | C     | (5-9)              | 2.35  |
| B     | (2-4)              |    | D     | (10-Over)          | 3.84* |
| C     | (5-9)              |    | D     | (10-Over)          | 1.08  |

\* $P < .05$ .

The critical difference for Tukey's test in Table XII is 3.79. The statistically significant differences for the ITBS mathematics scores are between teachers in their second through fourth years of teaching experience in Title I schools and teachers having ten years or more experience in Title I schools.

Further analysis of the data pertained to the number of students in third-grade classrooms in this study. Analysis

of covariance techniques were used to test for statistical differences. The dependent variable was the ITBS Level 8 classroom mean scores for reading and mathematics. The covariate was the corresponding Level 7 classroom mean scores. The independent variable was Group W, classrooms with zero to twenty-two class members; Group X, classrooms with twenty-three to twenty-five class members; Group Y, classrooms with twenty-six to twenty-seven class members; and Group Z, classrooms with over twenty-eight class members.

Classroom Size:

The results of the analysis of reading scores of third-grade students when comparing number of students in the classrooms are found in Table XIII.

TABLE XXIII

RESULTS OF ANALYSIS OF COVARIANCE FOR CLASSROOM SIZE AND  
CLASSROOM MEANS ON ITBS READING SCORES

| Source     | DF | SS     | MS    | F    |
|------------|----|--------|-------|------|
| Total      | 40 | 2837.8 |       |      |
| Within     | 37 | 2292.0 | 61.9  |      |
| Difference | 3  | 545.8  | 181.9 | 2.9* |

\* $P < .05$ .

The resultant F ratio is statistically significant at the .05 level of significance. Multiple comparisons using

Tukey's test were conducted in order to determine where the differences between groups occur. The results of these analyses appear in Table XIV.

TABLE XIV

RESULTS OF TUKEY'S TEST FOR COMPARING CLASSROOM MEANS FOR  
ITBS READING SCORES AND SIZE OF CLASS MEMBERSHIP

| Group | (Class Size) | vs | Group | (Class Size) | Equal  |
|-------|--------------|----|-------|--------------|--------|
| W     | (0-22)       |    | X     | (23-25)      | 0.79   |
| W     | (0-22)       |    | Y     | (26-27)      | 0.69   |
| W     | (0-22)       |    | Z     | (28-Over)    | -0.90  |
| X     | (23-25)      |    | Y     | (26-27)      | -2.10  |
| X     | (23-25)      |    | Z     | (28-Over)    | -3.89* |
| Y     | (26-27)      |    | Z     | (28-Over)    | -1.59  |

\*P  $\leq$  .05.

The differences for the reading scores appear between classrooms with twenty-three to twenty-five class members, Group X; and classrooms with twenty-eight and over class members, Group Z. It appears that the students in the larger class have a greater gain in reading scores.

The results of the analysis of mathematics scores of third-grade students when comparing number of students in the classrooms are found in Table XV.

TABLE XV

RESULTS OF ANALYSIS OF COVARIANCE FOR CLASSROOM SIZE AND CLASSROOM MEANS ON ITBS MATHEMATICS SCORES

| Source     | DF | SS     | MS    | F    |
|------------|----|--------|-------|------|
| Total      | 40 | 6016.3 |       |      |
| Within     | 37 | 4794.9 | 129.6 |      |
| Difference | 3  | 1221.5 | 407.2 | 3.1* |

\*P  $\leq$  .05.

The resultant F ratio is statistically significant at the .05 level of significance. Multiple comparisons using Tukey's test were conducted in order to determine where differences between groups occur. The results of these analyses appear in Table XVI.

TABLE XVI

RESULTS OF TUKEY'S TEST FOR COMPARING CLASSROOM MEANS FOR ITBS MATHEMATICS SCORES AND SIZE OF CLASS MEMBERSHIP

| Group | (Class Size) | vs | Group | (Class Size) | Equal  |
|-------|--------------|----|-------|--------------|--------|
| W     | (0-22)       |    | X     | (23-25)      | 2.84   |
| W     | (0-22)       |    | Y     | (26-27)      | -0.49  |
| W     | (0-22)       |    | Z     | (28-Over)    | 0.08   |
| X     | (23-25)      |    | Y     | (26-27)      | -4.33* |
| X     | (23-25)      |    | Z     | (28-Over)    | -2.76  |
| Y     | (26-27)      |    | Z     | (28-Over)    | 0.57   |

\*P  $\leq$  .05.

