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PUPIL MOBILITY AND
ITS EFFECT ON BASIC SKILLS
ACHIEVEMENT GROWTH RATES AND
THE EDUCATIONAL PROGRAM

by

DANIEL P. KLEE

A dissertation submitted in partial
fulfillment of the requirements for the degree of

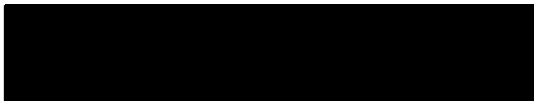
DOCTOR OF EDUCATION
in
EDUCATIONAL ADMINISTRATION AND SUPERVISION

Portland State University

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TO THE OFFICE OF GRADUATE STUDIES:


The members of the Committee approve the dissertation
of Daniel P. Klee presented May 12, 1988.


John D. Lind, Chairperson

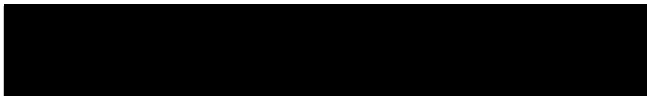

Michael E. Carl



John F. Heflin


Maxine Thomas


Robert L. Casteel

APPROVED:


Robert B. Everhart, Dean, School of Education


Bernard Ross, Vice Provost for Graduate Studies

AN ABSTRACT OF THE DISSERTATION OF Daniel P. Klee for the
Doctor of Education in Educational Administration and
Supervision presented May 12, 1988.


Title: Pupil Mobility and Its Effect On Basic Skills
Achievement Growth Rates and The Educational
Program.

APPROVED BY MEMBERS OF THE DISSERTATION COMMITTEE:


John D. Lind, Chairperson


Michael E. Carl


John F. Heflin


Maxine Thomas


Robert L. Casteel

The purpose of the study was to compare the basic
skills achievement scores of mobile and non-mobile stu-
dents within the Portland Public Schools. The problem was
to assess the effect of this mobility on basic skills
achievement and the total educational program.

The study was designed to test differences in reading,

language usage and mathematics achievement test scores between pupils in the third through the eighth grades. The instrument that was used was the Portland Achievement Levels Tests of reading, language usage and math. These tests are administered to students in grades 3 - 8 in the fall and spring of each school year. A questionnaire was also designed to determine the effect of student mobility on instructional programs. This questionnaire was mailed to 81 principals with 56 responding.

The Portland Public Schools computer banks were utilized to plot the basic skills test results for two groups of students:

1. The clear and intact group, which was the student who was in the same school from September through June (grades 3 - 8).
2. The mobile student (grades 3 - 8) who had a valid fall and spring test score, but from different schools.

Plotting was done for the residual effect of variables in basic skill gains rather than plotting for the effects of regression. Additional analysis took place using multiple regressions by stability index, to determine the relationship between student achievement test scores and the independent variables of mobility and other independent variables (ethnic groups, gender).

It was determined that student mobility and the inde-

pendent variables of gender and ethnicity had no negative effect on basic skills achievement test scores. However, for the stable student, the higher the school stability index, the higher the achievement level for the non-mobile students in that school for the fall testing. The achievement gain was no different for a student in a high stability school versus a low stability school. Additionally, based on the results of the questionnaire used in the study, most principals felt that student mobility had a negative impact on instructional programs. Most of the responding principals, however, were opposed to a more structured district wide basic skills curriculum as a way of moderating the negative effects of student mobility on the educational program.

Student mobility is a factor related to the success of a school academic program. It cannot, however, be taken as an answer to the low achievement of mobile students. This study concludes that all students can achieve academically, regardless of their mobility.

Recommendations were made to the Portland School District that in order to facilitate and decrease the problem of student mobility, the district might wish to require that each school have a formal plan for integrating new students into the instructional program. Additionally, a more structured district wide basic skills curriculum was recommended.

Suggestions for additional in-depth studies were made to determine the kinds of problems that students and school staffs encounter with school mobility. This would include a longitudinal study for students with only one valid test score during an academic year, comparing their fall or spring scores over several years and the frequency of their mobility.

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CHAPTER I

INTRODUCTION

Educators today recognize the general mobility of pupils. Movement of families from one area to another is a trend in American society (U.S. Census Population Reports, 1974). Clary (1961) found that "it is not at all unusual for many pupils - sometimes half a class - to enter classrooms while numerous others leave during the normal school year" (p. 125). This situation has always been true in areas that serve migrant workers, military families and transient groups, but it also appears to be true for other populations within our society. The average American family moves once every 5 years (Goebel, 1978), with approximately 20% of the population, including about 6 million children between the ages of 5 and 13 years, changing residence each year (U.S. Bureau of the Census, 1980).

Pupil mobility in the elementary schools, as defined in this study, occurs when a pupil in grades 3 - 8 moves to a different school during the academic year. Grades 3 - 8 were chosen for this study because Portland Public Schools Achievement Levels Tests of reading, math and language usage are administered to pupils in grades 3 - 8

in the fall and spring of each school year. Other researchers concerned about various aspects of this problem have used terms such as inter school transfers (IST) or pupil turnover (Holland, Kaplan & Davis, 1974; Levine, Wisolowski & Corbett, 1966).

There are unique educational needs related to a mobile population. Often children need help in adjusting to a new environment and intensive instructional remediation. One of the consequences of mobility is that thousands of children face the experiences of transferring to new schools with the inherent problems of adjustment in these schools (Fisher, 1967).

For the child, the school is second only to the family as the most significant social setting. In general, the adaptations which the child undertakes in coping with a changed school environment (and the competence with which the school facilitates the integration of the new child) is the most salient, immediate challenge for the child. This is true regardless of the reason for school transfer. Fenichel (1945) suggests that a change in residence for a child is analogous to a change of a parent.

Mobility is a major cause of social fragmentation in some segments of American life and obviously has some impact on the millions of youngsters who find themselves being moved to a new locality each year. However, the impact of mobility on children is not readily predictable.

It varies in relationship to the family and other situational factors. Many children are resilient and seemingly learn to adjust readily (Shapiro & Bloom, 1977).

In urban areas mobility is a universal problem. It is an often ignored variable that is at times acknowledged, but seldom methodically examined. Most school districts in the United States plan educational programs assuming that the same children will be in their schools year after year. Test scores are interpreted on the same basis. Pupil mobility is significantly high in most urban school districts throughout the country (Shapiro and Bloom, 1977). If the frequency of mobility is negatively related to achievement, there should be concerted effort to make this transition as smooth as possible and to provide appropriate instructional and support services to those pupils who are in transition.

School district policy makers need to examine mobility within their districts and take this factor into consideration when analyzing and reporting test scores. The impact of mobility on schools and achievement test scores is an often ignored problem and it is an issue that warrants further examination.

Pupil mobility is a major problem in many Portland Public elementary, middle and high schools. Collectively, pupil mobility appears to be an outgrowth of many complex community problems which are reflected in neighborhood schools. Research findings have indicated that many

children who are admitted and discharged from school affect organizational, administrative, and supervisory activities (Chase, 1964). The extent of pupil mobility must certainly influence the effectiveness of the educational program, as well as the achievement of pupils. Kasindorf (1962) found that highly mobile children had scholastic difficulties and were transferred into remedial and/or special educational services, or the educational program lowered its academic standards to allow the mobile children to minimally function in the schools.

This study will examine the relationship between pupil mobility and pupil achievement in the Portland Public Schools as measured by test scores. The issue of pupil mobility and pupil achievement is a vital one. Research on pupil mobility is essential if the educational and social needs of these pupils are to be fulfilled. This study will make a contribution to educational practice by providing recommendations which may result in educational gains for mobile children. It will also provide quantitative evidence to support these recommendations.

THE STATEMENT OF PROBLEM

The purpose of the study was to compare the achievement scores of mobile and non-mobile pupils within the Portland Public Schools. The problem was to determine if there was a significant relationship between pupil

mobility and basic skills achievement growth rates and the educational program. This study compared achievement scores on the Portland Achievement Levels Tests of reading, language usage and math. These tests are administered to pupils in grades 3 - 8 in the fall and spring of each school year. Specific answers were sought to three questions:

1. What is the relationship between pupil mobility and pupil achievement in mathematics, reading and language usage test scores at the third through eighth grade levels?
2. What is the relationship between the independent variables of gender, ethnicity, SES and basic skills test scores?
3. What is the effect of pupil mobility on instructional programs and how do principals and building staffs respond to these problems?

The Portland Public Schools Enrollment Report for the years 1982 - 1987 indicates that the highest late enrollee ratio of pupils occurred in schools that received Chapter I funding (49 schools) and had over 30.0% of low income pupils (38 schools). Pupil mobility data for 1985-86 showed the Portland School District had an average late enrollee ratio of 19.7%. This ratio was exceeded by 41 of the 80 schools reporting. Fourteen schools had late enrollee ratios in excess of 30.0% during this same period.

The Portland Public School District was an appropriate place to conduct this study because of the district's high pupil mobility rate, high ECIA Chapter I eligible pupils, and large non-English speaking population. Most of the schools in the city were experiencing pupil mobility (1985-86) above the district average, which was 22.5%. Research was needed so that school administrators could plan for the educational needs of this constantly changing pupil population. The study sought to determine if there was a significant relationship between pupil mobility and reading, language usage and mathematics achievement test scores, and if there was an influence of mobility on the total educational program and not just the basic skills areas? The pupils in the study sample were divided into two groups as follows:

1. Clear and intact group: Pupils who were in the same school from September through June (Grades 3 - 8), for each academic year.
2. Mobile pupil group: Pupils in grades 3 - 8 with a valid fall and spring test score, but who transferred from different schools within the school district, for each academic year.

The study also incorporated a questionnaire which was mailed to all K-8 principals in the district. The questionnaire collected principals' opinions and basic information on possible negative effects of pupil mobility

on instructional programs and how principals and their staffs responded to those problems.

SIGNIFICANCE OF THE STUDY

The pupil mobility factor has significance to the field of Educational Administration as a field of study for several reasons:

1. The curriculum in our schools is basically directed to the pupil who is enrolled at school for the full academic year.
2. Pupil achievement levels are much higher for some and quite low for others.
3. School staffing allocations (FTE) are generally based on the October 1 enrollment figures. However, for most Portland elementary and middle schools the peak pupil enrollment occurs after October 1 of the school year.
4. The turnover of staff appears to be much higher in schools with high pupil mobility.

The significance of this study in the context of previous research on the topic of pupil mobility is:

1. This study surveyed pupils over a five year period of time.
2. Over 105,000 pupils were surveyed in grades 3 - 8.

3. A detailed computer analysis relating mobility to the variables of gender, socioeconomic status and ethnic group was used.
4. A questionnaire was developed to collect principals' opinions and basic information on possible negative effects of pupil mobility on instructional programs.
5. A computer analysis was used that plotted for the residual effects of variables in reading, math and language usage.

This study built upon previous study designs only in relation to the variables of socioeconomic status, gender and ethnic group.

This studies major contribution to the body of knowledge relating to pupil mobility in that when a pupil is identified as mobile (semi-stable) there are no significant negative correlations with achievement in the basic skill areas. Secondly, the higher the stability index for a given school, the higher the achievement level score for non-mobile (stable) pupils in that school.

The pupil mobility factor accounts for some of the differences in achievement test scores among schools. Differences in achievement test scores may also be related to other variables such as ethnic groups, socioeconomic status, and gender.

In Portland, during the 1986 - 1987 school year, out of a total of 80 schools, 41 elementary and middle schools

had a pupil stability rate of less than 79.0%, which was the average for the school district. A total of 18 schools had a pupil stability rate of less than 70.0% (Portland Public Schools, 1986). In other words, 51.0% of the Portland School District had 31.0% or more of their pupils who were mobile between October and June of the school year. Most of these schools had high percentages of minority group children who lived in the school attendance areas or were bussed from other attendance areas.

It has been suggested that mobility is negatively associated with achievement tests (Larson, 1940; Levine et al., 1966; Tetreau and Fuller, 1942). Specifically, a pupil is particularly vulnerable due to a school change, which means an adjustment to the new school, peers and the academic program. Little attention has been given to the meaning of such mobility for school children, despite the fact that every urban school official testifies that population movement is a major problem for the school system (Chase, 1964).

Most of the pupil mobility in Portland is mobility from school to school within the district. From 1982 to 1987 the late enrollee numbers amounted to an average of 8,329 pupils per year (Portland Public Schools Enrollment Report, 1982 - 1987). This figure includes pupils who are enrolled between October and June of a school year compared to pupils enrolled at a school during the opening

days of school each fall who are still enrolled in the Portland Public Schools in June.

This internal mobility makes it necessary to do a considerable amount of curriculum and guidance planning. Curriculum sequences must be planned so that a pupil moving from one school to another will not be moving into a completely new curriculum content or sequence each time he/she moves. Progress reporting must be planned in such a manner that the receiving school will have an idea of the curriculum placement of a pupil entering the school.

There is a possibility that mobility may not be the only variable affecting pupil academic achievement. Additional analysis was conducted in this study, using multiple regressions by stability index, to determine the relationship between pupil achievement test scores, mobility, socioeconomic status, ethnic groups and gender.

DEFINITION OF TERMS

Basic Skills Curriculum. Language arts, reading and math. Verbal and written communication. Reading for enjoyment and information acquisition. Math computation and quantification.

ECIA Chapter I. (Education Consolidation and Improvement Act of 1981) Chapter I provides supplemental classes in reading and math to pupils achieving at least one year below grade level.

Discipline. Indicates that a pupil had behavior difficulties which were identified by the number of suspensions and/or expulsions.

In - Mobility. Pupil admissions and discharges within a school system. The movement of pupils from one school to another within the school district.

Language Usage Achievement Level. Based on Portland Public Schools P - scores or RIT scores.

Late Enrollee Ratio. The percentage of pupils enrolling during the school year (October through June) compared to the number of pupils enrolled during the opening days of school each fall.

Mathematics Achievement Level. Based on Portland Public Schools P - scores or RIT scores.

Middle Schools. Schools containing 6th, 7th, and 8th grade pupils or 5th through 8th grades.

Mobility. When a pupil in grades 3 - 8 moves to a different school during the academic year.

P-Scores. Portland standard scores which indicate the level of achievement as compared to other pupils in the Portland Public Schools in the same grade. The value of a P-score is comparable for each subject tested and for all grades tested. Because of this comparability, all

P-Scores can be combined for a group of pupils to produce a composite of test scores for reading, math and language usage.

Reading Achievement Level. Based on Portland Public Schools P-scores or RIT scores. The Portland Achievement Levels Tests of reading, language usage and mathematics are administered to pupils in grade 3 - 8 in the fall and spring of each academic year. The tests were developed by the Portland Evaluation Department with the goal of producing a test that was valid for the basic skills curriculum of the Portland Public Schools.

The tests are designed to be administered to students according to the level of performance of each pupil. Consequently, pupils in the same grade will take tests with differing levels of difficulty which correspond to differences in predicted performance which is based upon previous test scores or from teacher judgment. The various levels tests produce scores which are related to a common scale and are reported as RIT scores and P-scores.

RIT Score. (Rasch Unit Scores). A measure of absolute rather than relative achievement. These scores are used to show fall to spring achievement compared with district means for each year. The differences in RIT scores over a period of time measures the amount of learning or growth in curricular content.

Socioeconomic Status. (SES). The numbers of low income pupils are based on AFDC (Aid to families with Dependent Children) and free and reduced lunch figures. These figures are calculated numbers and do not represent an actual school-by-school head count of pupils. Low SES is determined by eligibility for free or reduced price meals.

Stability Index. The percentage of pupils enrolled at a school during the opening days of school each fall who are still enrolled at the same school in June.

LIMITATIONS OF THE STUDY

Data for the study were collected from the Portland Public School District. The results of the study apply only to the school district investigated. The pupil population surveyed included all pupils in the third through the eighth grades who took the Portland Achievement Levels Tests of reading, language usage and math for each academic year over a five year time period (1982 - 1987).

Only pupils in the third through eighth grades, with valid fall and spring achievement tests during each academic year were the subjects of this study. The Portland Public Schools computer banks were used to plot the basic skills test results for non-mobile and mobile pupils, analyzing the relationship between socioeconomic status, ethnic groups and gender. In addition, a survey

instrument was developed and mailed to all Portland Public School elementary and middle school principals (+69% returned) to solicit information about the effect of high pupil mobility on the instructional program and pupil achievement.

This study was limited by the reliability and validity of the instrument used to measure pupil achievement and the survey instrument which was developed for principals. The Portland Public Schools computer banks were used to plot the basic skills test results and independent variables, using the SPSS program.

The actual numbers in the case studies relate to the actual number of pupils in the sample. Frequently, this number varies by grade level. The aggregate analysis includes every pupil who had valid fall and spring scores from the same school. The variables considered in the study included fall and spring scores, pupil stability, SES, ethnicity and gender.

The indicators of achievement were determined by the P-scores on the Portland Achievement Levels Tests for reading, language usage and math. This study was also limited to an examination of pupil stability and mobility as described in the definition of terms.

ORGANIZATION OF STUDY

This chapter presented background information on pupil mobility and academic achievement test scores. The

significance of the study was presented as well as the limitations of the study. Chapter II presents concepts and research trends which emerged from a review of related literature on pupil mobility, mobility and achievement in school systems. Chapter III presents the study design, focusing upon procedures for collecting and analyzing data, the setting, and the population of the study. Chapter IV presents the analysis of the data. Chapter V presents the findings, conclusions drawn from the study, and discusses the implications of the study for educational practice and for future research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Literature was examined which investigated the relationship between pupil mobility on basic skills achievement rates and educational programs. The studies were almost evenly balanced between mobility having a positive or negative affect on pupil achievement, 16+ to 14-.

The first section centers on pupil mobility. The literature on geographic mobility and mobility due to school transfers are also presented.

The second section summarizes the literature on pupil mobility and achievement.

The last section discusses mobility and pupil adjustment. The effect of mobility on the educational program are also summarized.

PUPIL MOBILITY

Mobility was based on the number of schools each pupil attended during each academic year. Comparisons were made between the pupil who had valid test results for the fall and spring from the same school as opposed to the pupil with no valid fall or spring test scores or the

pupil with valid fall and spring test scores, but from different schools. Pupil mobility refers to the number of schools attended by a pupil during an academic year. Schools in general tend to be organized around the presentation of an educational program to pupils who enter and leave as a group.

Several researchers have concluded that there is a negative relationship between the transient pupil and achievement (Cramer & Dorsey, 1970; Frankel & Forlono, 1967; Tetreau & Fuller, 1942). Others state that mobility has either no relationship to academic achievement or only a partial relationship (Gilliland, 1958; Greene & Daughtery, 1969; Morris, Pestaner & Nelson, 1967). All of the researchers who have investigated pupil mobility, however, agree that there are numerous causes of mobility and that there are significant numbers of pupils moving from one school to another.

A review of a number of studies indicate that there may be social and psychological factors that contribute to a pupil's achievement in school. Glidewell and his associates (Glidewell, Kantor, Smith & Stringer, 1965; Kantor, 1965) reviewed a number of studies that concluded that children from lower socioeconomic classes are more likely to experience difficulty adjusting to transfer while children from middle and upper-middle class backgrounds are more likely to profit from the experiences involved in changing schools. Rakieta (1961) indicated

that the majority of pupils entering a new school are more concerned about peer acceptance and coping with school expectations than academic success.

Frankel & Forlano (1967) conducted a longitudinal study on the test performance of transient versus non-transient disadvantaged pupils in 18 elementary schools in New York City. Their findings indicated that the non-transient pupils scored significantly higher than did the transient pupils at the third grade and three years later at the sixth grade. It was also discovered that "... the non-transient pupils exhibited a relative constancy in mean aptitude scores over the years", (Frankel & Forlano, 1967, p. 356).

Stuhr (1973) conducted a study in the Toronto school system which found that high pupil mobility had negative implications on staff morale and on curriculum development. It was also determined that a negative relationship existed between pupil mobility and overall academic performance.

In a more recent research review, Blane (1978) examined 25 articles and theses; 16 indicated either no significant difference between academic achievement and mobility or slightly higher scores for mobile pupils. Nine of the studies reported a positive achievement related to the non-mobile pupils. From a mensurational point of view, studies that indicate no significant difference between the groups seem to be in the majority.

However, many of the contradictory results of these studies occur because no differentiation is made between pupil populations that relate to high, middle and low I.Q., frequency of migration, urban to rural, rural to urban, gender, etc.

Geographic Mobility

A survey of the literature indicated that many of the families that move are long distance movers (outside of the county of previous residence) (Bayer, 1982; Lacey, 1978; Long, 1975; Morris, 1967). Consequently, large numbers of families must deal with a change in schools resulting from geographic relocation (Table I).

The reasons for the moves are complex. For some segments of the population the move is the result of a job promotion. For others it is the result of a family break-up or the "...inability to pay the rent" (Lacey, 1978). The reasons for mobility are as varied as the populations that move. Further study may provide an explanation as to how this affects pupil achievement.

The relationship between geographic mobility and pupil achievement is complex with few research studies. The effect of mobility is directly related to the reasons for the mobility and the various groups within the population. Many of the studies surveyed were based on cross-sectional rather than longitudinal data. Many of the studies made generalizations about the relationship

TABLE I
GEOGRAPHIC MOBILITY OF
SCHOOL AGE CHILDREN: MARCH 1985
TO MARCH 1979 (IN PERCENTAGES)

AGE GROUP	TOTAL	SAME HOUSE (NON- MOVERS)	SAME COUNTY	SAME STATE DIFFERENT COUNTY	DIFFERENT STATE	FROM ABROAD
5-9 YRS	100.0	47.2	30.2	10.8	9.9	1.9
10-14 YRS	100.0	61.2	22.5	7.6	7.4	1.3
15-19 YRS	100.0	66.1	19.7	6.4	6.2	1.5
TOTAL	100.0	58.8	23.8	8.1	7.7	1.5

Source: U.S. Bureau of the Census, Current Population Reports, Series P-20, No.353, "Geographic Mobility: March 1975 to March 1979," Washington D.C.: U.S. Government Printing Office, 1980. Table 6

between pupil mobility and achievement rather than using carefully designed longitudinal studies (Bensen, Haycraft, Steyaert & Weigel, 1979; Bollenbacher, 1962; Green & Daughtry, 1969; Kantor, 1965; Levin et al., 1966; Long, 1975; Schaller, 1975). Geographic mobility and pupil achievement can be influenced by other variables such as the family (Schaller, 1975).

In-Mobility

Mobility consists of pupil admissions and discharges within a school system. This is compounded by the types of mobility that occurs from school to school within a district. To this must be added pupils who are granted requests to attend a school outside their attendance area for a variety of reasons such as improvement of

racial/ethnic balance, child care, personal and social adjustment, and parental hardship.

Most of these mobile pupils appear as late enrollees on the school register. That is, these pupils enroll at a school during the year rather than during the opening of school in the fall. These late enrollees constitute a large risk group in danger of dropping out of school. The Portland Public School District had a pupil population (1985-86) in the first through the eighth grades of approximately 29,457 pupils. During the school year 6,785 pupils entered the school district between October 1985 and June 1986. Over 23 per-cent of the children in the district (sixth through eighth grade) were late enrollees and in many cases interschool transfers (Table II).