The difference between mathematics scores appeared between classrooms with twenty-three to twenty-five class members, Group X; and classrooms with twenty-six or twenty-seven class members, Group Y. It appears that the students in the larger class have a greater gain in mathematics scores.

#### Summary of Further Analysis of Data

A significant difference seems to be indicated in the reading and mathematics adjusted mean scores of third-grade students as measured by the ITBS when comparing years of teacher experience in Title I schools. The teachers having more experience in Title I schools appeared to have the greater increase in reading and mathematics scores of students.

A significant difference seems to be indicated in the reading and mathematics adjusted mean scores of third-grade students as measured by the ITBS when comparing number of students in the classroom. It appears that the students in the larger class sizes showed greater gains in reading and mathematics scores.

#### Additional Data from Self-Report Questionnaire

The self-report questionnaire administered to all teachers involved in the study is presented in Appendix A. Additional data were collected from responses of the forty-two teachers. The data were tabulated by frequency of

responses in groups based on the years of experience of the teacher.

It appears that the majority of teachers in most of the groups were teaching in schools having 1,000 students or more. All of the teachers in their first year of teaching were Caucasian and the majority of the teachers with ten years experience or more were black. The majority of teachers in their first year of teaching showed less absenteeism than the other groups of teachers and were absent five days or less in the school year. The largest percentage of teachers with a Master's Degree had been teaching ten years or more. Selected data from the teacher self-report questionnaire are reported in Table XVII.

Teachers were asked to select five factors they felt had the most impact on the achievement of students and five factors they felt had the least impact on the achievement of students. Twenty factors were listed in the self-report questionnaire.

Teachers in all years of experience selected the teacher, parent involvement, class size, and discipline as the most important factors that have an impact on the achievement of students. The attendance of students was felt to be an important factor to teachers in the first through ninth years of teaching experience.

Teachers in all years of experience selected staff development, library books per pupil, and the condition of the

TABLE XVII  
 SELECTED DATA FROM TEACHER SELF-REPORT QUESTIONNAIRE

| Item               | Group A* | Group B* | Group C* | Group D* |
|--------------------|----------|----------|----------|----------|
| School Enrollment: |          |          |          |          |
| 400-599            | 1        | 1        | 1        | 0        |
| 600-799            | 1        | 4        | 2        | 1        |
| 800-999            | 1        | 3        | 2        | 1        |
| 1000-1299          | 6        | 8        | 4        | 6        |
| Race:              |          |          |          |          |
| Black              | 0        | 8        | 2        | 7        |
| Caucasian          | 9        | 8        | 7        | 1        |
| Absence:           |          |          |          |          |
| 0-1 days           | 1        | 1        | 0        | 1        |
| 2-5 days           | 4        | 5        | 4        | 2        |
| 6-10 days          | 3        | 8        | 5        | 4        |
| 11-20 days         | 0        | 0        | 0        | 0        |
| Over 20 days       | 1        | 2        | 0        | 1        |
| Master's Degree    | 0        | 7        | 1        | 4        |

\*Group A contained nine teachers with 0-1 years of experience, Group B contained sixteen teachers with 2-4 years of experience, Group C contained nine teachers with 5-9 years of experience, and Group D contained eight teachers with 10 and more years of experience.



school facility as least important factors in achievement of students. The first-year teachers and the teachers teaching ten years or more felt the school size was least important. The most-experienced teachers felt that graduate training had the least impact on student achievement.

The instructional facilities did not appear to be an important factor to teachers in the first through ninth years of teaching experience. The teachers having ten or more years of teaching experience responded that they felt that the principal was an important factor in the achievement of pupils. Results of this section of the self-report questionnaire are reported in Table XVIII.