The magnitude of the problem is further exemplified in a study of the Little Lake School District in California.

"The Little Lake School District, Santa Fe Springs, California, has a population of approximately 30,000 people...There are 5,600 children attending school from kindergarten through the sixth grade...Over 1,500 children (23 per cent) in the district were IST [interschool transfer] children in one year." (Holland, et al., 1974) (p. 75).

TABLE II

LATE ENROLLEE RATIO - ELEMENTARY AND MIDDLE
SCHOOLS, PORTLAND, OREGON. THESE FIGURES REPRESENT
THE PERCENTAGES OF PUPILS ENROLLING AT A SCHOOL
DURING THE YEAR AS COMPARED TO THE NUMBER OF
PUPILS ENROLLING DURING THE OPENING OF SCHOOL
EACH FALL.

1985-86			1985-86			1985-86			1985-86			1985-86		
SCH	NUMBER	PERCENT	SCH	NUMBER	PERCENT	SCH	NUMBER	PERCENT	SCH	NUMBER	PERCENT	SCH	NUMBER	PERCENT
1	93	24.7	21	24	5.2	41	37	11.8	61	145	31.0	71	154	21.9
2	20	7.2	22	20	5.9	42	71	24.5	62	83	35.6	72	86	13.9
3	54	7.5	23	106	27.0	43	81	27.6	63	65	14.0	73	46	8.5
4	86	35.1	24	154	28.4	44	34	8.4	64	30	13.1	74	92	18.0
5	167	36.0	25	89	17.8	45	102	18.3	65	41	6.0	75	94	15.6
6	47	10.7	26	106	26.4	46	16	14.5	66	111	16.9	76	86	22.8
7	61	15.6	27	71	13.2	47	86	26.8	67	43	8.7	77	71	13.3
8	98	48.3	28	23	12.2	48	181	38.6	68	61	26.5	78	52	8.2
9	129	22.3	29	238	54.1	49	78	13.3	69	56	12.6	79	35	4.8
10	74	10.6	30	71	14.0	50	115	21.1	70	58	11.5	80	160	19.3
11	54	24.5	31	105	20.5	51	118	22.5						
12	47	12.5	32	179	31.5	52	122	26.9						
13	54	37.0	33	78	32.9	53	26	15.8						
14	106	35.2	34	150	26.7	54	27	8.0						
15	46	12.5	35	105	23.3	55	40	10.9						
16	57	14.7	36	128	27.4	56	110	34.9						
17	109	27.6	37	42	11.4	57	154	28.9						
18	156	35.4	38	92	31.3	58	98	28.6						
19	97	21.4	39	67	24.0	59	109	22.5						
20	78	19.9	40	104	20.7	60	26	12.7						

1633 1952 1631 693 876
Source: Portland Public Schools 1986 Enrollment Report, Management Information Services, Late
Enrollee Ratios - Elementary and Middle Schools, P55-57

He concluded that what is even more startling in the district is that over half of the pupils who had entered one of the study schools had left by the end of the school year.

MOBILITY AND ACHIEVEMENT

One reason why today's youth are more subject to transferring among schools is that they are "at-risk" (resident in school) for a longer period of time than previously (Bayer, 1982:2). During the 1920's only about 30 percent of the pupils graduated from high school as compared to three fourths of the pupils today (Grant and Lind, 1979:15).

The movement of families from one area to another has become a trend in modern life (U.S. Bureau of the Census, 1980). Although many studies have focused on the influence of pupil mobility on school achievement, to date these studies have been inconsistent concerning the effects of mobility on school achievement. In an early review of the literature, Bourke and Naylor (1971), found 11 previous studies indicated no effect of mobility on academic achievement while 12 studies found lower achievement, and five studies found higher achievement directly related to pupil mobility. More recent studies have noted similar inconsistencies. Goebel (1975) indicated that concerns about the effect of pupil mobility on academic achievement were "... generally based on

intuition rather than scientific substantiation" and that "... most studies have treated mobility as a unidimensional rather than multidimensional phenomenon and results have been inconsistent" (Gentry, and Schaeffer, 1960; Moore, 1966:2).

Benson and Weigal (1980), studied 643 ninth grade pupils in Colorado and found that mobility is negatively related to achievement in math. This study controlled for the variables of sex, ethnicity, the date of entrance to the school currently enrolled, the total number of schools attended during junior high, and total raw scores on the Stanford Achievement Test for reading and arithmetic. Pearson product moment correlations were employed to determine the relationship among the variables. Results indicated mobility to be inversely related to achievement in math ($r = -.2$; $p < .01$; $N = 552$).

In contrast to these findings, Bollenbacher (1962) conducted a study of 4,089 sixth grade pupils in Cincinnati to determine the effect of mobility on pupil achievement in reading and math. Data regarding the number of moves made by an individual pupil were gathered rather than gross statistics which report the total number of moves and transfers. Covariance techniques were used in the statistical analysis which took into consideration the differences in the intelligence test scores of the pupils. According to the findings of this study, achievement in reading and math were not affected by the mobility of the

sixth grade pupils. Ballenbacher's findings agree with those of Sackett (1935), whose study indicated that the mobile pupil may achieve higher reading scores than the non-mobile pupil. Snipes (1966) found in his study that mobile pupils tend to achieve greater success in vocabulary and comprehension than the non-mobile pupil. Cramer and Dorsey (1970) also found in their study of 366 sixth grade pupils, that mobility had no adverse effect on reading achievement. Their "mobility variables included the number of schools attended by each child and his prior place of residence" (p. 387).

Whalen and Fried (1973) investigated the effects of pupil mobility on achievement scores for secondary age pupils, controlled for socioeconomic status and level of ability. They found that the mobility increased the differences that already existed. Mobility depressing the scores of the pupils with low intelligence and improving the scores of the intelligent pupil. This finding supported the study conducted by Saperstein (1971) whose hypothesis stated that a significant relationship existed between pupil mobility and pupil achievement. It was hypothesized that pupils with high mobility would have lower achievement scores on math and reading tests than pupils who were not mobile. The findings, however, did not support the hypothesis. There were no significant differences in achievement between the mobile and non mobile pupils.

Goebel (1975) found that the effects of mobility on 382 high school pupils was multidimensional. She indicated the following:

It must be concluded from this study that whether the effects of mobility on academic achievement and cognitive development are beneficial, neutral, or detrimental seems to depend on the specific pattern of mobility, rate of mobility, sex of the individual and measure of academic achievement being used (p. 10).

Her findings indicated that the tendency to view mobility as a negative influence on academic performance was unfounded. Also, there were no significant academic differences in favor of the non-mobile pupil.

In yet another study, Ferri (1976), working with data from the National Children Bureau's National Child Development Study, conducted an analysis of variance on a national sample of families which included the variables of free school meals, family size, sex, number of schools attended, parental situation, child care, parental goals, affability of the home and test scores of the pupil. The result indicated that all of these variables, except for sex, had a statistically significant effect on test scores. The number of schools attended had the least effect and the socioeconomic level had the highest statistically significant effect.

Low Socioeconomic Status Pupils And Mobility

The general rate of pupil mobility is about 20 percent and in urban areas, especially among the low

socioeconomic status pupils, the rate is even higher according to Frankel and Forlano (1967). Sexton (1961) found that the highest rate of transiency in school came from the lowest income groups and "...there was a pupil turnover of almost 50 percent during one semester" (p. 96). Interest during the last decade has centered around the poor academic performance of the low socioeconomic child as compared to the middle class child on standardized tests. A number of researchers (Coleman, 1966; Jencks & Bane, 1972; Justman, 1965) agree that not only is there disparity between the low and middle groups, but the difference grows larger as they move through the grades. A number of reasons for these differences have been investigated by researchers.

The high mobility of pupils in poor areas is another factor. Lloyd (1965) stated that a basic characteristic of children in socially disadvantaged areas is the excessive mobility of their families which has a negative effect on reading progress. As Jencks and Bane (1972) point out, quality of educational opportunity and attainment does not automatically bring equality and economic status.

In 1966, the Coleman research team studied equality of educational opportunities in America, with the expectation to find that noted differences in achievement levels of minority and poor children were caused by inequitable allocation of resources. The Coleman study

determined that facilities, materials, and other school resources are not directly causal variables in providing effective schooling. "Improving school quality by standard measures of quality (class size, quality of textbooks, school physical plant, teacher experience, library size) has little effect on cognitive skills" (p. 137). Distribution of resources, in and of itself, does not provide or maintain effective schooling.

What appears to be a more reasonable view regarding the disparity in groups is that mobility is a very complex process. A review of the literature revealed two basic opinions concerning the relationship between pupil achievement and mobility. One side stated that mobility has a negative effect on pupil achievement; the other side states that there is significant difference and that sometimes mobility even improves pupil achievement.

This diversity of opinion seems to apply to disadvantaged as well as advantaged pupils. What appears to account for significant differences in favor of the non-mobile pupil on achievement scores indicates a lack of attention to other factors (SES, IQ scores, population variables, longitudinal studies) which might influence the scores. Greenberg & Davidson (1972) indicated that the fact that pupils of the urban poor have lower IQ scores, lower achievement scores, and are more mobile may not mean that this is not a cause and effect chain, but rather that these variables occur together.

The conclusion that is reached regarding low SES and mobility is that there is ambiguous evidence concerning the relationship of mobility to academic achievement in the elementary grades.

MOBILITY AND PUPIL ADJUSTMENT

Researchers have also studied the relationship between mobility and pupil adjustment in the classroom.

Calvo (1969) stated that:

...Certain psychological and sociological factors come to bear on the mobile child, causing him to "fall behind" in school. Even for adults, leaving one's friends behind can be an emotionally wrenching experience, and finding new friends can be a painful and lonely process (p. 487).

Children moving two or more times had more difficulties relating to their school peers as reported by Schaller (1975). Benson et al. (1979) found a negative association between mobility and a pupil's adjustment in the classroom.

Rollins (1968) indicated that the peer relationships were the most important aspect of schooling for the secondary pupils. This finding was also supported by Hamachek (1980) who indicated that being accepted and liked were crucial during this period. As a consequence, when a pupil changes to a different school he/she is not only faced with adjusting to a new instructional program, but also with having to adjust to an entirely new peer group. Recent studies on school change resulting from

desegregation, reviewed by Anderson, Haller, and Smorodin 1976, and research on school transfer due to geographic relocation, reviewed by Schaller (1974) and by Whalen and Fried (1973), generally demonstrate different effects for different levels of S.E.S. and IQ when these variables are taken into account in the research design.

Another more recent work by Blyth, Simmons, and associates focused on the establishment of middle schools (Blyth, Simmons and Bush, 1978; Simmons, Blyth, Van Cleave and Bush, 1979; Simmons, Bulcroft, Blyth and Bush, 1979). Their study investigated the adjustment of grade school pupils who experience systematic transfer out of K-6 schools as compared to their counterparts who remained in a traditional K-8 system. They found that the systematic transfer at grade 7 to a junior high school had harmful effects on the pupil, particularly girls' self concept. They concluded that there was a "special vulnerability" of adolescent girls who are enrolled in systems which require that they transfer to junior high schools.

A similar study by Inbar and Adler (1976) focused on pupil adjustment as a function of geographic mobility which they called "the vulnerable age". However, they set the pupil vulnerability at a different developmental point than Blyth, Simmons, and associates. Inbar and Adler conclude that harmful effects of residential change are most pronounced for elementary children, particularly boys.

Smith and Christopherson (1966) indicated that the peer group is of growing importance to the child through the period from early childhood through adolescence. Consequently, they conclude that "uprooting" the child from his or her peers will cause greater difficulty in adjustment to the new school environment as the child matures through the teen years.

Most of the pupils new to a school, regardless of their past achievement and social development, have some difficulties adjusting to a new system (Paganos, Holmes, Thurman & Yard, 1981). Levine, Wisolowski and Corbett (1976) indicated that adjustment difficulties are compounded when the new pupil has not been adequately equipped with the necessary academic and/or behavioral prerequisites. As stated earlier in this chapter, Rakieten (1961) found that almost all children are apprehensive about entering a new school. He also indicated that the uppermost priority for children who move was the problem of making friends.

Developmental theory, demographic data, and research evidence support the concept that behavior may be differently affected by inter and intra-community moves (Butler, Van Arsdol & Sobagh, 1970; McAllister, Kaiser & Butler, 1971), and by moves at different developmental periods (Stubblefield, 1955).

Disconnected research results demonstrated that a move to a new school is not without some negative

consequence for children. Highly mobile pupils show attitudes toward the schools educational program which are less positive than those of the non-mobile pupils. Mobility has a negative association with a pupil's adjustment in the classroom.

These findings are consistent with the literature surveyed and seem reasonable considering the many kinds of adjustments that pupils have to make.

One-Parent Mobile Pupils

Figures released by the U.S. Bureau of Census (1980) show that the number of one parent families increased by nearly 8% in the last decade (from 11% of all families in 1970 to 19% in 1979). Half of the Black families with children at home are maintained by one parent. Nearly half of the children born in the U.S. in 1980 will live a considerable time with one parent.

The findings of Myer (1980) confirm that as a group, one-parent children show lower achievement in school than do their two-parent classmates. Also, that as a group, one-parent children present more discipline problems than do their two-parent peers in both elementary and high school.

The U.S. Bureau of Census (1980) also indicates that one-parent families tend to move more often than do families with two parents. In the elementary school the

ratio is 2 to 1. Also, the children of divorced parents are most likely to be of elementary school age.

SUMMARY

This chapter reviewed literature that related to pupil mobility and achievement test results. In reviewing the literature the chapter focused primarily on the mobility studies that either stated that there is no significant relationship between pupil mobility and academic achievement test results or that pupil mobility does affect achievement.

A general background was provided by the literature review for analyzing the mobility variables in relation to pupil test scores. Some research findings found negative effects of pupil mobility on achievement test scores while others found either no effect or a positive effect. The review indicated that there are no conclusive answers and the effect of mobility on the pupil was not predictable.

There are some conclusions, however, that can be drawn from the literature review, regardless of whether or not the studies surveyed were based on cross-sectional rather than longitudinal data:

1. There are numerous causes for mobility.
(Glidewell, et al., 1967; Blane, 1978).
2. There are significant numbers of pupils moving from one school to another (Cramer, et al., 1970; Frankel, et al., 1967; Tetreau, et al.,

1942; Gilliland, 1958; Green, et al., 1969; Morris, et al., 1967).

3. Mobility may be negative to one pupils achievement and positive to another (eg. migrant, service, IBM family) (Jencks, et al., 1972; Anderson, et al., 1976; Inbar, et al., 1976).
4. High pupil mobility has a negative effect on staff morale (Benson, et al., 1979; Coleman, 1966; Sexton, 1961; Stuhr, 1973).
5. High pupil mobility has negative effects on curriculum development (Benson, et al., 1979; Coleman, 1966; Sexton, 1961; Stuhr, 1973).
6. Most mobile pupils enter schools between October and June of a school year (Blane, 1978; Calvo, 1969; Hamachek, 1980; Portland Public Schools, 1982-1987).
7. Most mobile pupils are inter-school transfers (Bayer, 1982; Blane, 1978; Holland, et al., 1974; Lacey, 1978; Long, 1975; Morris, 1967).
8. Youth today are more subject to mobility because they are in school for longer compulsory education years period of time (Bayer, 1982; Grant, et al., 1979).
9. Most mobile pupils have difficulty adjusting to their new environment (Rakieten, 1961; Glidewell, et al., 1965; Kantor, 1965; Levine,

et al., 1976; Rollins, 1968; Hamachek, 1980; Smith, et al., 1966).

The Portland Public Schools have a large movement of pupils within its school system throughout the academic year. The composition of this mobile pupil group is complex because of the types of mobility that occur. However, the majority of the transfers that occur within the school district do not transfer to schools outside of the district.

In the discussion on geographic mobility, low socioeconomic status, and one-parent families, the contention is that there are other variables that also contribute to a negative relationship between mobility and pupil achievement. The next chapter discusses the procedures used to collect and analyze the data which measured the relationship between pupil mobility and its effect on basic skills achievement level rates and the educational program.

CHAPTER III

RESEARCH DESIGN

This study, which was a combination of longitudinal and cross-sectional studies, compared the basic skills achievement test scores of the mobile pupil with the non-mobile pupil. The study was designed to test differences in reading, language usage and mathematics achievement test scores between pupils in the third through the eighth grades who had valid fall and spring test scores from the same school (the clear and intact group) and pupils who had valid scores, but from different schools. Other independent variables that were included in the study design were socioeconomic status (SES), gender and ethnicity. Also included in the design was a questionnaire which was mailed to all K - 8 principals in the Portland School District to determine if pupil mobility had an influence on the educational program and how principals and their staffs responded to pupil mobility. Specific answers were sought to three questions:

1. What is the relationship between pupil mobility and pupil achievement in mathematics,

reading and language usage test scores at the third through eighth grade levels.

2. What is the relationship between the independent variables of gender, ethnicity, SES and basic skills test scores?
3. What is the effect of pupil mobility on instructional programs and how do principals and building staffs respond to these problems.

SCHOOL DISTRICT COMPOSITION

This study gathered data from 80 elementary and middle schools in a district with 90 schools which is the largest public school system in Oregon.

The characteristics of the Portland Public School District pupil population reflected substantial diversity in its ethnic composition, mobility and suspension rates.

The ethnic composition of the district, as shown in Table III, shows the highest minority percentages were black and Asian pupils. However, the ethnic composition revealed varied minority concentrations within the district (see Table IV).

In Table III the 1982 and 1983 grade level minority enrollments were not available, except in the school district computer banks. A varied statistical minority enrollment range existed for all five years of the study for both elementary and middle schools. The statistical

TABLE III

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FIVE YEAR ETHNIC
ENROLLMENT SUMMARY

1982 ETHNIC ENROLLMENT SUMMARY

	WHITE	BLACK	HISPANIC	ASIAN	AMERICAN INDIAN	TOTAL
<u>TOTAL</u>						
<u>ELEMENTARY</u>						
(1-8)						
NUMBER	25,065	5,323	634	2,534	631	34,242
PERCENT	73.2	15.6	2.0	7.4	1.8	

1983 ETHNIC ENROLLMENT SUMMARY

	WHITE	BLACK	HISPANIC	ASIAN	AMERICAN INDIAN	TOTAL
<u>TOTAL</u>						
<u>ELEMENTARY</u>						
(1-8)						
NUMBER	25,213	5,229	703	2,375	666	34,186
PERCENT	73.8	15.3	2.1	6.9	1.9	

1984 ETHNIC ENROLLMENT SUMMARY

GRADE	WHITE	BLACK	HISPANIC	ASIAN	AMERICAN INDIAN	TOTAL
3	2,586	483	63	253	67	3,452
4	2,543	543	75	267	68	3,496
5	2,377	486	78	250	66	3,257
6	2,440	504	60	279	61	3,344
7	2,468	467	55	267	71	3,328
8	2,708	507	71	270	61	3,617
<u>TOTAL</u>						
NUMBER	15,122	2,990	402	1,586	394	20,494
PERCENT	73.8	14.6	2.0	7.7	1.9	

1985 ETHNIC ENROLLMENT SUMMARY

GRADE	WHITE	BLACK	HISPANIC	ASIAN	AMERICAN INDIAN	TOTAL
3	2,313	549	89	231	73	3,755
4	2,595	483	68	253	62	3,461
5	2,569	564	78	264	76	3,551
6	2,407	512	80	250	67	3,316
7	2,501	519	52	285	61	3,418
8	2,438	479	58	284	65	3,324
<u>TOTAL</u>						
NUMBER	15,323	3,106	425	1,567	404	20,825
PERCENT	73.6	14.9	2.0	7.5	1.9	

1986 ETHNIC ENROLLMENT SUMMARY

GRADE	WHITE	BLACK	HISPANIC	ASIAN	AMERICAN INDIAN	TOTAL
3	2,884	631	86	251	74	3,926
4	2,782	561	80	225	92	3,740
5	2,575	469	74	242	74	3,434
6	2,531	576	86	280	79	3,552
7	2,394	523	74	260	69	3,320
8	2,466	524	56	277	76	3,399
<u>TOTAL</u>						
NUMBER	15,632	3,284	456	1,535	464	21,371
PERCENT	73.1	15.4	2.1	7.2	2.2	

SOURCE: Portland Public Schools 1982 through 1986
Enrollment Report, Management Information Services, Late
Enrollee Ratios - Elementary and Middle Schools, P.55-57.

TABLE IV

MINORITY PUPIL ENROLLMENT
BY ELEMENTARY AND MIDDLE SCHOOLS

ELEMENTARY SCHOOLS OCTOBER ENROLLMENT REPORT			
SCHOOL	1986-87 MINORITY ENROLLMENT	1986-87 MINORITY PERCENT	1986-87 TOTAL ENROLLMENT
1	95	23.6	402
2	16	6.3	254
3	82	11.1	739
4	102	39.2	260
5	72	16.3	443
6	45	10.0	451
7	79	21.4	369
8	150	57.7	260
9	240	36.2	663
10	429	55.1	778
11	44	17.1	257
12	47	11.3	415
13	24	17.0	141
14	112	37.5	299
15	36	9.4	384
16	59	15.0	394
17	74	18.6	398
18	147	35.3	416
19	55	11.5	477
20	62	15.1	411
21	53	11.9	446
22	31	11.7	266
23	176	46.1	382
24	42	9.4	447
25	119	24.6	484
26	61	11.8	519
27	13	6.8	192
28	418	89.1	469
29	288	56.7	508
30	130	24.5	530
31	51	11.6	439
32	98	26.8	365
33	507	71.4	710
34	87	17.0	513
35	39	10.7	363
36	33	10.7	308
37	32	9.3	345
38	34	6.9	491
39	21	6.5	325
40	34	10.9	311
41	114	38.1	299
42	162	34.8	466
43	26	25.2	103
44	54	14.9	363
45	213	39.4	540
46	150	25.0	599
47	367	57.0	644

TABLE IV
MINORITY PUPIL ENROLLMENT
BY ELEMENTARY AND MIDDLE SCHOOLS

(continued)

ELEMENTARY SCHOOLS OCTOBER ENROLLMENT REPORT

SCHOOL	1986-87 MINORITY ENROLLMENT	1986-87 MINORITY PERCENT	1986-87 TOTAL ENROLLMENT
48	85	15.1	563
49	96	19.3	498
50	4	2.4	168
51	15	4.2	359
52	25	6.4	393
53	62	19.1	324
54	398	67.6	589
55	92	25.1	367
56	42	8.5	496
57	70	31.4	223
58	340	61.0	557
59	37	9.7	381
60	39	11.7	334
61	32	12.1	264
TOTAL ELEM.	6,660	26.5	25,154

MIDDLE SCHOOLS OCTOBER ENROLLMENT REPORT

SCHOOL	1986-87 MINORITY ENROLLMENT	1986-87 MINORITY PERCENT	1986-87 TOTAL ENROLLMENT
62	222	32.6	682
63	103	16.8	614
64	158	29.3	539
65	119	27.4	435
66	99	49.0	202
67	53	11.7	452
68	95	18.2	522
69	196	27.5	713
70	133	20.3	654
71	52	12.4	418
72	48	8.5	562
73	91	16.8	541
74	268	43.9	610
75	176	45.1	390
76	64	12.0	535
77	471	70.4	669
78	49	7.8	627
79	501	59.6	841
TOTAL MIDDLE SCHOOLS	2,898	29.0	10,006

SOURCE: Portland Public Schools 1987 Enrollment Report, Management Information Services, Minority Enrollment By School, (p. 21-23).

range in 1986/87 varied from 2.4 percent to 89.1 percent, with a mean of 27.75 percent. The 1986/1987 figures include all minority pupils in Pre-Kindergarten through the eighth grade. Consequently, the totals for Table III and Table IV are different.

The data regarding pupil mobility (Late Enrollee Ratio) was also included in this study. This data covered a five year period for all of the schools.

Table V describes the late enrollee ratio for elementary and middle schools. The figures give an overall view of the stability of the pupil population from October through June for each school listed. Although the percent figure varies, the number of pupils appears to be fairly consistent over the five year period of time. These numbers reflect the organizational, administrative and supervisory effects on each school, especially because the staff assignments (FTE) are based on the October enrollment and not the "Late Enrollee Ratio".

METHOD

Subjects

All eighty Portland Public elementary and middle schools were selected for this study because the Portland Achievement Levels Tests are only administered to pupils in grades 3 - 8. The grade levels and numbers of pupils

TABLE V
LATE ENROLLEE RATIO
ELEMENTARY SCHOOLS

SCHOOL	1982-83		1983-84		1984-85		1985-86		1986-87	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
1	102	32.6	54	14.6	99	28.6	93	24.7	70	18.0
2	24	4.5	37	7.8	30	7.3	20	7.2	14	5.5
3	96	16.4	108	16.5	58	8.5	54	7.5	59	7.9
4	62	25.5	45	19.9	63	29.4	86	35.1	85	32.1
5	102	23.9	109	25.2	126	30.0	167	36.0	151	34.8
6	51	12.9	62	14.9	50	10.9	47	10.7	55	12.1
7	54	14.7	52	13.7	61	16.8	61	15.6	38	10.2
8	92	33.7	72	30.6	94	40.5	98	48.3	69	29.2
9	124	28.6	160	31.5	134	27.0	129	22.3	141	24.3
10	146	33.3	36	22.1	109	18.0	74	10.6	103	15.7
11	40	18.3	57	28.8	41	17.2	54	24.5	54	24.0
12	49	9.4	49	9.9	47	11.5	47	12.5	62	14.8
13	48	29.3	48	30.4	76	53.5	54	37.0	36	26.1
14	162	41.1	182	50.1	93	33.5	106	35.2	96	32.3
15	43	13.5	64	19.5	51	14.5	46	12.5	61	15.4
16	163	37.7	141	42.9	106	28.5	57	14.7	67	17.3
17	56	15.3	83	23.2	127	33.7	109	27.6	94	23.9
18	126	31.9	144	35.6	126	27.9	156	35.4	257	57.8
19	85	17.9	81	19.0	91	20.6	97	21.4	93	19.0
20	105	27.0	107	28.5	112	28.7	78	19.9	97	23.2
21	37	10.8	34	9.0	30	7.3	24	5.2	31	6.9
22	29	8.8	39	11.8	23	6.6	20	5.9	42	12.6
23	18	4.4	36	7.2	*	*	*	*	*	*
24	50	12.9	80	23.9	86	24.9	106	27.0	100	26.1
25	184	35.4	157	28.7	134	23.3	154	28.4	**	**
26	43	9.3	84	18.7	94	18.7	89	17.8	90	16.2
27	105	29.5	131	36.5	110	28.3	106	26.4	92	19.9
28	52	12.1	32	8.5	71	13.2	71	13.2	57	11.0
29	43	21.4	14	6.9	8	3.9	23	12.2	9	4.6
30	110	22.3	109	22.6	155	34.2	238	54.1	136	30.8
31	58	9.8	78	14.4	101	18.3	71	14.0	64	13.3
32	175	36.9	138	27.9	136	25.2	105	20.5	108	19.4
33	135	25.5	199	33.4	207	32.3	179	31.5	119	27.4
34	44	15.4	57	26.8	95	41.5	78	32.9	70	29.2
35	76	16.3	99	18.5	163	31.1	150	26.7	179	29.9
36	108	27.1	80	17.8	153	35.4	105	23.3	**	**
37									28	14.1
38	46	11.2	35	7.8	62	14.4	128	27.4	92	17.9
39	38	9.5	50	13.0	36	9.5	42	11.4	48	13.8
40	141	32.3	120	27.8	89	21.8	92	31.3	119	38.3
41	55	17.4	44	14.2	45	14.8	67	24.0	53	15.0
42	79	17.4	107	23.9	129	26.3	104	20.7	89	17.7
43	31	12.0	54	18.8	21	7.0	37	11.8	26	8.0
44	86	24.0	71	17.9	67	22.0	71	24.5	53	17.6
45	76	25.9	73	23.3	80	24.9	81	27.6	64	20.6
46	46	11.9	37	9.7	34	8.0	34	8.4	38	8.8
47	92	15.4	78	12.8	86	18.8	102	18.3	84	12.2

MEAN	79	20.5	81	21.3	85	21.5	83	20.8	83	20.6
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[illegible]

47	93	15.4	70	12.0	96	19.0	102	10.3	94	16.2
48	34	21.4	33	20.2	20	12.2	16	14.5	22	19.3
49	142	43.7	52	16.3	69	20.8	86	26.8	87	25.7
50	20	17.3	23	16.7	- CLOSED -		- CLOSED -		- CLOSED -	
51	80	19.2	114	23.5	147	29.9	181	38.6	229	42.2
52	52	0.7	50	10.0	100	20.0	70	13.3	77	12.7
53	92	19.2	90	19.1	93	17.6	115	21.1	133	23.4
54	83	17.7	120	25.5	102	20.6	118	22.5	125	21.9
55	144	30.1	140	28.0	165	36.0	122	26.9	149	29.4
56	31	12.2	30	14.0	35	20.7	26	15.0	14	0.4
57	29	9.8	32	10.1	37	10.9	27	0.0	36	10.0
58	25	7.1	37	10.2	22	6.0	40	10.9	44	11.1
59	124	43.1	84	27.7	86	26.5	110	34.9	105	38.3
60	120	24.9	140	28.3	133	25.9	154	28.9	141	27.3
61	90	30.4	136	37.6	87	23.4	98	28.6	121	32.8
62	105	21.6	141	31.1	131	27.8	109	22.5	93	18.6
63	38	22.0	38	20.5	33	15.5	26	12.7	21	9.3
64	65	16.7	132	32.8	102	23.2	145	31.0	138	29.4
65	76	26.8	82	30.5	53	24.0	83	35.6	128	33.5
66	104	21.1	85	16.5	69	13.7	65	14.0	51	13.5
67	40	21.5	45	28.7	31	16.6	30	13.1	30	11.1

MEAN	79	20.5	81	21.3	85	21.5	83	20.8	83	20.6
------	----	------	----	------	----	------	----	------	----	------

* #10 & 23 MERGED AT THE BEGINNING OF THE 1984-85 SCHOOL YEAR

LATE ENROLLEE RATIO MIDDLE SCHOOLS

SCHOOL	1982-83		1983-84		1984-85		1985-86		1986-87	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
1	66	9.7	69	10.7	69	10.7	41	6.0	53	7.9
2	91	15.4	84	14.0	103	15.6	111	16.9	103	16.5
3	55	9.2	120	22.4	55	9.8	43	8.7	54	9.6
4	40	15.5	31	12.5	29	11.3	61	26.5	*	*
5	40	8.1	44	9.6	49	11.0	56	12.6	45	9.9
6	60	11.7	58	10.6	49	9.4	58	11.5	57	10.9
7	154	22.2	147	23.3	133	18.7	154	21.9	127	17.8
8	132	20.9	127	20.9	145	25.9	86	13.9	108	16.4
9	34	5.3	46	8.2	54	10.0	46	8.5	57	10.2
10	94	19.9	94	20.3	164	35.4	92	18.0	112	20.6
11	99	13.9	104	15.0	85	13.0	94	15.6	127	20.7
12	95	24.9	115	28.2	93	24.7	86	22.8	99	24.7
13	84	15.3	91	16.9	97	19.5	71	13.3	103	18.7
14	46	9.3	48	9.4	39	7.3	52	8.2	69	10.0
15	21	6.2	65	12.8	38	6.5	35	4.8	63	10.1
16	178	24.0	224	22.7	204	21.4	160	19.3	165	19.9
17									98	22.3
18									103	24.1
MEAN	81	14.7	92	16.4	88	15.7	70	13.7	86	15.0

* #17 AND #18 BECAME MIDDLE SCHOOLS AT THE BEGINNING OF THE 1986-87 SCHOOL YEAR.
 ** #4 IS LISTED UNDER ELEMENTARY SCHOOLS FOR 1986-87

SOURCE: PORTLAND PUBLIC SCHOOLS 1982 THROUGH 1986 ENROLLMENT REPORT, LATE ENROLLEE RATIOS BY SCHOOL, MANAGEMENT INFORMATION SERVICES.

were surveyed over a five year span of time (see Table VI). The same pupils, however, were not surveyed in a longitudinal manner for the five years.

The total pupil population in the third through the eighth grades, with valid fall and spring achievement tests, were the subjects of this study and are included in Table VI. These pupils were isolated into two populations for analysis:

1. The stable population, operationalized as clear and intact or the control group. These were pupils with valid scores, both fall and spring, in the same building, and presumed to have had an uninterrupted instructional year.
2. The semi-stable population, operationalized as clear, but not intact or the treatment group. These were pupils with valid scores, both fall and spring, but not in the same building and presumed to have had an interrupted instructional year.

The number of pupils identified as clear, but not intact or the treatment group represents the total number of pupils for that year, academic subject and grade level.

INSTRUMENT

The instrument that was used was the Portland Achievement Levels Tests of reading, language usage and math. These tests are administered to pupils in grades

TABLE VI

FIVE YEAR PUPIL POPULATION
WITH VALID FALL AND SPRING ACHIEVEMENT TESTS

Grade	1982/83	1983/84	1984/85	1985/86	1986/87
3	3423	3559	3452	3755	3926
4	3328	3353	3496	3461	3740
5	3360	3355	3257	3551	3434
6	3561	3373	3344	3316	3552
7	3854	3683	3328	3418	3320
8	3740	3937	3617	3324	3399

3 - 8 in the fall and spring of each school year. The goals of the tests are to provide a valid measure of pupil achievement in the basic skills curriculum of the Portland Public Schools.

The tests are designed to be administered to pupils in accordance with the level of performance of each pupil. This means that different pupils in the same grade take the tests with differing levels of difficulty which correspond to differences in predicted performance as determined from previous test scores or from teacher judgement. The various test levels produce scores which are related to a common scale and are reported as RIT scores and P-scores.

P-scores are Portland standard scores which indicate the level of achievement as compared with other pupils in the Portland Public Schools in the same grade. Table VII illustrates the meaning of P-scores.

The value of a P-score was comparable for each subject tested and for all grades tested.

TABLE VII
P-SCORE SCALE

<u>P-score</u>	<u>Meaning</u>
66 & above	very high
61-65	high
56-60	high average
45-50	average
40-50	low average
35-39	low
34 & below	very low

RIT scores (Rasch Unit Scores) provide a measure of absolute rather than relative achievement. Differences in RIT scores over time indicate the amount of learning in curriculum content which has occurred. The scale is particularly suitable for the measurement of pupil achievement gain. The RIT scale measurement units are not standardized. As a result a reading RIT score of 210 is not necessarily the same as a RIT score of 210 in language usage or mathematics. Also, a gain of six RIT points does not always have the same meaning between subjects or within a subject area. To be meaningful the RIT measures must be compared with norms (means) or standards. Grade level means for Portland are compared with the baseline year of 1980-81 means.

PROCEDURES

The Portland Public Schools computer banks were utilized to plot the basic skills levels test results for the following two groups of pupils:

1. The clear and intact group, which was the pupil who was in the same school from September thru June (Grades 3 - 8) for each academic year in the sample.
2. The mobile pupil (Grades 3 - 8) who had a valid fall and spring test score, but from different schools.

A questionnaire was developed to collect principals' opinions and basic information on possible negative effects of pupil mobility on instructional programs and how principals and building staff deal with those problems.

The questionnaire was limited to eight basic questions and provided the opportunity for additional feedback to the questions, encouraging additional attachments by the respondent, as necessary.

Plotting was done for the residual effects of variables in reading, math and language arts gains rather than plotting for the effects of regression. By plotting for regression greater gains were shown for low achievers and less gain for high achievers. The residual effects is

what is left over after the fall and spring shared variance in scores is eliminated.

The plotting of the residual effect of achievement equalized the effect of pupil gain because it compared the gain with the average gain for the population. Regression models are particularly appropriate for the analysis of test scores. Variations in spring scores are highly correlated with the fall scores. To assess other contributions to the spring score, the shared variance with the fall score must be eliminated. After the removal of this variance or residual in the spring score, the remaining residual becomes the shared variance and can then be used as a dependent variable in other tests. In this study, the contribution of an uninterrupted instructional year is the second predictor variable to be tested.

STATISTICAL ANALYSIS

When the collection of data was completed, pupil mobility was examined to determine its relationship to the dependent variable, pupil achievement test scores, for non-mobile and the mobile pupils in the third through the eighth grade. Comparisons of reading, mathematics and language arts achievement test scores for the two groups of pupils were then analyzed for each academic year in the study design. The analysis was done in two step homologues. The fall scores generated residuals in the

spring scores. All the variance or residuals in the spring scores, after the removal of the shared variance with the fall scores, was then taken out for further analysis.

Additional analysis took place using multiple regressions by stability index, to determine the relationship between pupil achievement test scores and the independent variable of mobility and other independent variables (S.E.S., ethnic groups, gender).

In addition, the responses from the questionnaire were analyzed to determine principals and teachers perceptions of the effects of mobility on the school program.

SUMMARY

This chapter reviewed procedures for collecting and analyzing the data in the study. The statistics generated by the Portland Public Schools computer data banks provided the data that identified pupils in 80 elementary and middle schools over a five year period. The detailed analysis from the computer furnished the mobility data for each pupil as it related to the variables of gender, socioeconomic status, and ethnic group.

The chapter discussed the setting and the population of the study. The analysis identified the significance of mobility with the variable independent variables of SES, ethnic groups and gender, as they relate to the dependent

variables of pupil achievement and the educational program. The following chapter presents the analysis of the data.

CHAPTER IV

ANALYSIS OF THE DATA

In this chapter the data regarding pupil mobility and pupil achievement test scores in reading, language usage and mathematics are analyzed and discussed. The data were examined to determine if there is a relationship between pupil mobility and pupil achievement test scores for elementary school's pupils in grades three through eight in the Portland School District. The independent variables of gender, SES and ethnic groups were also analyzed in relation to basic skills test scores. In addition, data from a questionnaire which was mailed to all elementary principals in the district were analyzed to determine if pupil mobility had an influence on the total educational program and how individual building staffs dealt with pupil mobility. Three research questions are used to organize the presentation of the data corresponding to the hypothesis that pupil mobility has a negative effect on pupil achievement and the educational program:

Question 1. What is the relationship between pupil mobility and pupil achievement in mathematics, reading

and language usage test scores at the third through the eighth grade levels?

Question 2. What is the relationship between the independent variables of gender, ethnicity, SES and basic skills test scores?

Question 3. What is the effect of pupil mobility on instructional programs and how do principals and building staffs respond to these problems?

To answer the first two research questions pupils were isolated into two potential populations for analysis:

1. The stable population, operationalized as clear and intact or the control group. These were pupils with valid scores, both fall and spring, in the same building, and presumed to have had an uninterrupted instructional year.
2. The semi-stable population, operationalized as clear, but not intact or the treatment group. These were pupils with valid scores, both fall and spring, but not in the same building and presumed to have had an interrupted instructional year.

MOBILITY AND BASIC SKILL ACHIEVEMENT

Question 1. What is the relationship between pupil mobility and pupil achievement in mathematics, reading and

language usage test scores at the third through eighth grade levels?

For the stable group it was hypothesized that some residual effect on mathematics scores resulted from other pupils moving in and out of a school, if only from lowered instructional time.

A control group was required. The fifth grade group in mathematics was chosen because mathematics were usually considered the most instructionally sensitive of the basic skills. Comparisons of the mathematics test scores for the stable and semi-stable groups in grade 5 are shown on Tables VIII, IX and X respectively. The .05 level of confidence was established as the point of significant difference.

The results, after plotting 238 fifth grade pupils for math residuals of the treatment (semi-stable) versus the control (stable) groups, indicated a zero correlation and a significance of 1.0000 or no difference (Figure 1).

When 119 fifth grade pupils in the semi-stable groups were plotted for math residuals, that is the difference between results obtained by computation, the results were also non-significant (Figure 2).

Similarly, when 119 fifth grade pupils in the stable group were plotted for math residuals the same pattern emerged (Figure 3).

In rejecting the hypothesis that pupil mobility has a negative effect on pupil achievement, the data results

TABLE VIII

READING - STABILITY INDEX 1985/86

<u>Grd</u>	<u>No of Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R Squared</u>
3	61	-.08529(1.13631)	.06415(.86423)	.9404	.00010
4	59	.01630(1.15929)	-.01258(.87764)	.9885	.00000
5	58	-.47080(1.20908)	.35509(.92132)	.6985	.00270
6	28	4.00956(2.24331)	-3.16784(1.78526)	.0862	.10899
7	26	-.41398(2.49336)	.32636(1.98266)	.8698	.00114
8	26	-1.99990(2.46674)	1.57900(1.95718)	.4255	.02666

MATH - STABILITY INDEX 1985/86

<u>Grd</u>	<u>No of Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R Squared</u>
3	61	.49417(1.13455)	-.37170(.86289)	.6647	.00321
4	59	-.02632(1.15928)	.01971(.87764)	.9820	.00001
5	58	-.35522(1.20979)	.26792(.92186)	.7701	.00154
6	28	-1.00600(2.37367)	.79431(1.88480)	.6752	.00686
7	26	-1.68618(2.47649)	1.33130(1.96491)	.5025	.01895
8	26	-1.40956(2.43368)	1.11290(1.97062)	.5756	.01324

TABLE IX

CLEAR BUT NOT INTACT FALL 85/SPRING 86
MATH DEVIATION & GROWTH SCORES
BY GRADE

Fall 85 Math Deviation Scores

<u>Grade</u>	<u>Cases</u>	<u>Mean</u>	<u>Std. Dev.</u>
3	158	- .95751	0.0
4	142	-1.54994	0.0
5	121	- .99012	0.0
6	85	-1.42197	0.0
7	97	-1.90624	0.0
8	56	-1.73131	0.0
Entire Population	659	-1.35646	.35783

Spring 86 Math Deviation Scores

<u>Grade</u>	<u>Cases</u>	<u>Mean</u>	<u>Std. Dev.</u>
3	158	-1.02482	0.0
4	142	-1.43674	0.0
5	121	- .79998	0.0
6	85	-1.20063	0.0
7	97	-1.92882	0.0
8	56	-1.65710	0.0
Entire Population	659	-1.28177	.37186

Fall 85/Spring 86 Math Growth Scores

<u>Grade</u>	<u>Cases</u>	<u>Mean</u>	<u>Std. Dev.</u>
3	158	- .11766	0.0
4	142	.21160	9.6806E-11
5	121	.55818	1.8035E-10
6	85	.83295	2.2864E-10
7	97	- .19886	0.0
8	56	.28980	1.0353E-10
Entire Population	659	.22267	.35104

TABLE X

CLEAR BUT NOT INTACT FALL 85/SPRING 86
READING DEVIATION & GROWTH SCORES
BY GRADE

Fall 85 Reading Deviation Scores

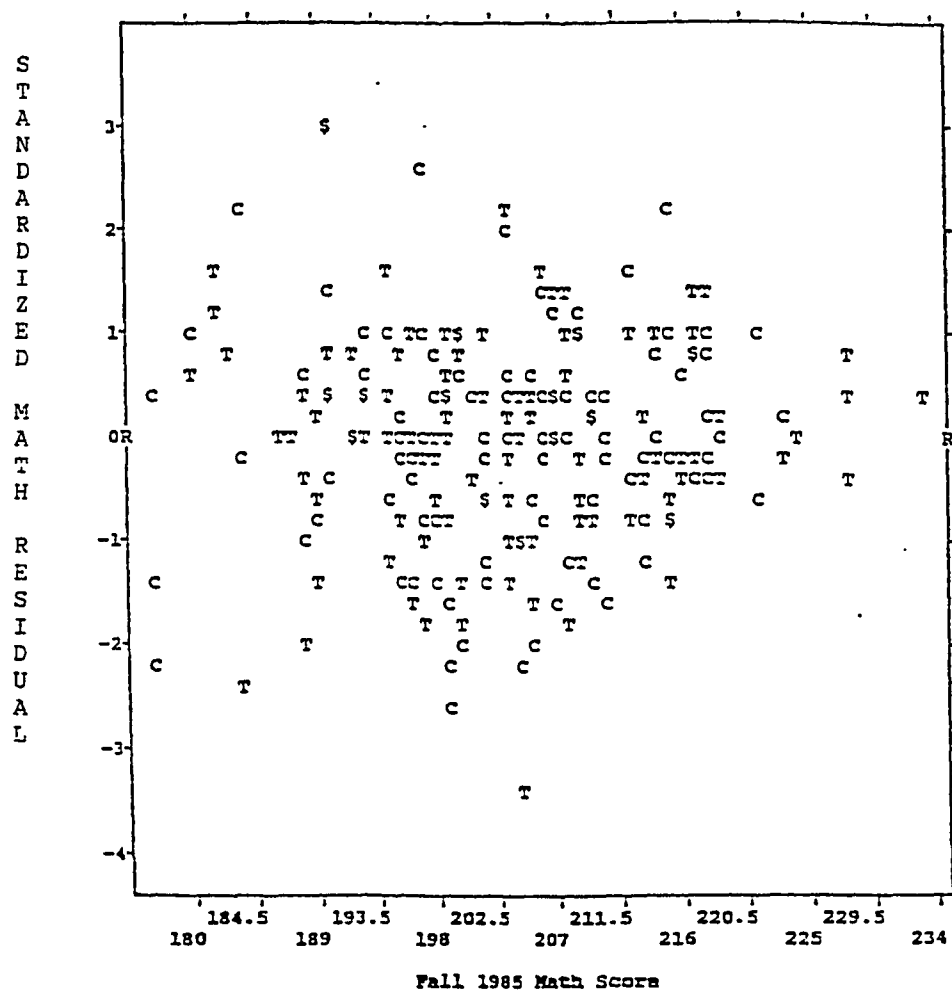
<u>Grade</u>	<u>Cases</u>	<u>Mean</u>	<u>Std. Dev.</u>
3	157	1.05400	0.0
4	140	1.39878	0.0
5	125	1.19946	0.0
6	87	1.17421	0.0
7	96	-1.57233	0.0
8	55	-1.45451	0.0
Entire Population	660	-1.27930	-.18128

Spring 86 Reading Deviation Scores

<u>Grade</u>	<u>Cases</u>	<u>Mean</u>	<u>Std. Dev.</u>
3	157	-1.26424	0.0
4	140	-1.44405	0.0
5	125	-.95631	0.0
6	87	-1.05518	0.0
7	96	-1.62463	0.0
8	55	-1.22550	0.0
Entire Population	660	-1.26570	.22286

Fall 85/Spring 86 Reading Growth Scores

<u>Grade</u>	<u>Cases</u>	<u>Mean</u>	<u>Std. Dev.</u>
3	157	-.39835	0.0
4	140	-.14367	0.0
5	125	.78618	0.0
6	87	.42710	1.4313E-10
7	96	-.31735	0.0
8	55	1.20955	5.6145E-10
Entire Population	660	.13460	.54967



238 cases plotted. Regression statistics of ZRESIDM on P85M:
 Correlation .00000 R Squared .00000 S.E. of Est. 1.00000 Sig. 1.0000 ---
 Intercept(S.E.) -.00000(1.26662) Slope(S.E.) .00000(.00622)
 T: Treatment C: Control \$: Multiple occurrence

Figure 1. Math residuals on fall math pooled group.