TABLE XVIII

RESULTS OF TEACHER SELF-REPORT OF FACTORS HAVING  
IMPACT ON STUDENT ACHIEVEMENT

| Factors                              | Group A<br>0-1<br>Years | Group B<br>2-4<br>Years | Group C<br>5-9<br>Years | Group D<br>10 or<br>More |
|--------------------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
| School Size                          | least                   |                         |                         | least                    |
| Staff Development                    | least                   | least                   | least                   | least                    |
| Resource Teachers<br>(in Bldg.)      |                         | least                   |                         |                          |
| Parent(s) Involvement                | most                    | most                    | most                    | most                     |
| Years of Teacher<br>Experience       |                         |                         |                         |                          |
| Community Support<br>of School       |                         |                         |                         |                          |
| Paraprofessional<br>Assistance       |                         |                         |                         |                          |
| Teacher Attendance                   |                         |                         |                         |                          |
| Discipline                           | most                    | most                    | most                    | most                     |
| The Principal                        |                         |                         |                         | most                     |
| Student Attendance                   | most                    | most                    | most                    |                          |
| The Teachers                         | most                    | most                    | most                    | most                     |
| Volunteers                           |                         |                         | least                   |                          |
| College Prepara-<br>tion of Teachers |                         |                         |                         |                          |
| Class Size                           | most                    | most                    | most                    | most                     |
| Instructional<br>Facilitator(s)      | least                   | least                   | least                   |                          |

TABLE XVIII--Continued

| Factors                         | Group A<br>0-1<br>Years | Group B<br>2-4<br>Years | Group C<br>5-9<br>Years | Group D<br>10 or<br>More |
|---------------------------------|-------------------------|-------------------------|-------------------------|--------------------------|
| Tardiness of<br>Student         |                         |                         |                         |                          |
| Teacher's Graduate<br>Training  |                         |                         |                         | least                    |
| Library Books for<br>Pupil      | least                   | least                   | least                   | least                    |
| Condition of<br>School Facility | least                   | least                   | least                   | least                    |

## CHAPTER BIBLIOGRAPHY

1. Bruning, James L. and B. L. Kintz, Computational Handbook of Statistics, 2nd ed., Glenview Ill., Scott, Foresman and Company, 1977.

## CHAPTER V

### SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This study investigated the impact of the number of years of teaching experience of classroom teachers on the achievement of third-grade students as measured by the Iowa Test of Basic Skills (ITBS). Nine inner-city Title I schools in a subdistrict of an urban independent school district in the north Texas area participated in the study and a total of 868 students from forty-two self-contained classrooms were included.

The experimental variable was the number of years of teaching experience. Forty-two teachers were grouped according to their years of teaching experience:

Group A.--Eight teachers in their first year of teaching;

Group B.--Sixteen teachers in their second, third, and fourth years of teaching;

Group C.--Nine teachers in their fifth through ninth years of teaching;

Group D.--Eight teachers in their tenth year or more of teaching.

The ITBS Level 7 was administered to students in the spring of 1977 and the ITBS Level 8 in the spring of 1978. The ITBS was used to measure the achievement of the students.

A four-group experimental design was utilized in the study. The analysis of covariance technique was used to statistically analyze the scores derived from the administration of the two tests. The Level 7 score was used as the covariate. This technique was chosen in order to control for possible initial differences between classroom groupings. Classroom mean scores were used as the basis of analysis. The scores were grouped for analysis in this manner because major independent variables were teacher characteristics rather than student characteristics.

The .05 level of significance was used as the level of rejection or acceptance of the null hypotheses. If the overall F ratio was determined to be statistically significant at the .05 level, then Tukey's test was used as the multiple comparison method between cells.

The first statistical analysis was a one-way analysis of covariance. The dependent variables were the classroom mean ITBS reading Level 8 scores and the classroom mean ITBS mathematics Level 8 scores. Corresponding Level 7 scores were used as the covariate. The independent variable in both analyses was the groups A, B, C, and D, described above. No significant differences were shown in the reading and mathematics adjusted mean scores when examining each group. Therefore, null hypothesis one was accepted.

Hypotheses two, three, and four pertained to statistically significant differences in the classroom mean scores for high achieving, average achieving, and low achieving students within the class. The resultant F ratios were not statistically significant at the .05 level, and no multiple comparisons were made. The null hypotheses were accepted.

The last two hypotheses related to statistically significant differences in the classroom mean scores for boys and girls. Significant difference was shown in the increase in reading scores of both third-grade boys and girls.