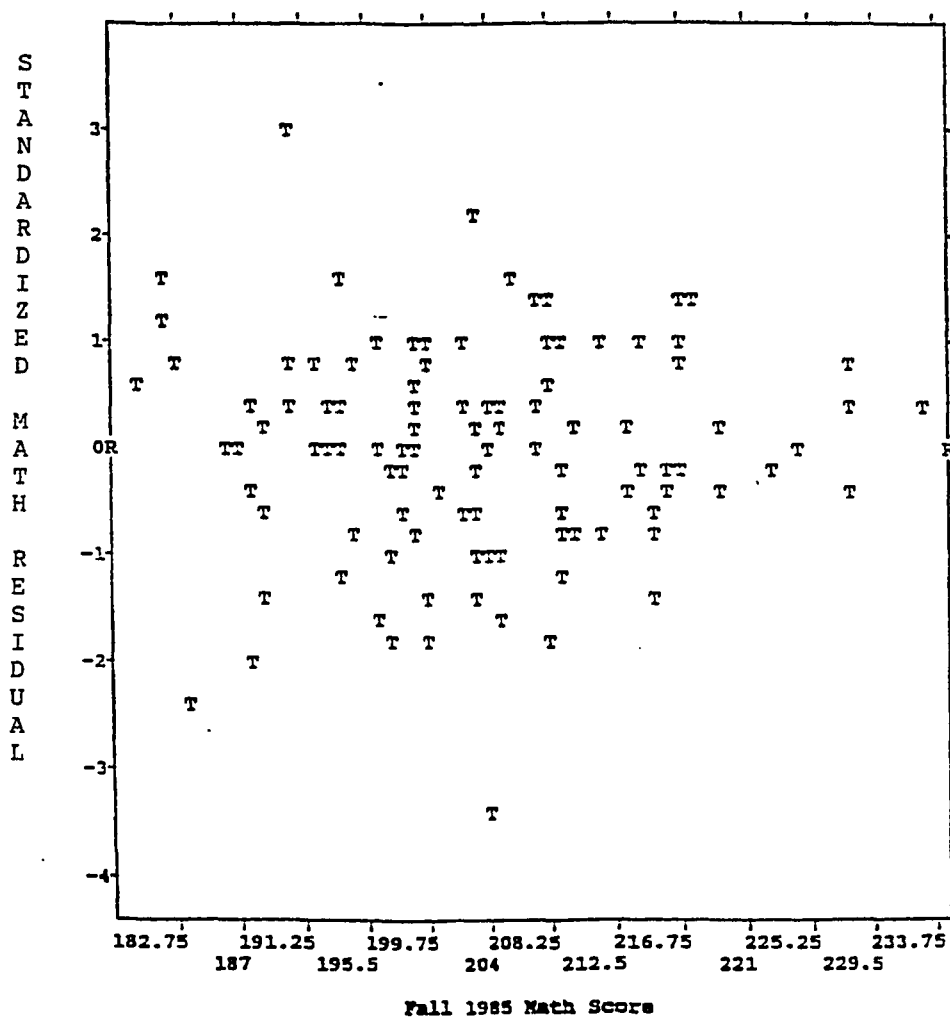
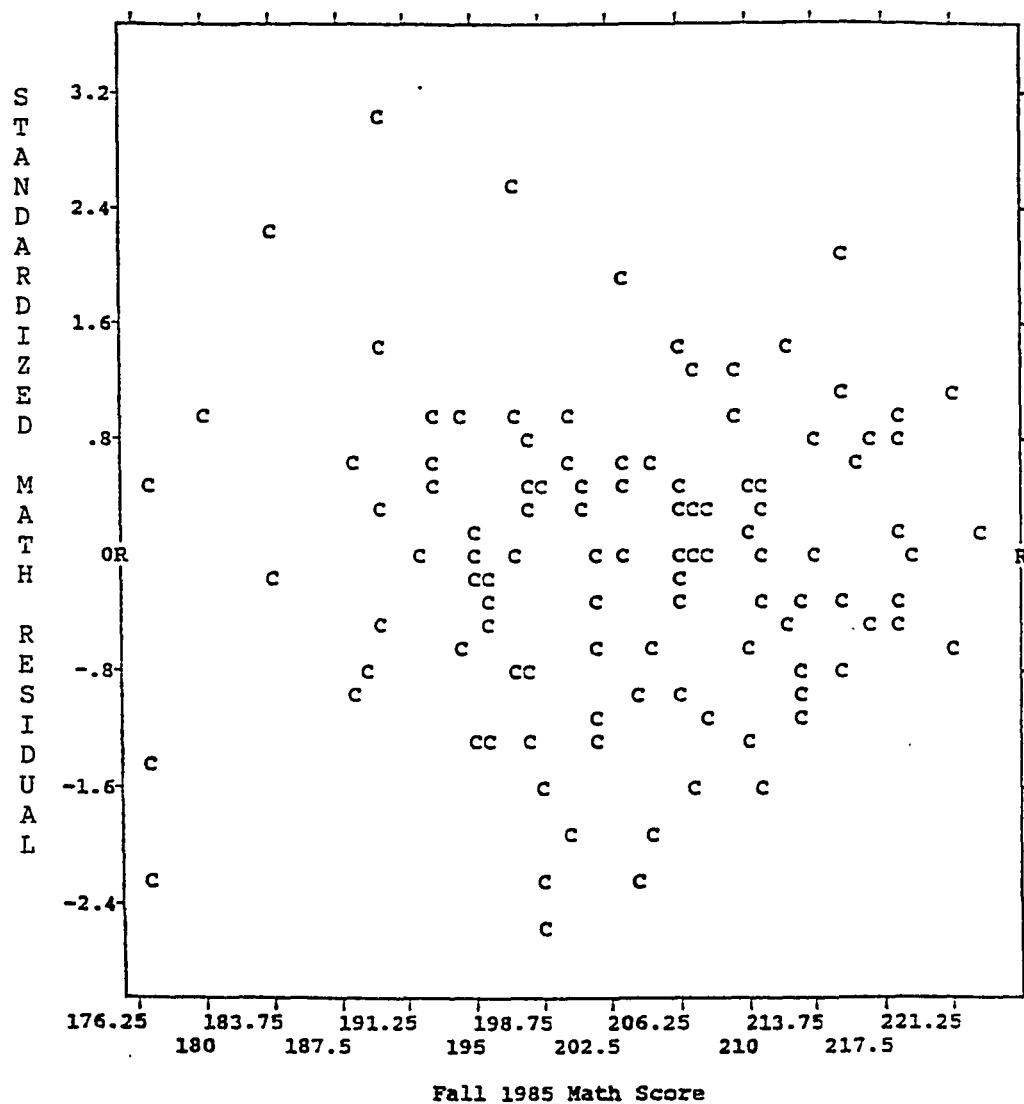


Figure 2. Math residuals of treatment group



119 cases plotted. Regression statistics of ZRESIDM on F85M:--
 Correlation -.00144 R Squared .00000 S.E. of Est 1.02464 Sig. .9876
 Intercept(S.E.) .04910(1.90363) Slope(S.E.) -.00015(.00935)
 T:Treatmen C:Control \$:Multiple occurrence

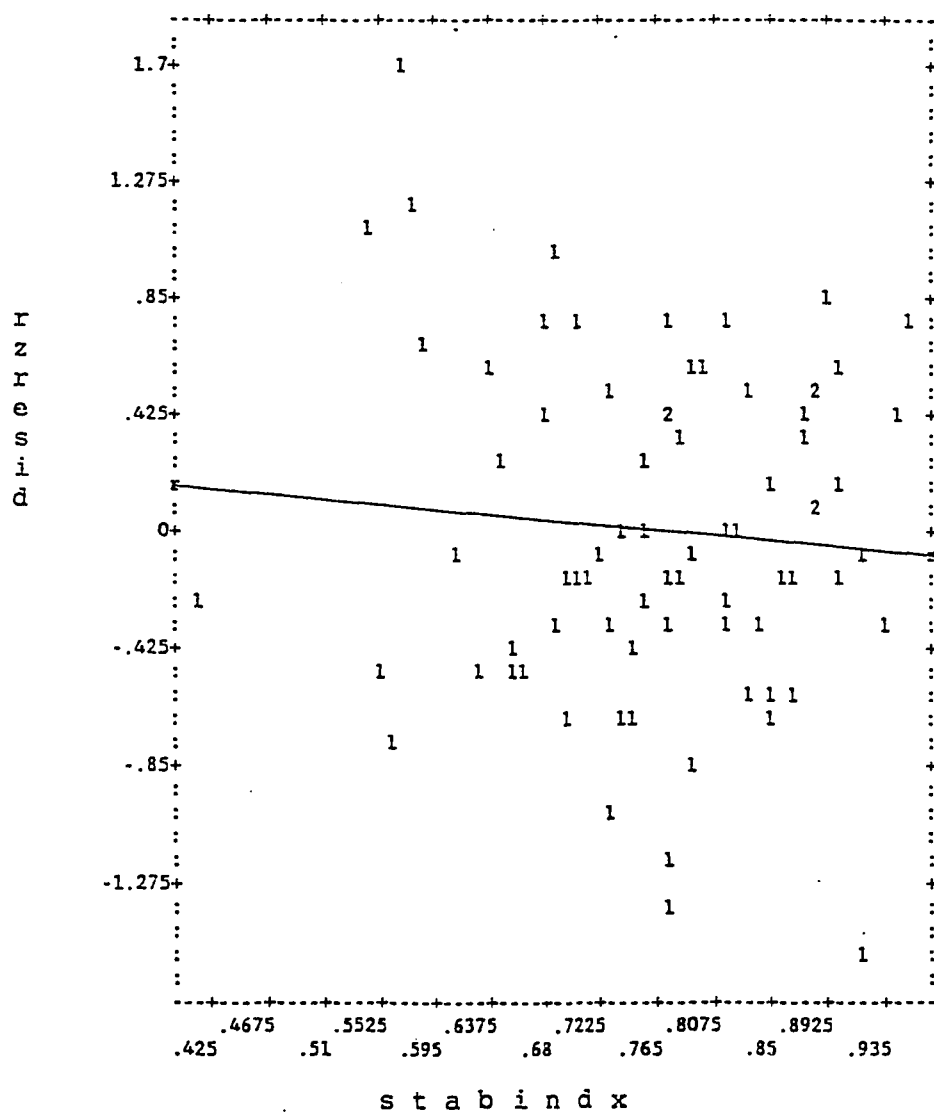
Figure 3. Math residuals of control group

clearly show that mobility has no significant effect on the mathematics scores of pupils for both of these groups at the fifth grade level.

However, correlations among reading, mathematics and language usage score levels and school stability indices were direct for the stable group. Specifically, the higher the school stability index, the higher achievement score level was likely to be for the non-mobile pupil (see Appendix A-1).

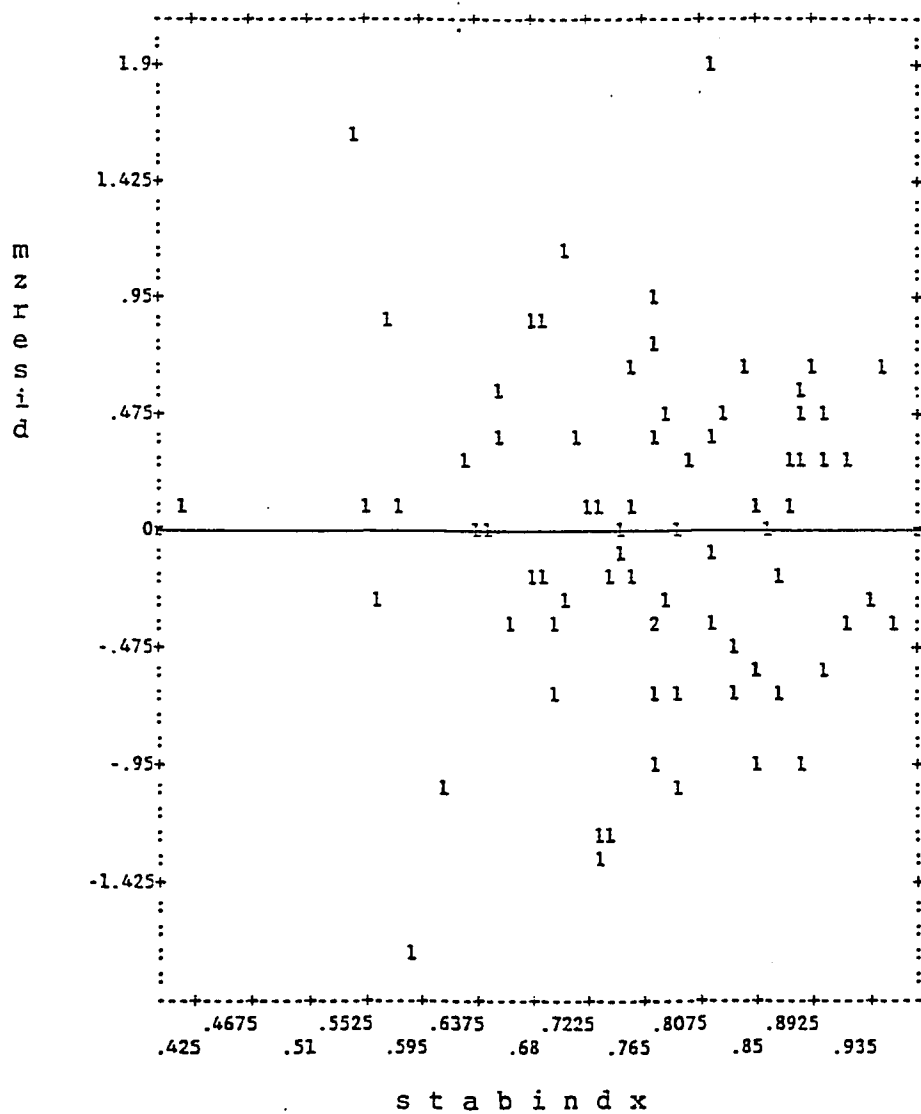
Relationships between gain and stability, however, were inconclusive, and none were statistically significant, in the stable group. A total of twelve separate analyses were performed (Appendix A-2). All of the analyses were performed at an aggregate level. These analyses were done in a two-step analogue of multiple regression for ease of understanding.

First, spring scores in reading and mathematics were regressed on Fall scores and standardized residuals computed and retained across grade levels (Figure 4 and 5). Seventy six pupils were plotted for both the reading and math residuals. No significant difference was discerned. The standardized residuals were then regressed on stability indices for reading and math at each grade level (Table VIII). This procedure is equivalent to hierarchical model multiple regression. No regression of residual gain on stability was statistically significant. Also, no discernible influence of pupil stability on the



76 cases plotted. regression statistics of rresid on stabindx:
 correlation -.07552 r squared .00570 s.e. of est .61001 sig. .5168
 intercept(s.e.) .32322(.49764) slope(s.e.) -.41936(.64371)

Figure 4. Stability index vs. mean reading residual



76 cases plotted. regression statistics of mzresid on stabindx:
 correlation -.01689 r squared .00029 s.e. of est .66314 sig. .8848
 intercept(s.e.) .05204(.54099) slope(s.e.) -.10170(.69977)

Figure 5. Stability index vs. mean math residual

basic skills performance of the stable group of pupils could be documented.

For the semi-stable group, the district's clear, but not intact population, was isolated for the 85-86 school year. Means and standard deviations in math, reading and language were conducted by all combination of Fall school - Fall grade, Spring grade - Spring school, using District norms for comparison (Tables IX, X and XI). As with the aggregate analysis, the semi-stable group was marginally level in terms of scores, but little different in Fall to Spring gain. All analysis on the semi-stable population took place at the individual, rather than aggregate level. Pupils in the semi-stable population were matched against pupils in the stable population by gender, ethnicity and test level.

Crosstabs of fall and spring school transience was conducted for all schools and then for middle schools only, to determine if there was a discernible pattern of movement. Also, these pupils were backtracked longitudinally through the last five years to determine if there was a population of a size that was constantly moving that could be analyzed further. No pattern of movement through District was discernible. It did not appear that there was a highly mobile group which was constantly moving from school to school.

TABLE XI

CLEAR BUT NOT INTACT FALL 85/SPRING 86
LANGUAGE DEVIATIONS & GROWTH SCORES
BY GRADE

Fall 85 Language Deviation Scores

<u>Grade</u>	<u>Cases</u>	<u>Mean</u>	<u>Std. Dev.</u>
3	149	- .96514	0.0
4	133	-1.40605	0.0
5	122	-1.13140	0.0
6	84	-1.12633	0.0
7	93	-1.82018	0.0
8	54	-1.56521	0.0
Entire Population	625	-1.28701	.28929

Spring 86 Language Deviation Scores

<u>Grade</u>	<u>Cases</u>	<u>Mean</u>	<u>Std. Dev.</u>
3	149	- .99235	0.0
4	133	-1.47607	0.0
5	122	- .98561	0.0
6	84	-1.16837	0.0
7	93	-1.83324	0.0
8	54	-1.58520	0.0
Entire Population	635	-1.28922	.31398

Fall 85/Spring 86 Language Growth

<u>Grade</u>	<u>Cases</u>	<u>Mean</u>	<u>Std. Dev.</u>
3	149	- .17157	0.0
4	133	- .22748	0.0
5	122	.41591	8.5325E-11
6	84	- .03263	0.0
7	93	- .03222	0.0
8	54	.00455	1.1174E-12
Entire Population	635	- .01664	.22600

Question 2. What is the relationship between the independent variables of gender, ethnicity, SES to basic skills test scores?

As stated previously, in order to test the hypothesis that reduced instruction time caused reduced gain, a control group was required from the semi-stable population. Using post hoc matching, a fifth grade group in mathematics was isolated with randomly selected groups from the stable population. These groups were matched by school grade, fall performance mean and standard deviation, sex and ethnicity. A total of thirty-seven randomly drawn samples were required to find a suitably matched control group.

Regressions were calculated for these groups to determine whether the treatment groups mobility had any impact on their mathematics gains from fall to spring. Wherever possible the same two-step homologue of hierarchical multiple regression referred to in the aggregate analysis was used. There was no apparent impact on mathematics gain.

Subsequent regression analyses were done to insure that results were the same when gender or ethnicity (Minority - non-minority) were controlled for. Neither of these analysis changed the outcome (Appendix B-1 & B-2).

An analysis to control for socioeconomic status was not undertaken. SES data were available only at the

aggregate level and the correlation between stability and the available SES indicator (percent of pupil eligible for free and reduced lunch program) is .76 (57 percent shared variance). The high correlation between stability and SES would have made any analysis meaningless (Appendix B-3).

Question 3. What is the effect of pupil mobility on instructional programs and how do principals and building staffs respond to these problems.

The questionnaire, which was mailed to 81 principals (see Appendix C-1), contained eight parts and was designed to solicit information regarding the effects of pupil mobility on instructional programs and how building staffs responded to those problems.

Fifty six principals (69%) responded to the questionnaire. The complete responses for the eight questions are shown in Appendix C-2.

Table XII lists the variable labels of the questionnaire and Table XIII lists a summary of the responses. For the first question, 33 principals (58.9 percent) felt that enrollment changes had a negative impact on instructional programs. Twenty two principals (39.3 percent) felt that enrollment changes had felt that enrollment changes had no effect on the instructional program.

Thirty-eight principals (67.8 percent) responded to question number two, pertaining to the number and percent

TABLE XII
VARIABLE LABELS

Q1	"ENROLLMENT CHANGES HAVE NEGATIVE IMPACT"									
Q2A	"AVE# OF NEW STUDENTS ENROLL PER QUARTER"									
Q2B	"PERCENT OF NEW STUDENT ENROLLMENT"									
Q3A	"AVE# OF STUDENTS LEAVING PER QUARTER"									
Q3B	"PERCENT OF STUDENTS LEAVING"									
Q4	"FORMAL POLICY TO INTEGRATE NEW STUDENTS"									
Q5	"FAVOR DISTRICTWIDE BASIC SKILLS CURRIC"									
Q6	"# OF YRS AS PRINCIPAL IN CURRENT BLDG"									
Q7	"# OF YRS AS BUILDING ADMINISTRATOR"									
Q8	"BUILDING TYPE"									

VALUE LABELS

Q1	Q4	Q5	1 "YES"	2 "NO"						
Q2A	Q3A		1 "0-10"	2 "11-20"	3 "21-30"	4 "31-40"	5 "40 PLUS/"			
Q8			1 "K-5"	2 "K-8"	3 "8-3"	4 "1-5"	5 "6-8"	6 "K-4"		
			7 "5-8"	8 "K-12"						

FREQUENCIES VARIABLES = Q1 TO Q8
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TABLE XIII

PRINCIPAL'S QUESTIONNAIRE SUMMARY

<u>Question</u>	<u>Yes</u>	<u>No</u>
Q1 - "Enrollment changes have negative impact"	33	22
Q4 - "Formal policy to integrate new students"	24	31
Q5 - "Favor district wide basic Skills curriculum"	14	32

<u>Question</u>	<u>No. Students</u>	
	<u>0-20</u>	<u>20+</u>
Q2 - "Ave # of new students enroll per quarter"	38	12
Q3A - "Ave. # of students leaving per quarter"	45	9

<u>Question</u>	<u>No. Years</u>							
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
Q6 - "# of yrs as principal in current bldg."	20	7	8	10	4	1	0	3
Q7 - "# of yrs as building administration"	4	4	3	8	2	1	6	2

<u>Question</u>	<u>Building Type</u>					
	<u>K-5</u>	<u>K-8</u>	<u>K-3</u>	<u>6-8</u>	<u>K-4</u>	<u>K-12</u>
Q8 - "Building type"	40	1	1	10	1	1

of new pupils, by indicating that they enrolled from 0 to 20 new pupils per quarter. Eleven principals indicated that they enrolled over 20 new pupils per quarter and two of these indicated an excess of 40 plus pupils.