In addition to the data concerning the experimental hypotheses, information concerning other teacher variables was analyzed. These data were collected through a teacher self-report questionnaire. Variables included years of experience of the teachers in Title I schools only, classroom size, and demographic variables. Further analysis of the data explored differences in variables mentioned previously.

Students in classrooms with teachers with the greater number of years of experience in Title I schools appeared to have the greater gain in both reading and mathematics scores. Data also included the number of students in the third-grade classrooms involved in this study. The larger class-size appeared to have the greater gain in reading scores. The larger class-size appeared to have the greater gain in mathematics scores.

Data from the teacher self-report questionnaire were tabulated by frequency of response. One hundred per cent of the teachers in the participating schools responded to the questionnaire. The data were tabulated in groups according to the years of teacher experience.

The majority of the teachers were teaching in schools having 1,000 students or more. All of the teachers in their first year of teaching were Caucasian and the majority of the teachers in their tenth year of teaching or more were black.

The majority of teachers felt the teacher, parent involvement, and class size had the most impact on student achievement. The teachers reported they felt that staff development, condition of the school facility, and the number of library books per pupil had the least impact on achievement of students.

### Findings

An analysis and interpretation of the data revealed the following findings.

1. The reading and mathematics achievement of third-grade students showed no significant differences when examining the number of years of experience of the teachers.



2. The reading and mathematics achievement of third-grade high achieving, average achieving, and low achieving students showed no significant differences when examining the number of years of experience of the teachers.

3. The mathematics achievement of third-grade boys or third-grade girls showed no significant differences when examining the number of years of experience of the teachers.

4. The reading achievement of third-grade boys and of third-grade girls did show significant differences when examining the number of years of experience of the teachers. The more experienced teachers appeared to have a greater increase in the reading scores of the boys and girls.

5. The reading and mathematics achievement of third-grade students did show significant differences when comparing the years of experience of the teacher in Title I schools. The teachers having more experience in Title I schools appeared to have the greater increase in reading and mathematics scores of the students.

6. The reading and mathematics achievement of third-grade students did show significant differences when comparing number of students in the classrooms. It appeared that students in the larger class sizes had a greater gain in reading and mathematics.

The findings alluded to in this study apply solely to the subjects used in this study. The findings were contin-

gent on the variables considered, the conditions under which the study was conducted, and the instrument used to collect the data.

### Conclusions

The following conclusions are based on the findings.

1. The number of years of experience of the teacher makes no significant difference in the achievement of third-grade students as measured by the ITBS.

2. The number of years of experience of the teacher makes no significant difference in the achievement of high achieving, average achieving, or low achieving third-grade students as measured by the ITBS.

3. The number of years of experience of the teacher makes no significant difference on mathematics achievement of third-grade girls or third-grade boys as measured by the ITBS.

4. The number of years of experience of the teacher did make a significant difference in the reading achievement of third-grade boys and the reading achievement of third-grade girls.

5. The number of years of experience of the teacher did make a significant difference in the reading and mathematics achievement of third-grade students when the number of years of teacher experience were in Title I schools. The

teachers with the greater number of years of experience appeared to have the greater gains in reading and mathematics.

6. The number of students in the classroom did appear to make a difference in achievement.

#### Recommendations

The following recommendations are based on the findings and conclusions.

1. It is recommended that the first-year teacher in the inner-city Title I schools and other areas of urban city school systems be investigated in order to consider factors that have an impact on the achievement of students.

2. It is recommended that classroom size be investigated as a factor in the achievement of students in Title I classrooms.

3. It is recommended that the effects of parent involvement on the achievement of students in inner-city Title I schools be investigated.

4. It is recommended that a study of the effectiveness of staff development programs for teachers as a factor in the achievement of their students be investigated.

5. It is recommended that a replication of this study be conducted with the following modifications: (a) using different grade levels, (b) using different socioeconomic levels, and (c) using different ethnic groups of students.

APPENDIX A

SELF-REPORT QUESTIONNAIRE

Research is being done in the Dallas Independent School District on the impact of school resources. All personnel will remain anonymous in the study. The following information should take about fifteen minutes to complete.