Similarly, 45 principals responded to question number three indicating that from 0 to 20 pupils left their buildings per quarter. Also, nine principals indicated that over 20 pupils left per quarter, with two of these principals indicating a number in excess of 40 pupils.

The responses for both questions, number two and three, indicate a pupil mobility factor that ranges from 0 to 40 pupils per quarter in the majority of the responding schools.

Of the 56 principals surveyed, only 24 of the schools (42.9 percent) had a formal policy or program for integrating new pupils into the instructional program. This is in direct contrast to the schools that report a pupil mobility that ranges from 0 - 40 pupils per quarter. Only two of the principals who reported in excess of 20 new pupils per quarter had any formal policy or program for integrating new pupils.

Similarly, 32 of the principals surveyed (57.1 percent) were opposed to a more structured district wide basic skills curriculum as a method of moderating the negative effects of pupil mobility on the instructional program. Sixteen of these principals indicated that

enrollment changes had a negative impact on instructional programs (Question 1) and all 16 of these principals had from 11 to 30 pupils enrolling or leaving their school buildings per quarter. Only 25 percent of the principals (14 individuals) favored a more structured district wide curriculum and only 5 of these principals indicated in Question 1 that enrollment changes had a negative impact on instructional programs.

In response to question number six, 20 of the principals surveyed had been in their buildings for one year (35.7 percent). A total of 45 principals, including the above 20, had been in their building for four years or less (80.4 percent). Also, 30 of the principals surveyed (53.6 percent) had eight years or less of administrative experience.

The most frequent model type principal in the questionnaire was the K-5 configuration. Forty principals (71.4 percent) indicated a K-5 assignment.

In summary, most of the principals surveyed (58.9 percent) indicated that pupil mobility had a negative impact on the instructional programs. However, less than half of the principals (42.9 percent) had a formal procedure for integrating new pupils even though their pupil mobility exceeded 1 to 20 pupils enrolling or leaving their buildings per quarter. Similarly, most principals (57.1 percent) were opposed to a more structured district-wide basic skills curriculum even

though 16 of these principals indicated that pupil mobility had a negative impact on the instructional programs. Principals reflecting those opinions had moderate to very little administrative experience (eight years or less) and were largely from K-5 schools.

SUMMARY OF RESULTS

The data collected to answer the first two research questions showed that there is no significant relationship between pupil mobility, gender, ethnicity, or SES and basic skills achievement test scores of pupils in the third through the eighth grades. Comparisons of the mathematics test scores for the fifth grade stable and semi-stable groups indicated a near zero correlation between mobility and mathematics scores. There was a positive correlation between mathematics, reading and language usage score levels and school stability for the stable group (the higher the stability index, the higher the achievement score level). There was no significant relationship between gain and stability at any grade level or for any basic skill area. No discernable pattern of movement could be identified in the pupil population for each academic year. When ethnicity and gender were controlled for within the stable and non-stable groups, there was no significant impact on academic gain. None of the cases plotted were significant at the .05 level of confidence.

The data collected to answer the third research question indicated that a majority of the principals surveyed felt that pupil mobility had a negative effect on instructional programs. However, less than half of those surveyed had a formal policy or procedure for integrating new pupils, and most principals were opposed to a more structured district wide curriculum.

The following Chapter V will present a summary of this study, conclusions reached, and makes recommendations for further research into the pupil mobility and achievement phenomenon.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the study was to determine the effects of mobility on pupil achievement scores and the educational program. Basic skill achievement test scores of the mobile and non-mobile pupils in the Portland Public School District were compared. The criteria for achievement were the scores on the Portland Achievement Levels Tests of reading, language usage and math. These tests were administered to pupils in grades 3 - 8 in the fall and spring of each school year. In addition, a questionnaire was developed and mailed to all elementary and middle school principals in the school district. The problem was to determine if there was a significant relationship between mobility, basic skills achievement and the educational program.

The study separated pupils into two groups; pupils who had valid fall and spring test scores from the same school and pupils who had valid scores, but from different schools.

Specifically, answers were sought to three questions:

1. What is the relationship between pupil mobility and pupil achievement in mathematics, reading and language usage test scores at the third through eighth grade levels?
2. What is the relationship between the independent variables of gender, ethnicity, SES and basic skills test scores?
3. What is the effect of pupil mobility on instructional programs and how do principals and building staffs respond to these problems?

The actual numbers of pupils in the grade level samples, whose achievement records were examined, varied over the five year period of time. Their cumulative numbers are as follows:

Third Grade	<u>18,115</u>	Fourth Grade	<u>17,378</u>
Fifth Grade	<u>16,957</u>	Sixth Grade	<u>17,146</u>
Seventh Grade	<u>17,603</u>	Eighth Grade	<u>18,017</u>

For the first two research questions, pupils in the study were divided into two populations for analysis:

1. Stable population. These were pupils with valid fall and spring scores in the same building for the entire academic year. It was presumed that these pupils had an uninterrupted instructional year.
2. Semi-stable population. These were pupils with valid fall and spring scores, but who attended two or more schools during the academic year. Comparisons of the basic

skills achievement test scores for the two pupil populations and the effect of the independent variables were analyzed.

The analysis included all of the following:

1. Choosing a control group of 238 fifth graders in mathematics and plotting for mathematics residuals for the treatment and control group.
2. Conducting twelve separate analysis, at an aggregate level, in a two-step analogue of multiple regression for both mathematics and reading at the third through the eighth grades.
3. Plotting pupils achievement scores across grade levels for both reading and math residuals.
4. Regressing the standardized residuals on stability indices for reading and math at each grade level.
5. Isolating the semi-stable group for the 1982-87 school year. Means and standard deviations were conducted at the individual level in reading, mathematics and language. Combinations of Fall school - Fall grade, Spring grade - Spring school were used using District norms for comparison.
6. Crosstabs of fall and spring school transcience were conducted for all schools and

then for middle schools only to determine if there was a discernable pattern of movement among pupils.

7. Choosing a control group at the fifth grade level in mathematics from the semi-stable population and then isolating this group with randomly selected groups from the stable population.

These groups were matched according to school grade, performance mean and standard deviations, and sex and ethnicity. Multiple regressions were then run on these groups to determine the effect of mobility on mathematics gain.

8. Conducting regression analysis on mathematics gain, controlling for gender and ethnicity.

A questionnaire was designed to answer the third research question. The questionnaire was mailed to all principals and 56 (69%) responded.

The following were the major findings of this study:

Question 1. What is the relationship between pupil mobility and pupil achievement in mathematics, reading and language usage test scores at the third through the eighth grade levels?

The semi-stable group was isolated for the 1982-87 school years. Means and standard deviations were

conducted at the individual level for the basic skills. Combinations of fall school-fall grade, spring grade-spring school were used by using district norms for comparison. Multiple regressions of the standardized residual on stability indices for reading and math at each grade level were conducted. Additionally, twelve separate analysis, at an aggregate level, in a two step analogue of multiple regression for both mathematics and reading at the third through the eighth grades were conducted.

It was determined that when pupils are identified as mobile (semi-stable), there are no significant negative correlations with achievement in mathematics, reading and language in the third through the eighth grade levels. Additionally, the higher the stability index for a given school, the higher the achievement level score for non-mobile (stable) pupils in that school.

Question 2. What is the relationship between the independent variables of gender, ethnicity, SES and basic skills test scores?

To answer this question a control group of 238 fifth graders were chosen in mathematics. These pupils were matched with a control group by gender, ethnicity, SES, performance mean and standard deviations and school grade. Multiple regressions were then run on these groups to determine the effect of mobility on mathematics gain.

It was determined that the independent variable of gender and ethnicity had no negative effect on mathematics achievement. It was also concluded that this would apply to language arts and reading achievement since mathematics is the most sensitive of the basic skills.

Question 3. What is the effect of pupil mobility on instructional programs and how do principals and building staffs respond to these problems?

A questionnaire was mailed to 81 principals in order to collect opinions and basic information. The questionnaire had a response from 69% of the principals.

Most principals who responded to the questionnaire in the study felt that pupil mobility had a negative impact on instructional programs. However, most of the responding principals were opposed to a more structured district wide basic skills curriculum as a way of moderating the negative effects of student mobility on the instructional program. Only 42.90 percent of the responding principals indicate that their schools had a formal policy or program for integrating new pupils into the instructional program.

Pupil mobility had no negative effect on basic skills achievement test scores gains. However, for the stable pupil, the higher the school stability index, the higher the achievement level for the non-mobile pupils in the school for the fall testing. The achievement gain was

no different in a high stability index school versus a low stability school. Also, most principals surveyed felt that pupil mobility had a negative impact on instructional programs. This researcher sees a contradiction in this response and the principals' negative response to a more structured district-wide basic skills curriculum and the general lack of a formal policy or program for integrating students into the schools.

CONCLUSIONS

Schools tend to be organized around the presentation of an educational program for pupils that enter and leave as a group. Most respondents to the survey, however, maintain that there is a negative effect upon the educational program by the pupil that has been identified as mobile.

The results of this study, which divided the pupil population into two groups, found that there is no correlation between pupil mobility and pupil basic skills achievement growth rates (gain). These findings are in agreement with a majority of the previous research. Morris, et.al., 1987, conducted a study of fifth grade boys and girls to investigate the relationship between pupil mobility and pupil achievement. His findings indicated that mobility had a possible negative effect on reading, but not arithmetic.

Goebal (1978) concluded that the effects of mobility on academic achievement depended on the pattern and rate of mobility, gender of the pupil and the measuring device being used. Her findings indicated that pupil mobility was not a negative influence on academic development. These findings were also supported by others controlling for variables (IQ, SES, Sex) Ballenbacker, 1962; Sackett, 1935 and Snipes, 1966.

This study also included the variables of gender, ethnicity, achievement level and concluded that moving to different schools did not effect the achievement gains for reading, mathematics and language usage. Consequently, it can be assumed that mobility is not significantly related to the variables examined in this study.

Based on the results of the questionnaire used in this study, the school districts need to pursue a consistent district-wide program to manage with staff morale and curriculum development in relation to pupil mobility. There is a much higher turnover of staff in schools with high student mobility. Districts need to provide pupil transfer information that is consistent with appropriate instructional placement and class data.

This research did not deal with mobile pupils possessing only one valid fall or spring test score. From the number of pupils surveyed in this research project it is evident that this is a large percentage of pupils. However, because of the absence of test data there is no

way to measure the effect of mobility on their achievement. It can be hypothesized that this kind of mobility is associated with poor academic performance. Hopefully, this will give some direction to future researchers in isolating academic problems related to these pupils.

RECOMMENDATIONS

Based upon the findings and conclusions of the study, the following recommendations are made:

Practitioner

Pupil mobility is a factor related to the success of a school academic program. It cannot, however, be taken as an answer to the low achievement of mobile pupils. This study concludes that all pupils can achieve academically, regardless of their mobility. Other variables that may interact with the mobile pupils' success in school need to be examined. In order to address the problem of pupil mobility, the Portland School District officials might wish to require each school develop a formal plan for integrating new pupils into the instructional program. Strategies for responding to staff morale could be included in the plan. Additionally, there should be a more standardized district-wide basic skills curriculum with fewer options for instructional materials. At present the Portland Public School Language Arts

adoption offers four choices of instructional materials for the elementary and middle schools. It might also be educationally more prudent for pupils to remain in their own attendance areas rather than transfer to other areas within the school district, except in extreme hardship cases, thus reducing the negative impact of pupil mobility on instructional programs.

Researchers

In-depth studies should be undertaken to determine the kinds of problems that pupils and school staffs encounter with pupil mobility. Research should also be conducted for pupils with only one valid test score during an academic year, comparing the fall or spring scores over several years in a longitudinal study. This study might indicate a negative relationship between mobility and academic gain due to the mobility rate and poor school attendance.

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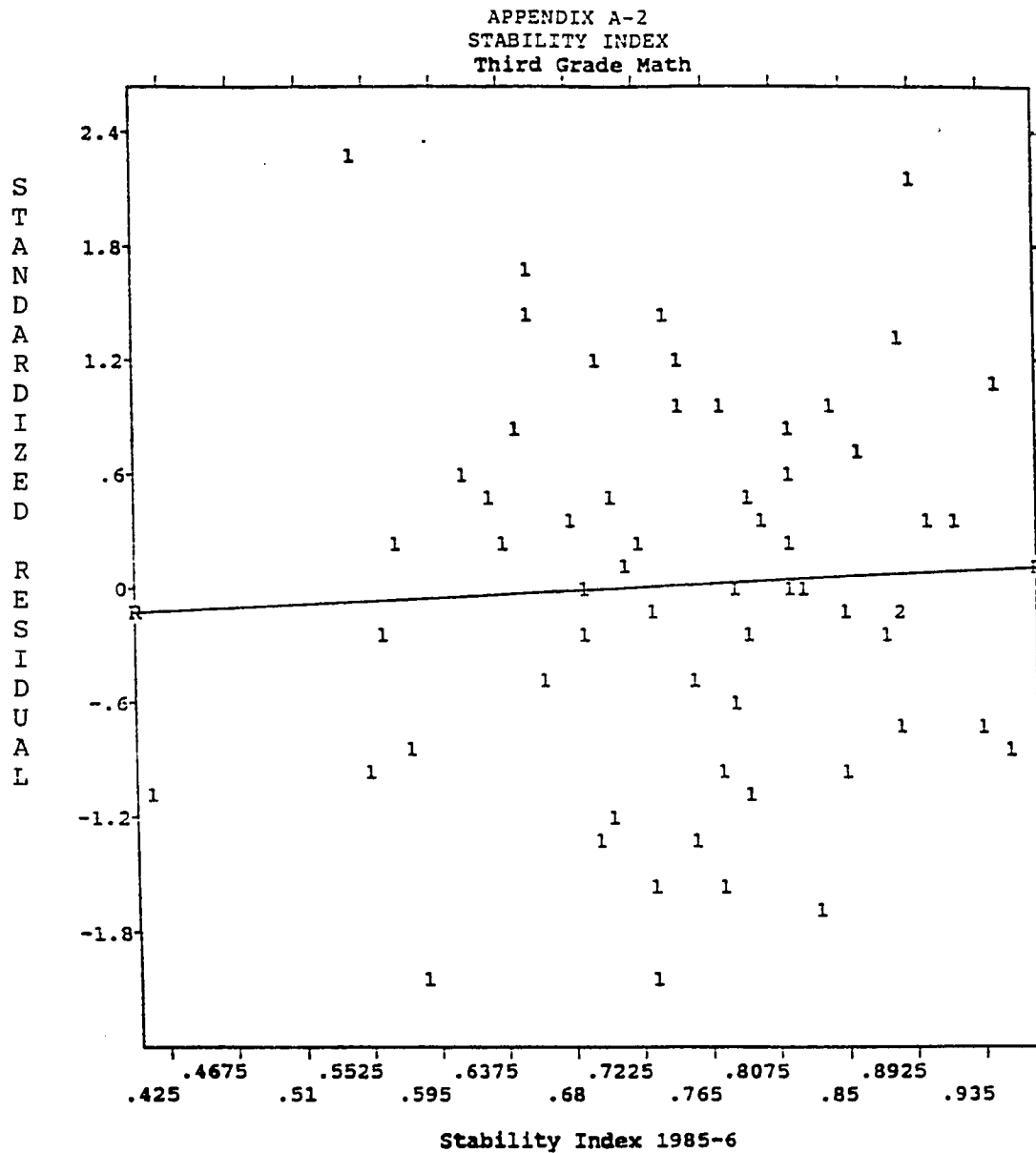
APPENDIX A

STABILITY INDICES

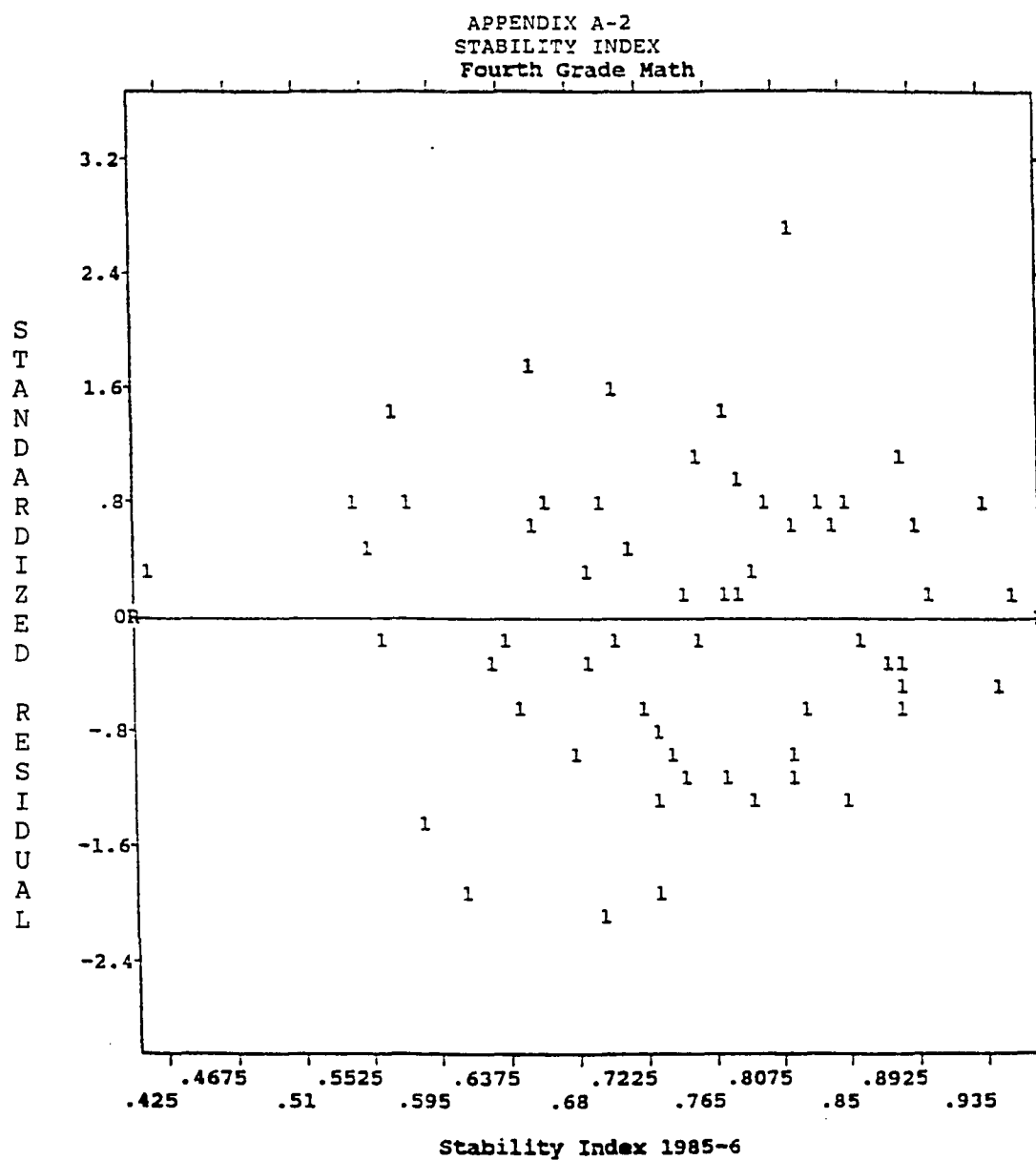
APPENDIX A-1

Correlations Of Stability Index
With Fall Rits for Clear and
Intact Group In Reading, Math
And Language

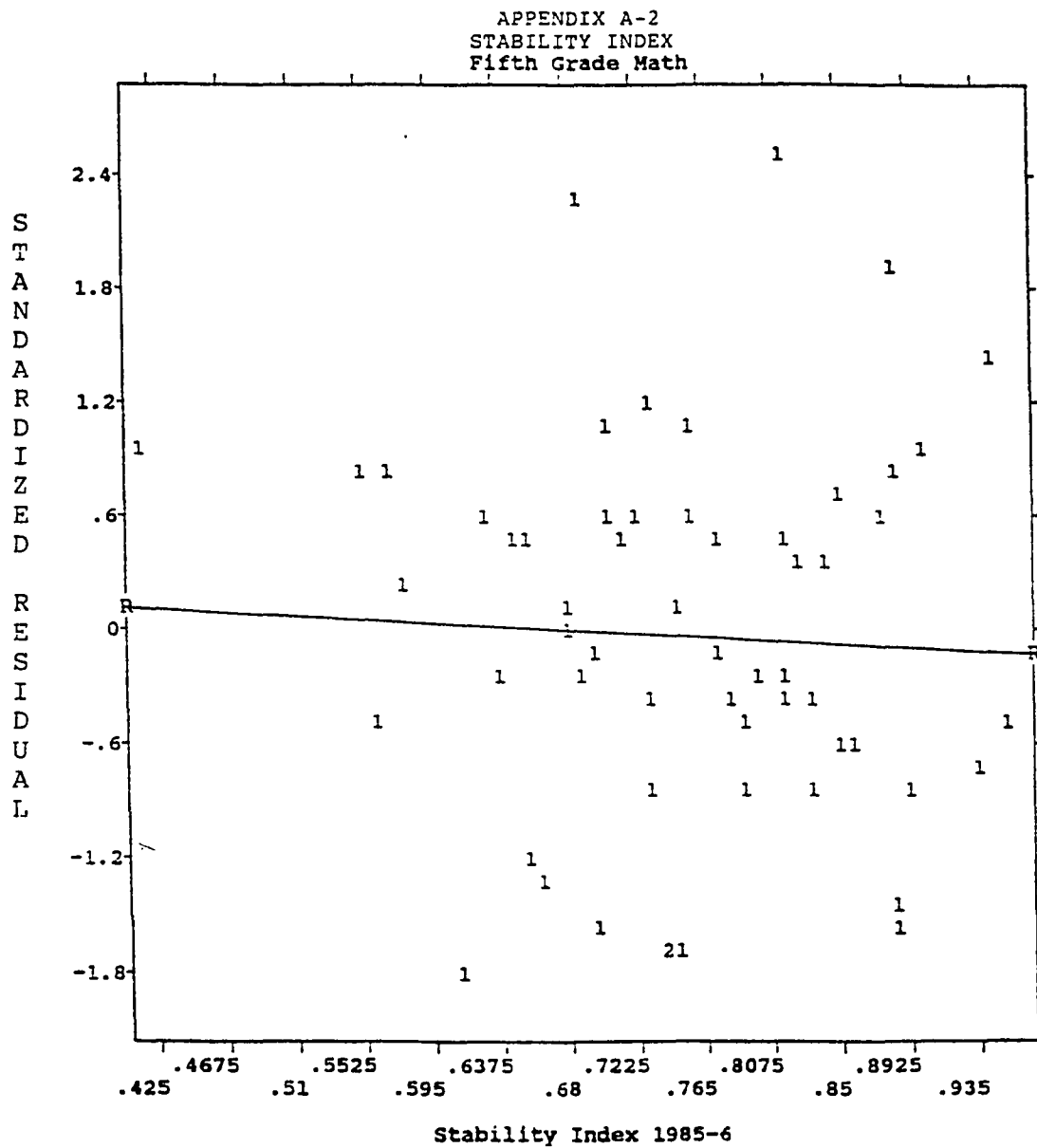
<u>Variable</u>	<u>Cases</u>	<u>Stability Index</u>	<u>Probability</u>
F85R	258	.4588	.000
F85M	258	.3678	.000
F85L	258	.4597	.000



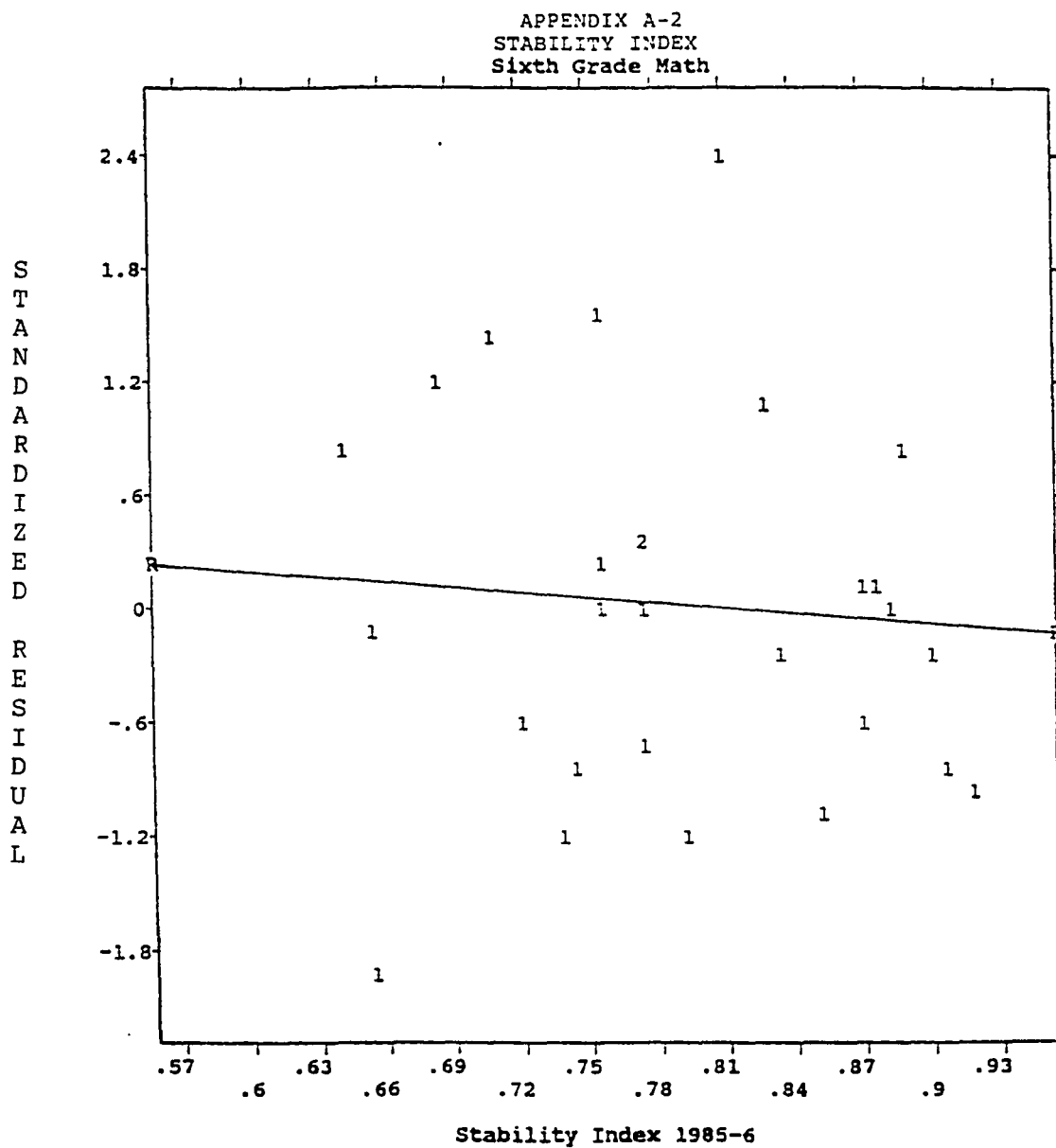
61 cases plotted. Regression statistics of Z85SMX3 on STABINDX: .
 Correlation .05661 R Squared .00321 S.E. of Est .99840 Sig. .6647
 Intercept(S.E.) -.37170(.86289) Slope(S.E.) .49417(1.13455)



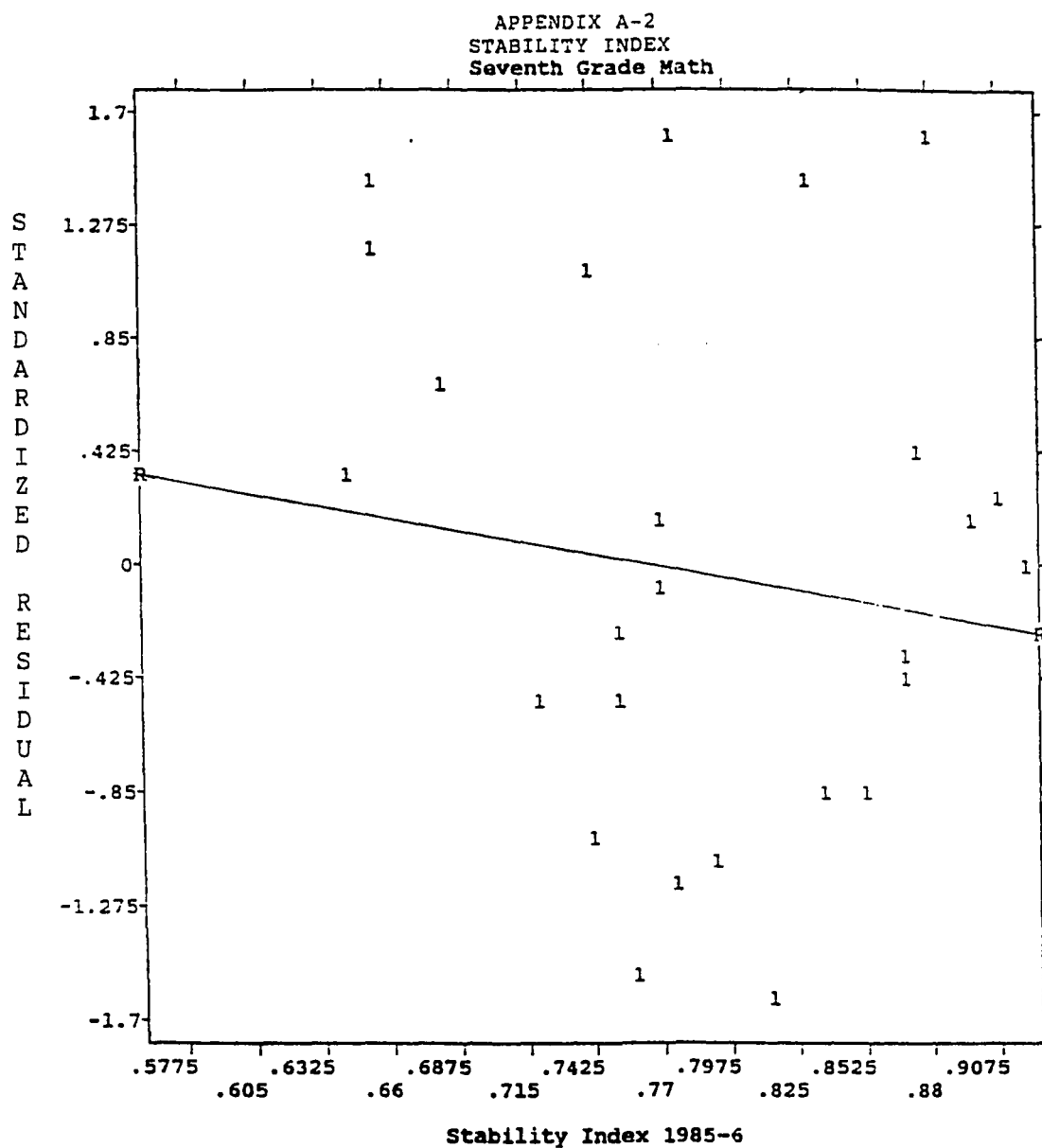
59 cases plotted. Regression statistics of Z85SMX4-on STABINDX:
 Correlation -.00301 R Squared .00001 S.E. of Est 1.00000 Sig. .9820
 Intercept(S.E.) .01971(.87764) Slope(S.E.) -.02632(1.15928)



58 cases plotted. Regression statistics of 285SMX5 on STABINDEX:
 Correlation $-.03921$ R Squared $.00154$ S.E. of Est $.99923$ Sig. $.7701$
 Intercept(S.E.) $.26792(.92186)$ Slope(S.E.) $-.35522(1.20979)$

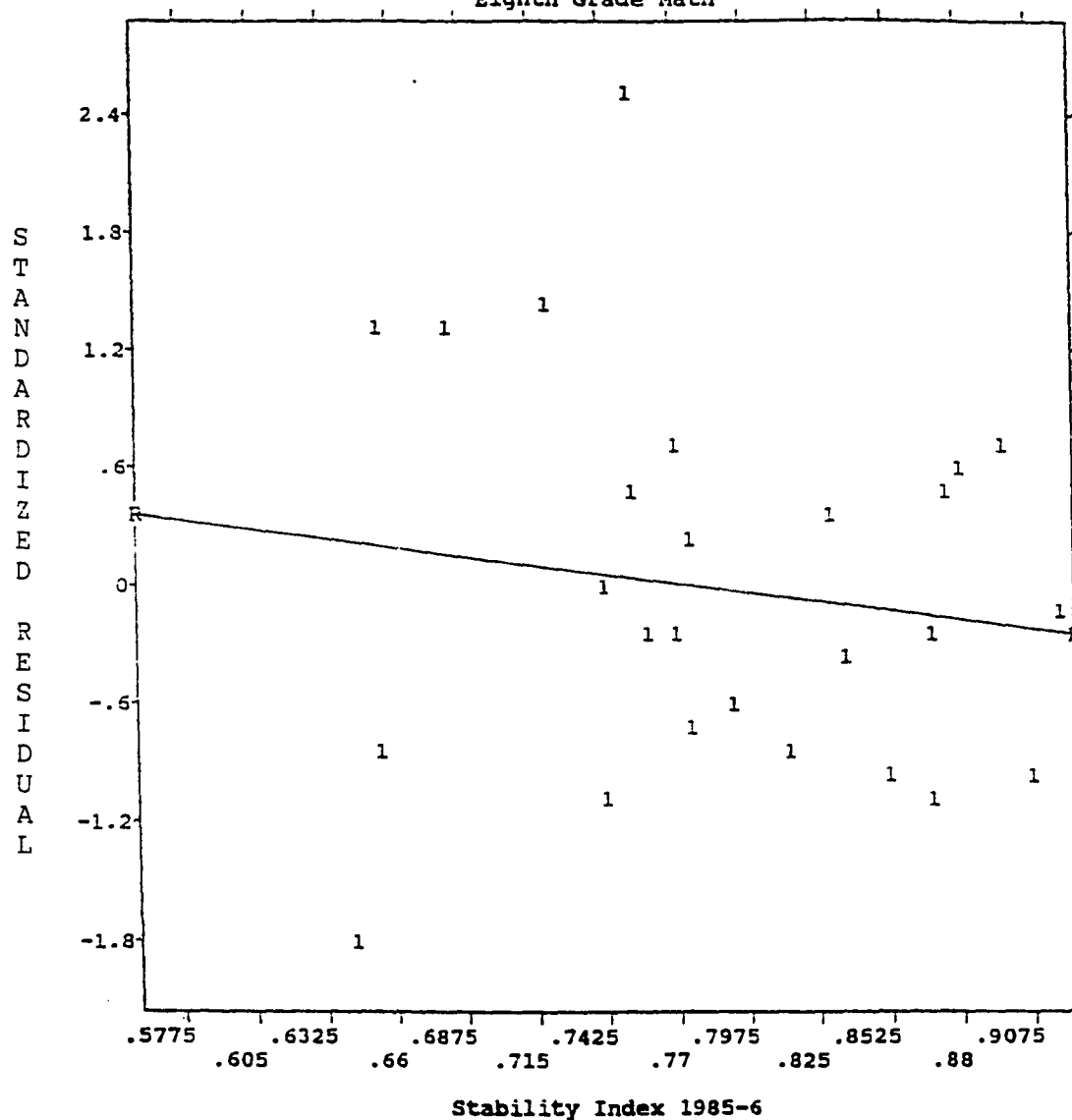


28 cases plotted.-Regression-statistics of Z85SMX6 on STABINDX:-
 Correlation $-.08283$ R Squared $.00686$ S.E. of Est $.99656$ Sig. $.6752$
 Intercept(S.E.) $.79481(1.88480)$ Slope(S.E.) $-1.00600(2.37367)$

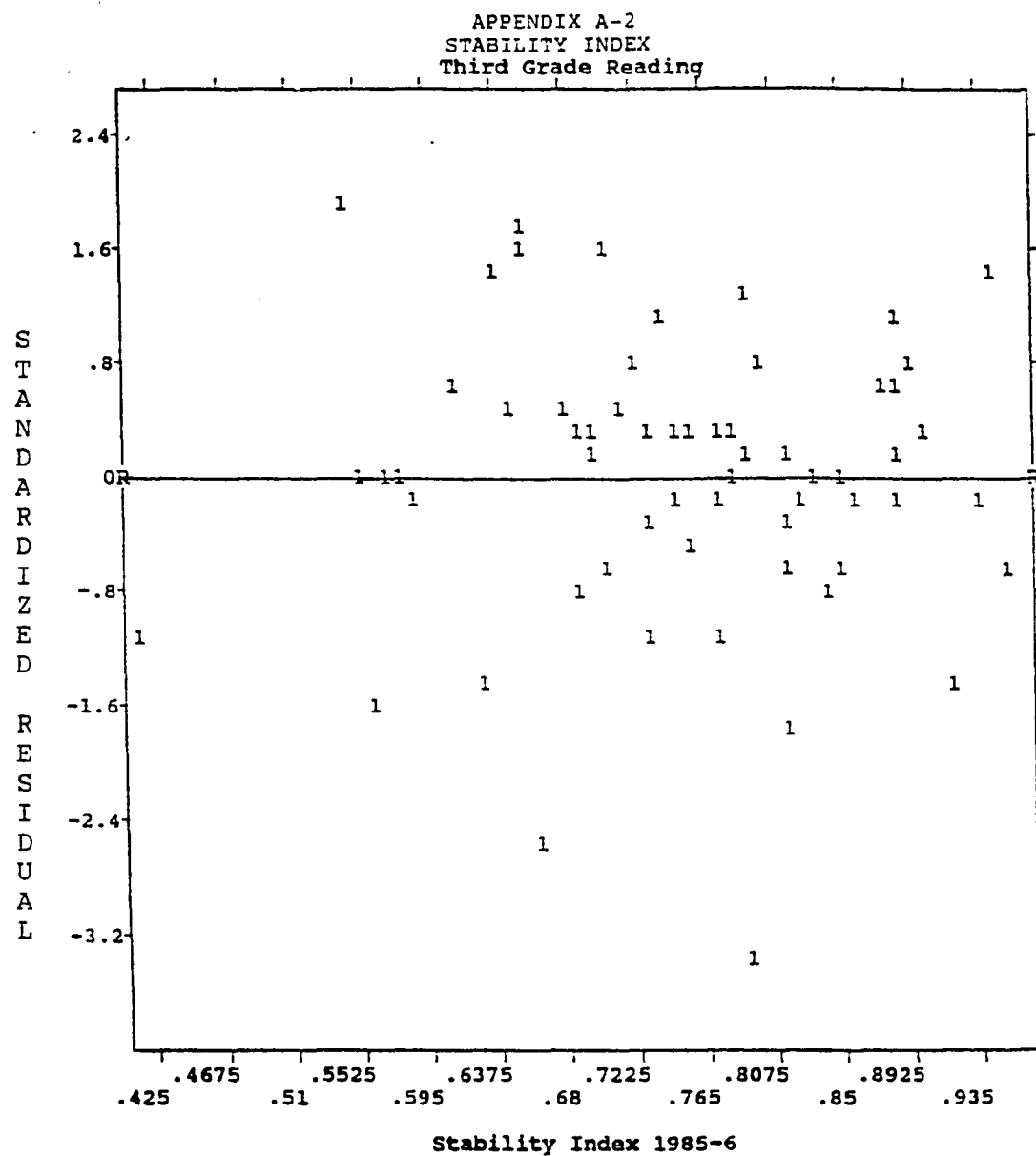


26 cases plotted.—Regression statistics of Z85SMX7 on STABINDX:
 Correlation $-.13766$ R Squared $.01895$ S.E. of Est $.99048$ Sig. $.5025$
 Intercept(S.E.) $1.33130(1.96491)$ Slope(S.E.) $-1.68618(2.47649)$

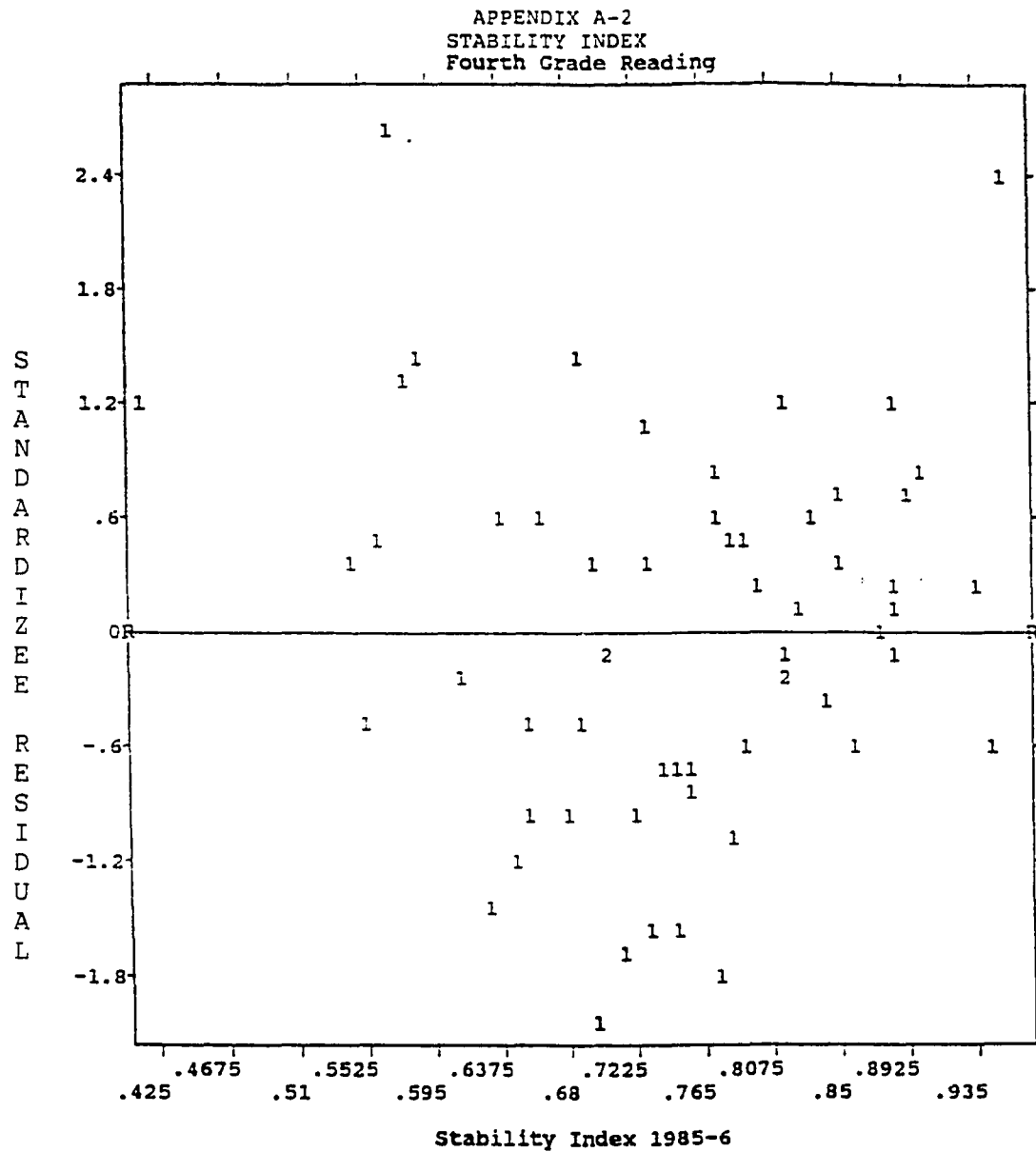
APPENDIX A-2
STABILITY INDEX
Eighth Grade Math