Teacher \_\_\_\_\_

|       |               |            |                      |           |             |
|-------|---------------|------------|----------------------|-----------|-------------|
|       | _____         | _____      | _____                | _____     | _____       |
|       | Last Name     | First Name | Social Security No.  |           |             |
| Age:  | 20-25 [ ]     | 26-30 [ ]  | 31-35 [ ]            | 36-40 [ ] | Over 40 [ ] |
| Sex:  | M [ ]         | F [ ]      |                      |           |             |
| Race: | Caucasian [ ] | Black [ ]  | Mexican American [ ] | Other [ ] |             |

Years of teaching in specific grade levels in a public school (including this year):

|                  |                             |
|------------------|-----------------------------|
| Kindergarten [ ] | Fourth to Sixth Grades [ ]  |
| First Grade [ ]  | Seventh to Ninth Grades [ ] |
| Second Grade [ ] | Tenth to Twelfth Grades [ ] |

Teaching experience in situations not specified above:

|             |                 |                     |
|-------------|-----------------|---------------------|
| _____       | _____           | _____               |
| Grade Level | Number of Years | Type of Institution |

|             |                 |                     |
|-------------|-----------------|---------------------|
| _____       | _____           | _____               |
| Grade Level | Number of Years | Type of Institution |

|             |                 |                     |
|-------------|-----------------|---------------------|
| _____       | _____           | _____               |
| Grade Level | Number of Years | Type of Institution |

Years experience in Title I school (including this year) [ ]

Number of children in your class: Boys [ ] Girls [ ]

Undergraduate degree from \_\_\_\_\_

|  |       |          |
|--|-------|----------|
|  | _____ | _____    |
|  | Name  | Location |

Major \_\_\_\_\_ Minor \_\_\_\_\_



Please put a [✓] next to the five factors you feel have the most impact on student achievement and an [x] next to the five factors you feel have the least impact on student achievement.

- |   |  |
|---|--|
| <input type="checkbox"/> school size                        | <input type="checkbox"/> student attendance                |
| <input type="checkbox"/> staff development                  | <input type="checkbox"/> the teacher                       |
| <input type="checkbox"/> resource teachers<br>(in building) | <input type="checkbox"/> volunteers                        |
| <input type="checkbox"/> parent involvement                 | <input type="checkbox"/> college preparation of<br>teacher |
| <input type="checkbox"/> years of teaching<br>experience    | <input type="checkbox"/> class size                        |
| <input type="checkbox"/> community support of<br>school     | <input type="checkbox"/> instructional facilitator(s)      |
| <input type="checkbox"/> paraprofessional<br>assistance     | <input type="checkbox"/> tardiness of student              |
| <input type="checkbox"/> teacher attendance                 | <input type="checkbox"/> graduate training of teacher      |
| <input type="checkbox"/> discipline                         | <input type="checkbox"/> library books per pupil           |
| <input type="checkbox"/> the principal                      | <input type="checkbox"/> condition of school facility      |

Other factors not listed that you feel have impact on student achievement:

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## APPENDIX B

TABLE XIX

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS  
FOR ITBS READING SCORES BY YEARS  
OF TEACHER EXPERIENCE

| Group | Teacher Experience | Number of Teachers | <u>ITBS</u><br>Level 7 |      | <u>ITBS</u><br>Level 8 |      |
|-------|--------------------|--------------------|------------------------|------|------------------------|------|
|       |                    |                    | M                      | SD   | M                      | SD   |
| A     | 1 year or under    | 9                  | 41.4                   | 10.4 | 28.6                   | 8.7  |
| B     | 2-4 years          | 16                 | 46.4                   | 11.8 | 37.1                   | 14.3 |
| C     | 5-9 years          | 9                  | 47.4                   | 15.3 | 39.2                   | 14.9 |
| D     | Over 10 years      | 8                  | 47.9                   | 16.8 | 40.9                   | 14.0 |
|       | TOTAL              | 42                 | 45.8                   | 13.1 | 36.4                   | 13.7 |