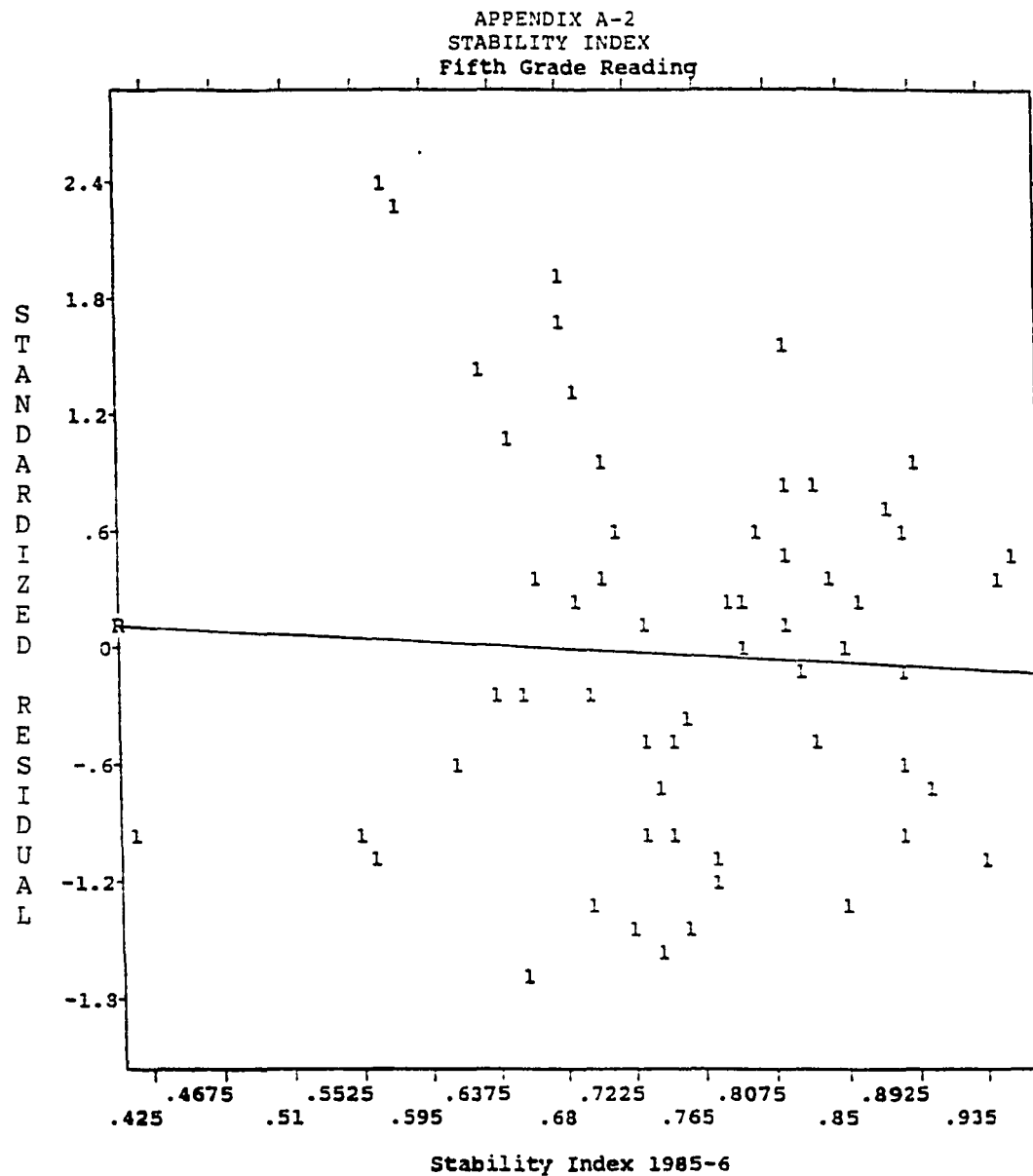
26 cases plotted. Regression statistics of Z85SMX8 on STABINDX: ---
Correlation $-.11508$ R Squared $.01324$ S.E. of Est $.99336$ Sig. $.5756$
Intercept(S.E.) $1.11290(1.97062)$ Slope(S.E.) $-1.40956(2.48368)$



61 cases plotted.--Regression statistics of Z85SRX3 on STABINDX:
 Correlation $-.00977$ R Squared $.00010$ S.E. of Est $.99995$ Sig. $.9404$
 Intercept(S.E.) $.06415$ ($.86423$) Slope(S.E.) $-.08529$ (1.13631)

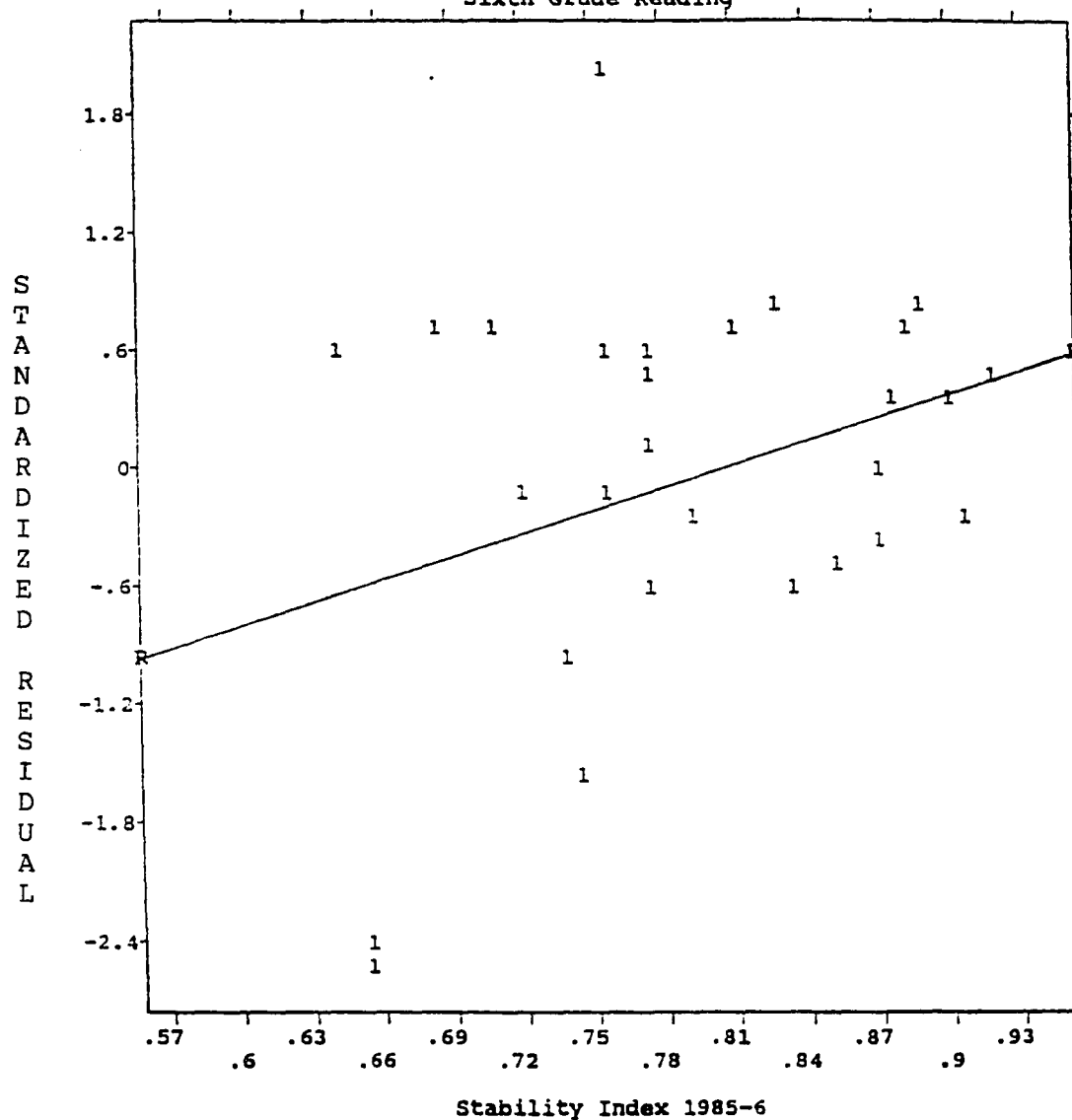


59 cases plotted.--Regression statistics of Z85SRX4 on STABINDX:
 Correlation .00192 R Squared .00000 S.E. of Est 1.00000 Sig. .9885
 Intercept(S.E.) -.01258(.87764) Slope(S.E.) .01680(1.15929)

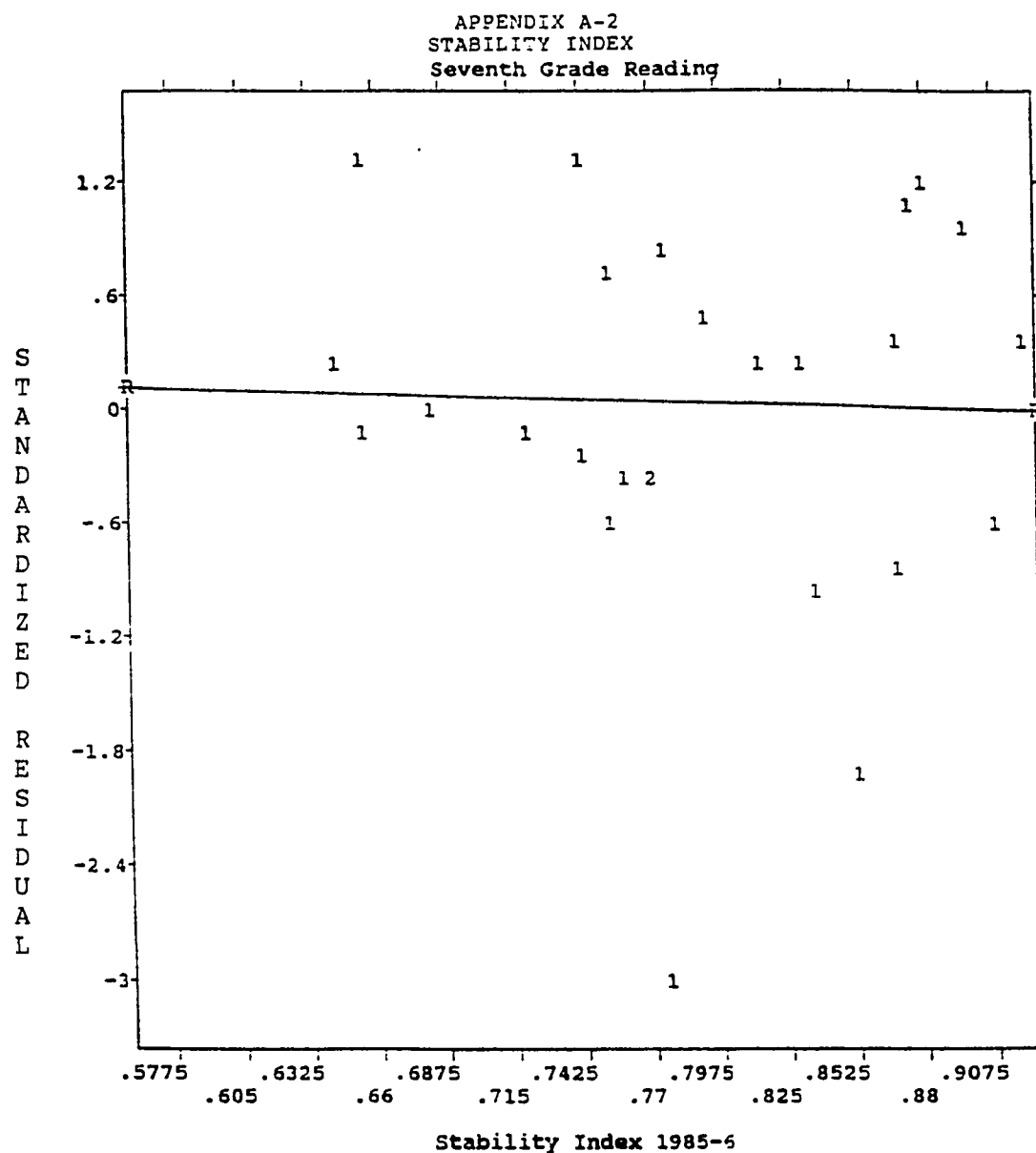


58 cases plotted. Regression statistics of Z85SRX5 on STABINDX:
 Correlation $-.05196$ R Squared $.00270$ S.E. of Est $.99865$ Sig. $.6985$
 Intercept(S.E.) $.35509$ ($.92132$) Slope(S.E.) $-.47080$ (1.20908)

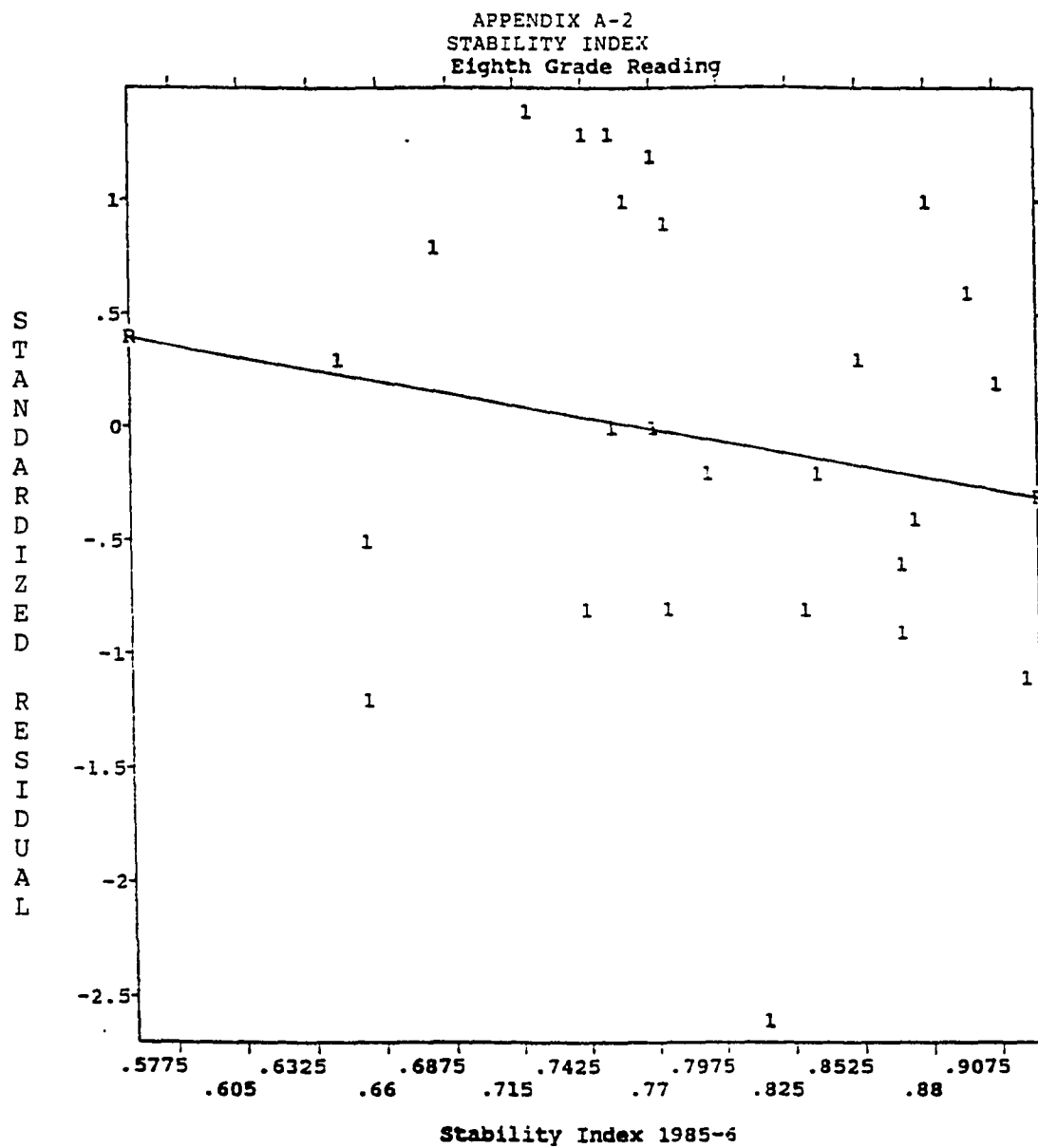
APPENDIX A-2
STABILITY INDEX
Sixth Grade Reading



28 cases plotted. Regression statistics of Z85SRX6 on STABINDX:
Correlation .33014 R Squared .10899 S.E. of Est .94393 Sig. .0862
Intercept(S.E.) -3.16784(1.78526) Slope(S.E.) 4.00956(2.24831)



26 cases plotted. Regression statistics of Z85SRX7 on STABINDX:
 Correlation $-.03380$ R Squared $.00114$ S.E. of Est $.99943$ Sig. $.8698$
 Intercept(S.E.) $.32686(1.98266)$ Slope(S.E.) $-.41398(2.49886)$



26 cases plotted. Regression statistics of 285SRX8 on STABINDX:
 Correlation $-.16327$ R Squared $.02666$ S.E. of Est $.98658$ Sig. $.4255$
 Intercept(S.E.) $1.57900(1.95718)$ Slope(S.E.) $-1.99990(2.46674)$

APPENDIX B

REGRESSION STATISTICS

APPENDIX B-1

Regression Statistics
Grade 5 Math Scores Fall 1985/Spring 1986

RITS AND GAINS BY SEX

Math Rits of Treatment vs. Control Groups by Sex

<u>No. of Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R. Squared</u>
238	1.00272(.04146)	6.31732(8.43684)	.0000	.71253

Math Gains of Treatment vs. Control Groups by Sex

<u>No. of Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R. Squared</u>
238	.00272(.04146)	6.31732(8.43684)	.9478	.00002

Math Rits of Treatment Groups by Sex

<u>No. of Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R. Squared</u>
119	1.00336(.05573)	6.056279(11.32754)	.0000	.73476

Math Gains of Treatment Groups by Sex

119	.00336(.05573)	6.05627(11.33754)	.9520	.00003
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Math Rits of Control Groups By Sex

<u>No. of Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R. Squared</u>
119	1.00175(.06229)	6.64437(12.67988)	.0000	.68854

Math Gains of Control Groups By Sex

<u>No. of Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R. Squared</u>
119	.00175(.06229)	6.64437(12.67988)	.9776	.00001

APPENDIX B-2

Regression Statistics
Grade 5 Math Scores Fall 1985/Spring 1986

RITS AND GAINS BY ETHNICITY

Math Rits of Treatment vs. Control Groups by Ethnicity

<u>No. of</u> <u>Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R Squared</u>
238	1.00272(.04146)	6.31732(8.43684)	.0000	.71253

Math Gains of Treatment vs. Control Groups by Ethnicity

<u>No. of</u> <u>Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R Squared</u>
238	.00272(.04146)	6.31732(8.43684)	.9478	.00002

Math Rits of Treatment Groups by Ethnicity

<u>No. of</u> <u>Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R Squared</u>
119	1.00336(.05573)	6.05627(11.33754)	.0000	.73476

Math Gains of Treatment Groups by Ethnicity

<u>No. of</u> <u>Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R Squared</u>
119	.00336(.05573)	6.05627(11.33754)	.9520	.00003

Math Rits of Control Groups by Ethnicity

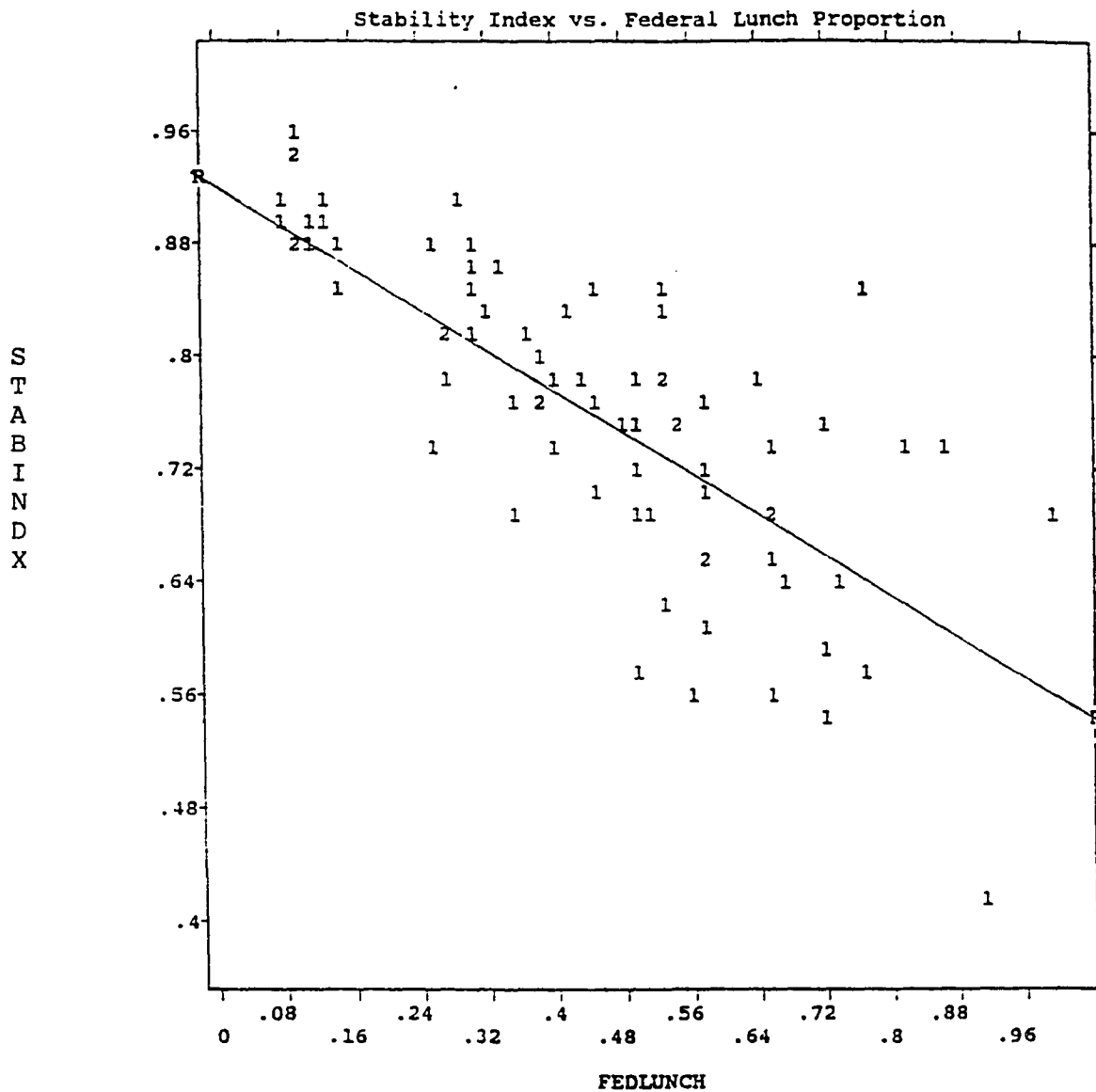
<u>No. of</u> <u>Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R Squared</u>
119	1.00175(.06229)	6.64437(12.67988)	.0000	.68854

Math Gains of Control Groups By Ethnicity

<u>No. of</u> <u>Cases</u>	<u>Slope</u>	<u>Intercept</u>	<u>Sig.</u>	<u>R Squared</u>
119	.00175(.06229)	6.64437(12.67988)	.9776	.00001

APPENDIX B-3

STABILITY INDEX
VS.
FEDERAL LUNCH PROPORTION



76 cases plotted. Regression statistics of STABINDX on FEDLUNCH:
 Correlation $-.75824$ R Squared $.57493$ S.E. of Est $.07174$ Sig. $.0000$
 Intercept(S.E.) $.93398(.01876)$ Slope(S.E.) $-.37621(.03760)$

APPENDIX C

QUESTIONNAIRE

APPENDIX C-1
PRINCIPAL'S QUESTIONNAIRE

This questionnaire is NOT an evaluation. Its purpose is to collect principals' opinions and basic information on possible negative effects of student mobility on instructional programs, and how principals and building staff deal with those problems. All information will be treated confidentially. Summaries may be requested from the Evaluation Department. Please take a few minutes to answer the questions below and return the questionnaire in the enclosed envelope.

1. Do changes in your building's enrollment during the year have a negative impact on your instructional program?
 yes _____
 no _____

2. What number and percent of new students typically enroll in your building in a quarter?
 0-10 _____ Percent of total enrollment
 11-20 _____ as of 1 October 1987.
 21-30 _____ _____percent
 31-40 _____
 more than 40 _____

3. What number and percent of students typically leave your building in a quarter?
 0-10 _____ Percent of total enrollment
 11-20 _____ as of 1 October 1987.
 21-30 _____ _____percent
 31-40 _____
 more than 40 _____

4. Does your building have a formal policy or program to integrate new students into the instructional program?
 yes _____
 no _____

 If your answer is "no," please continue with Question 5. If your answer is "yes," please attach a copy of the policy or a program description. If no copy is available, please briefly describe the program's main components on the back of this questionnaire. Then continue with Question 5.