## APPENDIX C

TABLE XX

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS  
FOR ITBS MATH SCORES BY YEARS  
OF TEACHER EXPERIENCE

| Group | Teacher Experience | Number of Teachers | <u>ITBS</u> Level 7 |      | <u>ITBS</u> Level 8 |      |
|-------|--------------------|--------------------|---------------------|------|---------------------|------|
|       |                    |                    | M                   | SD   | M                   | SD   |
| A     | 1 year or under    | 9                  | 23.8                | 7.0  | 21.0                | 7.3  |
| B     | 2-4 years          | 16                 | 28.9                | 8.8  | 28.5                | 17.1 |
| C     | 5-9 years          | 9                  | 30.4                | 9.6  | 32.4                | 11.9 |
| D     | Over 10 years      | 8                  | 31.9                | 14.1 | 36.4                | 18.8 |
|       | TOTAL              | 42                 | 28.7                | 9.1  | 29.2                | 15.2 |



## APPENDIX D

TABLE XXI

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS OF  
HIGH-ACHIEVING STUDENTS ON ITBS READING SCORES  
BY YEARS OF TEACHER EXPERIENCE

| Group | Teacher Experience | Number of Teachers | <u>ITBS</u><br>Level 7 |      | <u>ITBS</u><br>Level 8 |      |
|-------|--------------------|--------------------|------------------------|------|------------------------|------|
|       |                    |                    | M                      | SD   | M                      | SD   |
| A     | 1 year or under    | 1                  | 60.5                   | 0.0  | 37.8                   | 0.0  |
| B     | 2-4 years          | 5                  | 59.9                   | 8.3  | 49.5                   | 18.6 |
| C     | 5-9 years          | 2                  | 66.7                   | 9.3  | 59.2                   | 14.2 |
| D     | Over 10 years      | 2                  | 71.7                   | 11.0 | 63.1                   | 1.3  |
|       | TOTAL              | 10                 | 63.7                   | 8.9  | 53.0                   | 15.5 |

## APPENDIX E

TABLE XXII

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS OF  
HIGH-ACHIEVING STUDENTS ON ITBS MATH SCORES  
BY YEARS OF TEACHER EXPERIENCE

| Group | Teacher Experience | Number of Teachers | <u>ITBS</u><br>Level 7 |      | <u>ITBS</u><br>Level 8 |      |
|-------|--------------------|--------------------|------------------------|------|------------------------|------|
|       |                    |                    | M                      | SD   | M                      | SD   |
| A     | 1 year or under    | 1                  | 36.8                   | 0.0  | 25.9                   | 0.0  |
| B     | 2-4 years          | 5                  | 39.5                   | 6.0  | 41.5                   | 24.1 |
| C     | 5-9 years          | 2                  | 39.8                   | 5.2  | 51.4                   | 2.6  |
| D     | Over 10 years      | 2                  | 50.6                   | 14.6 | 57.1                   | 13.7 |
|       | TOTAL              | 10                 | 41.5                   | 8.2  | 45.1                   | 19.2 |

## APPENDIX F

TABLE XXIII

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS OF  
MIDDLE-ACHIEVING STUDENTS ON ITBS READING SCORES  
BY YEARS OF TEACHER EXPERIENCE

| Group | Teacher Experience | Number of Teachers | <u>ITBS</u><br>Level 7 |     | <u>ITBS</u><br>Level 8 |     |
|-------|--------------------|--------------------|------------------------|-----|------------------------|-----|
|       |                    |                    | M                      | SD  | M                      | SD  |
| A     | 1 year or under    | 3                  | 47.1                   | 4.6 | 31.6                   | 6.7 |
| B     | 2-4 years          | 8                  | 42.6                   | 6.2 | 31.3                   | 7.4 |
| C     | 5-9 years          | 5                  | 48.2                   | 3.6 | 37.3                   | 7.4 |
| D     | Over 10 years      | 5                  | 43.2                   | 2.4 | 34.0                   | 3.3 |
|       | TOTAL              | 21                 | 44.7                   | 5.1 | 33.4                   | 6.5 |

## APPENDIX G

TABLE XXIV

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS OF  
MIDDLE-ACHIEVING STUDENTS ON ITBS MATH SCORES  
BY YEARS OF TEACHER EXPERIENCE

| Group | Teacher Experience | Number of Teachers | ITBS Level 7 |     | ITBS Level 8 |      |
|-------|--------------------|--------------------|--------------|-----|--------------|------|
|       |                    |                    | M            | SD  | M            | SD   |
| A     | 1 year or under    | 3                  | 24.1         | 5.6 | 20.9         | 4.9  |
| B     | 2-4 years          | 8                  | 24.5         | 4.6 | 20.2         | 8.0  |
| C     | 5-9 years          | 5                  | 30.8         | 7.1 | 27.5         | 6.6  |
| D     | Over 10 years      | 5                  | 27.8         | 4.9 | 32.4         | 15.0 |
|       | TOTAL              | 21                 | 26.8         | 5.7 | 24.9         | 10.3 |