5. Do you feel that an even more structured district-wide basic skills curriculum would help moderate any remaining negative effects of student mobility on your instructional program?
 yes _____
 no _____

6. How long have you been principal in your current building?
 _____ years

7. How long altogether have you been a building administrator?
_____ years

8. My building type is:

K-5 _____	6-8 _____
K-8 _____	K-4 _____
K-3 _____	5-8 _____
1-5 _____	K-12 _____

Thank you for providing your information and opinions. If you have any questions or wish to request a summary of this information, please contact Gary Williams at extension 210 or Walt Hathaway at extension 203.

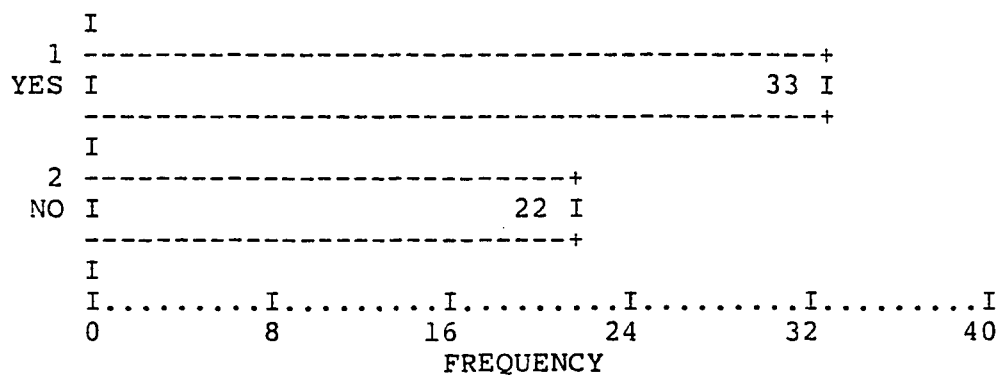
Please use the rest of this sheet for your program description and feel free to attach additional sheets, if necessary.

PROGRAM DESCRIPTION:

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q1 ENROLLMENT CHANGES HAVE NEGATIVE IMPACT

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	33	58.9	60.0	60.0
NO	2	22	39.3	40.0	100.0
	.	.	1.8	MISSING	
	TOTAL	56	100.0	100.0	

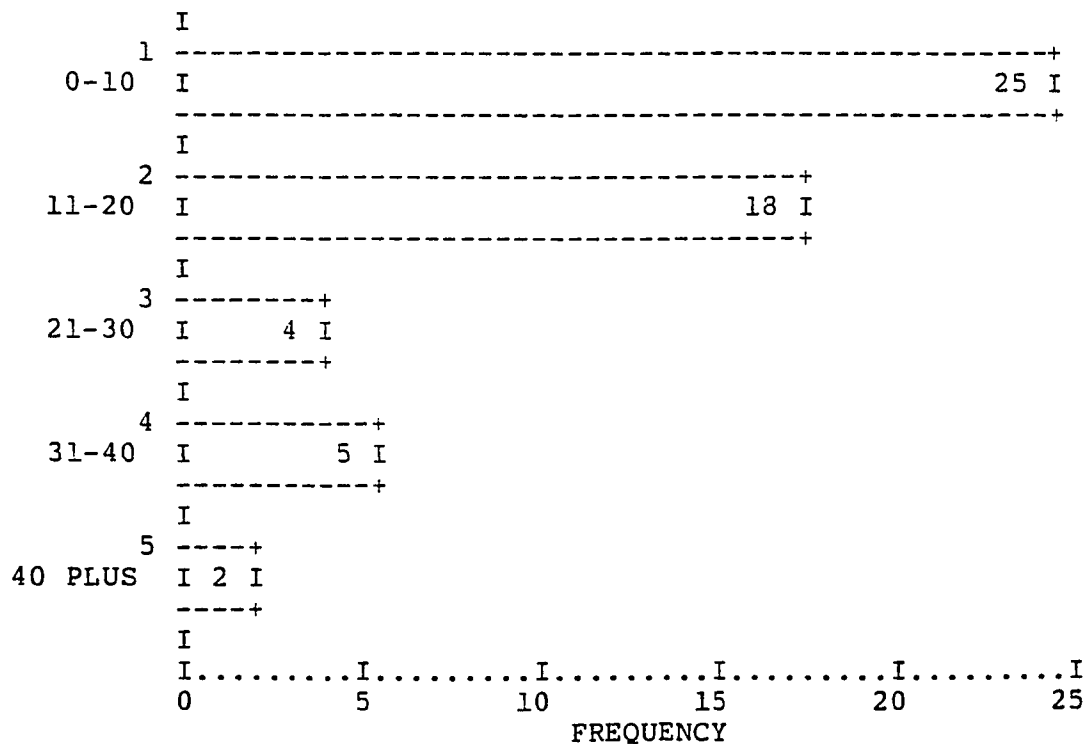


VALID CASES 55 MISSING CASES 1

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q2A AVE# OF NEW STUDENTS ENROLL PER QUARTER

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
0-10	1	25	44.6	46.3	46.3
11-20	2	18	32.1	33.3	79.6
21-30	3	4	7.1	7.4	87.0
31-40	4	5	8.9	9.3	96.3
40 PLUS	5	2	3.6	3.7	100.0
	.	2	3.6	MISSING	
		-----	-----	-----	
	TOTAL	56	100.0	100.0	



VALID CASES 54 MISSING CASES 2

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

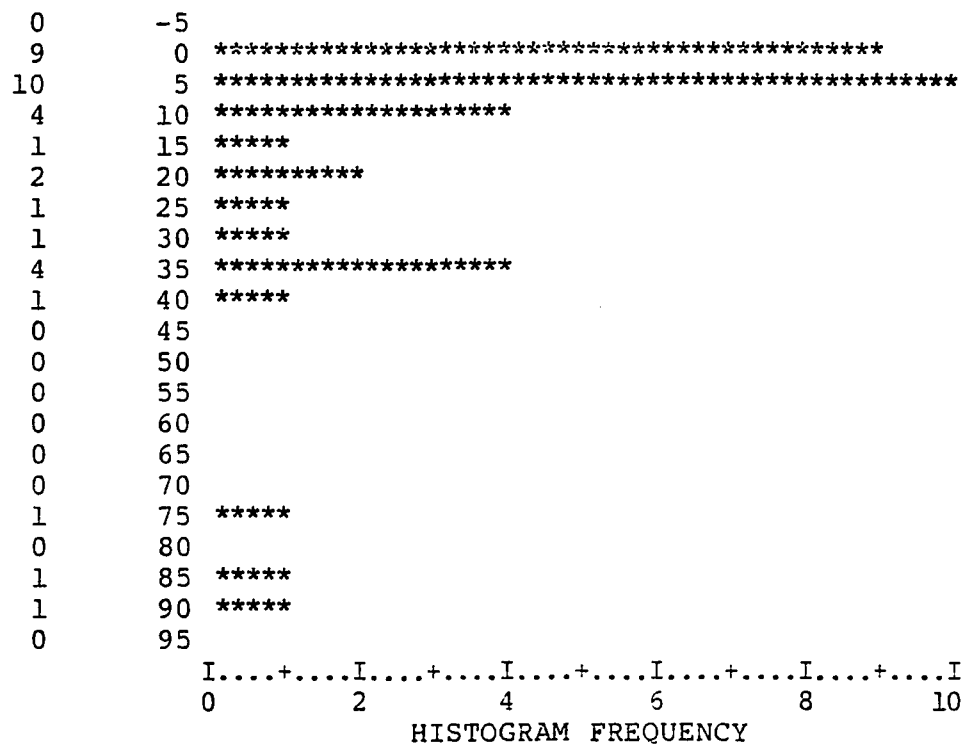
Q2B PERCENT OF NEW STUDENT ENROLLMENT

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	1	4	7.1	11.1	11.1
	2	5	8.9	13.9	25.0
	3	4	7.1	11.1	36.1
	4	2	3.6	5.6	41.7
	5	2	3.6	5.6	47.2
	6	1	1.8	2.8	50.0
	7	1	1.8	2.8	52.8
	9	1	1.8	2.8	55.6
	10	3	5.4	8.3	63.9
	15	1	1.8	2.8	66.7
	20	1	1.8	2.8	69.4
	21	1	1.8	2.8	72.2
	23	1	1.8	2.8	75.0
	30	1	1.8	2.8	77.8
	33	1	1.8	2.8	80.6
	34	2	3.6	5.6	86.1
	35	1	1.8	2.8	88.9
	40	1	1.8	2.8	91.7
	75	1	1.8	2.8	94.4
	87	1	1.8	2.8	97.2
	90	1	1.8	2.8	100.0
	.	20	35.7	MISSING	
		-----	-----	-----	
	TOTAL	56	100.0	100.0	

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q2C PERCENT OF NEW STUDENT ENROLLMENT

COUNT MIDPOINT ONE SYMBOL EQUALS APPROXIMATELY .20 OCCURRENCES

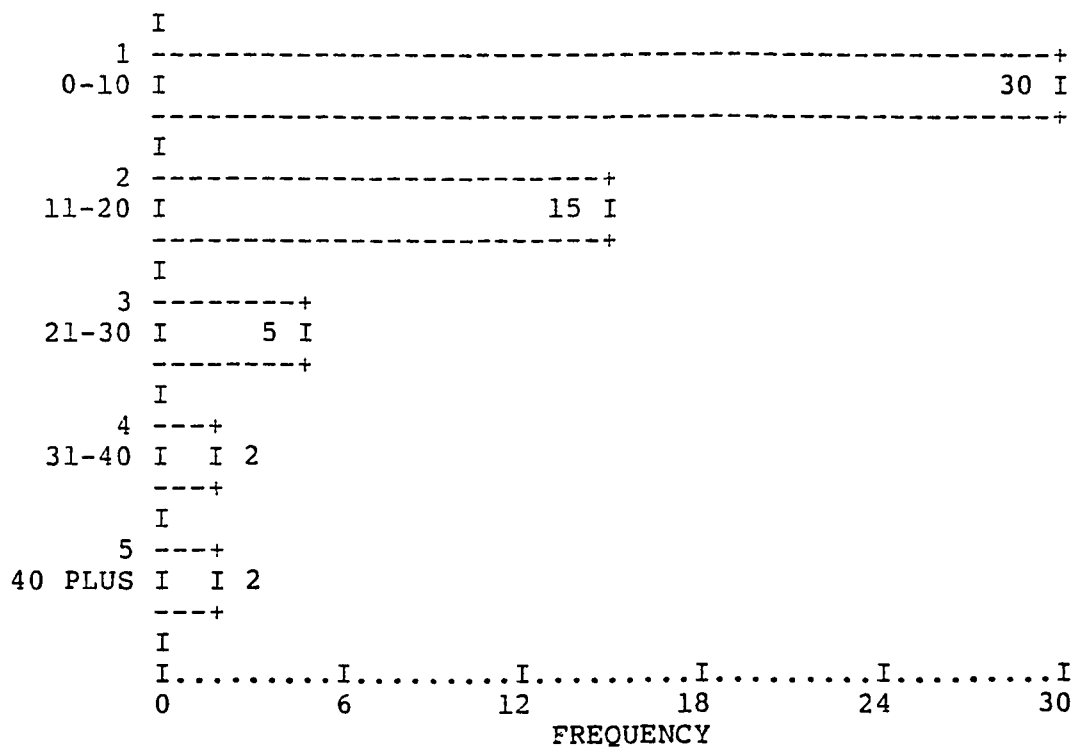


VALID CASES 36 MISSING CASES 20

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q3A AVE# OF STUDENTS LEAVING PER QUARTER

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
0-10	1	30	53.6	55.6	55.6
11-20	2	15	26.8	27.8	83.3
21-30	3	5	8.9	9.3	92.6
31-40	4	2	3.6	3.7	96.3
40 PLUS	5	2	3.6	3.7	100.0
	.	2	3.6	MISSING	
		-----	-----	-----	
	TOTAL	56	100.0	100.0	



VALID CASES 54 MISSING CASES 2

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q3B PERCENT OF STUDENTS LEAVING

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	1.	7	12.5	22.6	22.6
	2	5	8.9	16.1	38.7
	3	3	5.4	9.7	48.4
	4	1	1.8	3.2	51.6
	6	2	3.6	6.5	58.1
	7	3	5.4	9.7	67.7
	10	2	3.6	6.5	74.2
	15	1	1.8	3.2	77.4
	20	1	1.8	3.2	80.6
	23	1	1.8	3.2	83.9
	24	1	1.8	3.2	87.1
	33	1	1.8	3.2	90.3
	34	2	3.6	6.5	96.8
	60	1	1.8	3.2	100.0
	.	25	44.6	MISSING	
		-----	-----	-----	
	TOTAL	56	100.0	100.0	

COUNT MIDPOINT ONE SYMBOL EQUALS APPROXIMATELY .20 OCCURRENCES

```

7      0      *****
9      3      *****
5      6      *****
2      9      *****
0     12
1     15      *****
0     18
1     21      *****
2     24      *****
0     27
0     30
3     33      *****
0     36
0     39
0     42
0     45
0     48
0     51
0     57
1     60      *****
      I.....+.....I.....+.....I.....+.....I.....+.....I.....+.....I
      0              2              4              6              8              10

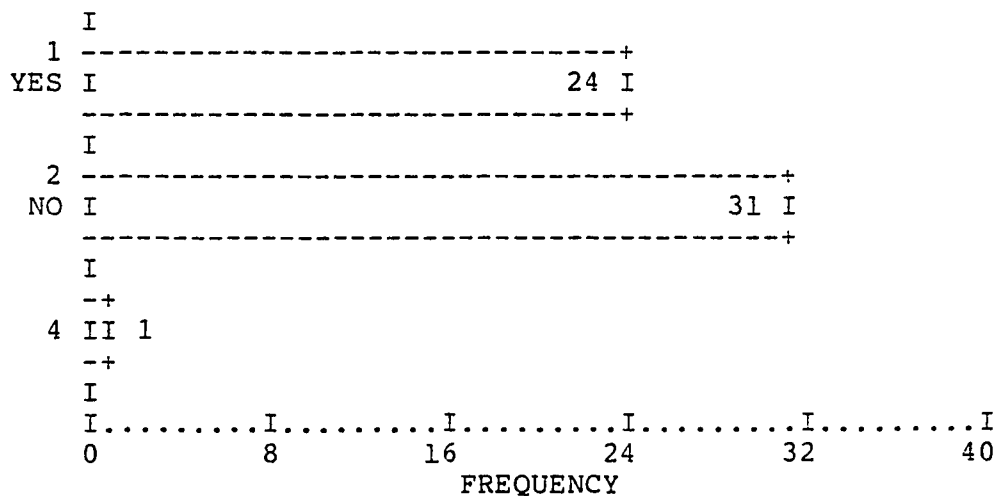
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VALID CASES	31	MISSING CASES	25
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KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q4 FORMAL POLICY TO INTEGRATE NEW STUDENTS

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	24	42.9	42.9	42.9
NO	2	31	55.4	55.4	98.2
	4	1	1.8	1.8	100.0
		-----	-----	-----	
	TOTAL	56	100.0	100.0	

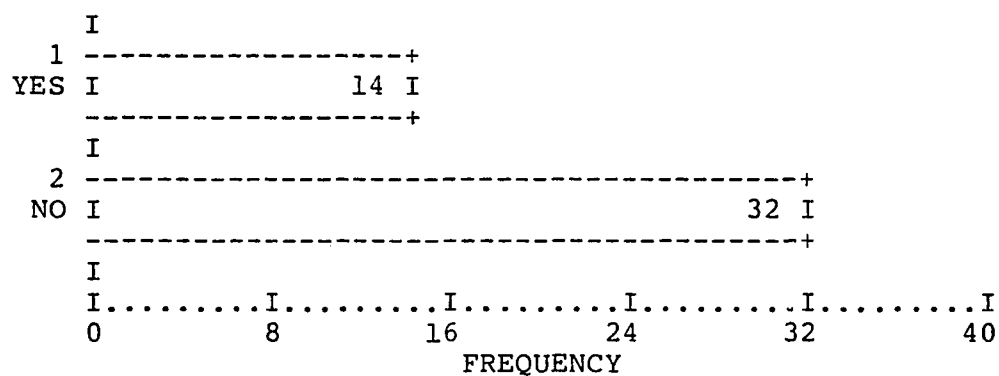


VALID CASES 56 MISSING CASES 0

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q5 FAVOR DISTRICTWIDE BASIC SKILLS CURRIC

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
YES	1	14	25.0	30.4	30.4
NO	2	32	57.1	69.6	100.0
	.	10	17.9	MISSING	
		-----	-----	-----	
	TOTAL	56	100.0	100.0	



VALID CASES 46 MISSING CASES 10

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q6A # OF YEARS AS PRINCIPAL IN CURRENT BUILDING

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	1	20	35.7	35.7	35.7
	2	7	12.5	12.5	48.2
	3	8	14.3	14.3	62.5
	4	10	17.9	17.9	80.4
	5	4	7.1	7.1	87.5
	6	1	1.8	1.8	89.3
	8	3	5.4	5.4	94.6
	10	1	1.8	1.8	96.4
	20	1	1.8	1.8	98.2
	35	1	1.8	1.8	100.0
		-----	-----	-----	
	TOTAL	56	100.0	100.0	

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q6B # OF YEARS AS PRINCIPAL IN CURRENT BLDG.

	I	
1	I	20 I
	I	
2	I	7 I
	I	
3	I	8 I
	I	
4	I	10 I
	I	
5	I	4 I
	I	
6	I I 1	
	I	
8	I 3 I	
	I	
10	I I 1	
	I	
20	I I 1	
	I	
35	I I 1	
	I	
	I.....I.....I.....I.....I.....I	
	0 4 8 12 16 20	
	FREQUENCY	

VALID CASES 56 MISSING CASES 0

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q7A # OF YEARS AS BUILDING ADMINISTRATOR

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	1	4	7.1	7.4	7.4
	2	4	7.1	7.4	14.8
	3	3	5.4	5.6	20.4
	4	8	14.3	14.8	35.2
	5	2	3.6	3.7	38.9
	6	1	1.8	1.9	40.7
	7	6	10.7	11.1	51.9
	8	2	3.6	3.7	55.6
	10	4	7.1	7.4	63.0
	11	3	5.4	5.6	68.5
	12	1	1.8	1.9	70.4
	13	2	3.6	3.7	74.1
	14	1	1.8	1.9	75.9
	15	1	1.8	1.9	77.8
	18	1	1.8	1.9	79.6
	19	1	1.8	1.9	81.5
	20	3	5.4	5.6	87.0
	21	2	3.6	3.7	90.7
	22	1	1.8	1.9	92.6
	25	1	1.8	1.9	94.4
	27	1	1.8	1.9	96.3
	29	1	1.8	1.9	98.1
	35	1	1.8	1.9	100.0
	.	2	3.6	MISSING	
	TOTAL	56	100.0	100.0	

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q7B # OF YEARS AS BUILDING ADMINISTRATOR

COUNT MIDPOINT ONE SYMBOL EQUALS APPROXIMATELY .40 OCCURRENCES

0	-2	
0	0	
8	2	*****
11	4	*****
3	6	*****
8	8	*****
4	10	*****
4	12	*****
3	14	*****
1	16	***
1	18	***
4	20	*****
3	22	*****
0	24	
1	26	***
1	28	***
1	30	***
0	32	
0	34	
1	36	***
0	38	

I.....+.....I.....+.....I.....+.....I.....+.....I.....+.....I
0 4 8 12 16 20
HISTORGRAM FREQUENCY

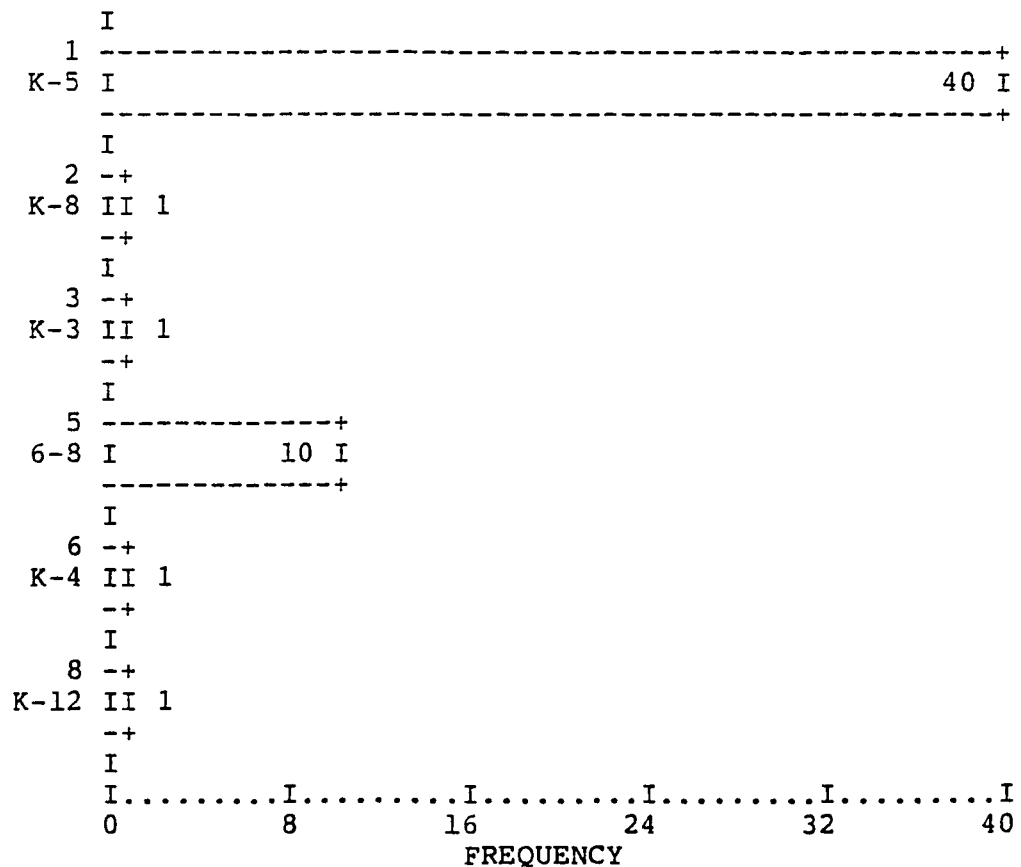
VALID CASES 54 MISSING CASES 2

KLEE PRINCIPAL SURVEY SPRING 1987
PRELIMINARY FREQUENCIES

Q8

BUILDING TYPE

	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
K-5	1	40	71.4	74.1	74.1
K-8	2	1	1.8	1.9	75.9
K-3	3	1	1.8	1.9	77.8
6-8	5	10	17.9	18.5	96.3
K-4	6	1	1.8	1.9	98.1
K-12	8	1	1.8	1.9	100.0
	.	2	3.6	MISSING	
		-----	-----	-----	
	TOTAL	56	100.0	100.0	



VALID CASES 54 MISSING CASES 2