## APPENDIX H

TABLE XXV

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS FOR  
ITBS READING SCORES FOR LOW-ACHIEVING STUDENTS  
 BY YEARS OF TEACHER EXPERIENCE

| Group | Teacher Experience | Number of Teachers | ITBS Level 7 |     | ITBS Level 8 |      |
|-------|--------------------|--------------------|--------------|-----|--------------|------|
|       |                    |                    | M            | SD  | M            | SD   |
| A     | 1 year or under    | 5                  | 34.1         | 4.8 | 25.0         | 9.2  |
| B     | 2-4 years          | 3                  | 34.2         | 5.6 | 32.0         | 10.3 |
| C     | 5-9 years          | 2                  | 26.0         | 9.0 | 23.8         | 9.0  |
| D     | Over 10 years      | 1                  | 23.6         | 0.0 | 30.4         | 0.0  |
|       | TOTAL              | 11                 | 31.7         | 6.4 | 27.2         | 8.7  |

## APPENDIX I

TABLE XXVI

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS FOR  
ITBS MATH SCORES FOR LOW-ACHIEVING STUDENTS  
 BY YEARS OF TEACHER EXPERIENCE

| Group | Teacher Experience | Number of Teachers | <u>ITBS</u> Level 7 |      | <u>ITBS</u> Level 8 |      |
|-------|--------------------|--------------------|---------------------|------|---------------------|------|
|       |                    |                    | M                   | SD   | M                   | SD   |
| A     | 1 year or under    | 5                  | 20.9                | 5.6  | 20.1                | 9.3  |
| B     | 2-4 years          | 3                  | 22.8                | 4.3  | 29.1                | 10.2 |
| C     | 5-9 years          | 2                  | 20.1                | 10.8 | 25.6                | 2.9  |
| D     | Over 10 years      | 1                  | 14.6                | 0.0  | 15.1                | 0.0  |
|       | TOTAL              | 11                 | 20.7                | 5.7  | 23.1                | 8.9  |

## APPENDIX J

TABLE XXVII

MEANS AND STANDARD DEVIATIONS OF CLASSROOM MEANS  
FOR ITBS READING SCORES OF BOYS

| Group | Teacher Experience | Number of Teachers | ITBS Level 7 |      | ITBS Level 8 |      |
|-------|--------------------|--------------------|--------------|------|--------------|------|
|       |                    |                    | M            | SD   | M            | SD   |
| A     | 1 year of under    | 9                  | 41.9         | 10.9 | 27.4         | 8.4  |
| B     | 2-4 years          | 16                 | 43.3         | 10.1 | 29.8         | 7.8  |
| C     | 5-9 years          | 9                  | 47.8         | 11.6 | 41.0         | 10.8 |
| D     | Over 10 years      | 8                  | 48.2         | 17.3 | 42.4         | 17.3 |
|       | TOTAL              | 42                 | 45.8         | 13.1 | 36.4         | 13.7 |

## APPENDIX K

TABLE XXVIII

MEANS AND STANDARD DEVIATIONS OF CLASSROOM MEANS  
FOR ITBS MATHEMATICS SCORES OF BOYS

| Group | Teacher Experience | Number of Teachers | ITBS Level 7 |      | ITBS Level 8 |      |
|-------|--------------------|--------------------|--------------|------|--------------|------|
|       |                    |                    | M            | SD   | M            | SD   |
| A     | 1 year or under    | 9                  | 23.6         | 7.5  | 19.3         | 5.7  |
| B     | 2-4 years          | 16                 | 25.8         | 5.9  | 20.6         | 9.3  |
| C     | 5-9 years          | 9                  | 30.0         | 9.8  | 32.4         | 9.8  |
| D     | Over 10 years      | 8                  | 32.6         | 12.1 | 38.4         | 20.2 |
|       | TOTAL              | 42                 | 28.7         | 9.9  | 29.2         | 15.2 |



## APPENDIX L

TABLE XXIX

MEANS AND STANDARD DEVIATIONS OF CLASSROOM MEANS  
FOR ITBS READING SCORES FOR GIRLS

| Group | Teacher Experience | Number of Teachers | ITBS Level 7 |      | ITBS Level 8 |      |
|-------|--------------------|--------------------|--------------|------|--------------|------|
|       |                    |                    | M            | SD   | M            | SD   |
| A     | 1 year or under    | 9                  | 36.2         | 9.8  | 23.8         | 9.5  |
| B     | 2-4 years          | 16                 | 36.5         | 11.8 | 26.5         | 9.5  |
| C     | 5-9 years          | 9                  | 46.8         | 13.6 | 41.4         | 13.2 |
| D     | Over 10 years      | 8                  | 46.9         | 19.1 | 42.7         | 19.7 |
|       | TOTAL              | 42                 | 42.6         | 19.1 | 35.3         | 16.3 |

## APPENDIX M

TABLE XXX

MEANS AND STANDARD DEVIATIONS OF CLASSROOM MEANS  
FOR ITBS MATHEMATICS SCORES FOR GIRLS

| Group | Teacher Experience | Number of Teachers | <u>ITBS</u><br>Level 7 |      | <u>ITBS</u><br>Level 8 |      |
|-------|--------------------|--------------------|------------------------|------|------------------------|------|
|       |                    |                    | M                      | SD   | M                      | SD   |
| A     | 1 year or under    | 9                  | 22.1                   | 7.5  | 17.8                   | 6.1  |
| B     | 2-4 years          | 16                 | 23.4                   | 8.8  | 19.0                   | 11.0 |
| C     | 5-9 years          | 9                  | 31.5                   | 11.0 | 35.5                   | 11.7 |
| D     | Over 10 years      | 8                  | 32.8                   | 13.0 | 38.2                   | 20.0 |
|       | TOTAL              | 42                 | 28.4                   | 11.4 | 29.4                   | 16.4 |

## APPENDIX N

TABLE XXXI

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS  
FOR ITBS READING SCORES BY YEARS OF TEACHER  
EXPERIENCE IN TITLE I SCHOOLS

| Group | Teacher Experience | Number of Teachers | <u>ITBS</u><br>Level 7 |      | <u>ITBS</u><br>Level 8 |      |
|-------|--------------------|--------------------|------------------------|------|------------------------|------|
|       |                    |                    | M                      | SD   | M                      | SD   |
| A     | 1 year or under    | 9                  | 41.9                   | 10.9 | 27.4                   | 8.4  |
| B     | 2-4 years          | 16                 | 43.3                   | 10.1 | 29.8                   | 7.8  |
| C     | 5-9 years          | 9                  | 47.8                   | 11.6 | 41.0                   | 10.8 |
| D     | Over 10 years      | 8                  | 48.2                   | 17.3 | 42.4                   | 17.3 |
|       | TOTAL              | 42                 | 45.8                   | 13.1 | 36.4                   | 13.7 |

## APPENDIX O

TABLE XXXII

MEANS AND STANDARD DEVIATIONS OF CLASSROOM TOTALS  
FOR ITBS MATH SCORES BY YEARS OF TEACHER  
EXPERIENCE IN TITLE I SCHOOLS

| Group | Teacher Experience | Number of Teachers | <u>ITBS</u><br>Level 7 |      | <u>ITBS</u><br>Level 8 |      |
|-------|--------------------|--------------------|------------------------|------|------------------------|------|
|       |                    |                    | M                      | SD   | M                      | SD   |
| A     | 1 year or under    | 9                  | 23.6                   | 7.5  | 19.3                   | 5.7  |
| B     | 2-4 years          | 16                 | 25.8                   | 5.9  | 20.6                   | 9.3  |
| C     | 5-9 years          | 9                  | 30.0                   | 9.8  | 32.4                   | 9.8  |
| D     | Over 10 years      | 8                  | 32.6                   | 12.1 | 38.4                   | 20.2 |
|       | TOTAL              | 42                 | 28.7                   | 9.9  | 29.2                   | 15.2 |

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