DOCUMENT RESUME

ED 362 307 PS 021 749

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TITLE Schools, Families, and Children: Sixth Year Results from the Longitudinal Study of Children at Risk.
INSTITUTION Chicago Board of Education, IL. Dept. of Research, Evaluation, and Planning.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE Feb 93
NOTE 98p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Academic Achievement; Blacks; Early Intervention; *Elementary School Students; *Family Environment; Grade 6; *High Risk Students; Hispanic Americans; Intermediate Grades; Longitudinal Studies; *School Effectiveness; *Social Adjustment; Socioeconomic Background; Student Attitudes
IDENTIFIERS *Chicago Public Schools IL; Longitudinal Study of Children At Risk IL

ABSTRACT

This report presents grade six findings of the Longitudinal Study of Children at Risk, an on-going, prospective study that has followed 1,235 low-income, minority children in the Chicago Public Schools since 1986. Three major questions are addressed in the report: What are the children's levels of school competence and socioemotional development?; What are the learning environments that these children experience, including the school, classroom, and family?; and, What are the effects of family, school, instructional factors, and individual factors in adjustment, especially those that are alterable in an educational context? The general pattern of results presented in the report indicates that the academic adjustment of the typical child in the study was relatively poor. On average, the children were 1.5 to 2 years behind the national average in reading and mathematics achievement, and 25 percent had been retained in grade. Social adjustment, however, was relatively good, with only 12 percent of students exhibiting delinquent behavior. Most children were happy, optimistic, had high levels of self-esteem, and expected to lead meaningful adult lives. The report recommends that schools: (1) identify at risk children as early as possible; (2) incorporate programs that focus on social adjustment into instruction in order to reduce behavior problems; (3) greatly increase the size and scope of early intervention programs; and (4) encourage teachers to make better use of intrinsic reinforcement in their classrooms. Contains 61 references. (MDM)

Department of Research, Evaluation and Planning

SCHOOLS, FAMILIES, AND CHILDREN: Sixth Year Results from the Longitudinal Study of Children at Risk

CHICAGO PUBLIC SCHOOLS

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Schools, Families, and Children: Sixth Year Results From the Longitudinal Study of Children at Risk

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February 1993

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Printed in the United States of America

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Acknowledgements

We gratefully acknowledge the teachers and principals in the Chicago Public Schools who cooperated with the collection of data for this study. This report would not have been possible without their support. We also thank Maxey Bacchus, Director of Research, Evaluation and Planning and Carlos Rosa, Director of Program Evaluation for their cooperation in data collection. Special thanks go to Jeanne Borger for her help in coordinating the successful completion of this study. Finally, we thank members of the Advisory Committee for their helpful comments and suggestions about the conduct of the study. Especially helpful were Timothy Shanahan, Roger Weissberg, and Herbert Walberg for their review of an earlier draft of this report. This publication was prepared under a grant from the U.S. Department of Education, Office of Educational Research and Improvement.

CHAPTER 1

OVERVIEW AND BACKGROUND

The purpose of this report is to present Grade 6 findings of the Longitudinal Study of Children at Risk (LSCAR), an on-going, prospective study of 1,235 low-income, minority children in the Chicago Public Schools (CPS). Three major questions are addressed in this report: (A) What are the children's levels of school competence and socioemotional development? (B) What are the learning environments that these children experience, including the school, classroom, and family? (C) What are the effects of family, school, instructional factors and individual factors in adjustment, especially those that are alterable in an educational context?

Research Context

The increasing prevalence of children at risk continues to concern educators, researchers, and policy makers alike. Children at risk due to poverty and associated factors, are more likely to drop out of school and experience problems of adjustment (Coll, 1990; Steinberg, Blinde, & Chan, 1984; Tuma, 1989). Children at risk also increase expenditures for supplementary educational programs needed on their behalf.

Children may be at risk for a number of reasons including physical, mental, and sociocultural barriers. Generally speaking, "risk" refers to "a wide range of biological and environmental conditions that are associated with increased probability for cognitive, social, affective, and physical problems" (Kopp, 1983). Sociocultural risk is the most prevalent source of risk. Garbarino (1982) defined sociocultural risk as the "impoverishing of the child's world so that the child lacks the basic social and psychological necessities of life" (p. 32). Natriello, McDill, and Pallas (1990) identified five broad sociocultural risk factors facing children: 1) race/ethnicity, 2) poverty, 3) poorly educated mothers, 4) single-parent families, and 5) limited-English-proficiency. These factors are not only correlated with lower academic achievement and dropout

behavior but are associated with social-emotional adjustment as well as other mental health problems (Tuma, 1989). Other indicators of risk include eligibility for government funding (Slavin & Madden, 1989) and socioeconomic characteristics of neighborhoods (Mincy, Sawhill, & Wolf, 1990). No matter what the criteria, risk usually reflects a lack of adequate resources, education, and support systems to prepare children for academic success. It is notable that risk is not intended to imply inevitability. Indeed, by definition risk means uncertainty and that substantial variation among children will exist in educational outcomes.

The number of children at risk is higher today than ever before. For example, the number of children with any of the above five risk factors has increased since 1984 according to the U. S. Census. Natriello, et al. (1990) indicated that approximately 40 percent of children under 18 are currently at risk, a figure consistent with performance measures reported by the National Assessment of Educational Progress (NAEP, 1985). For instance, between 1979 and 1985 the number of households that increased in poverty were as follows: African American 13 percent, White 23 percent, and Latino 73 percent (Orfield, 1988). Due to the high concentration of at-risk children in metropolitan areas, such trends probably underestimate the severity of the problem in cities like Chicago and Los Angeles. In addition, Mincy, Sawhill, and Wolf (1990) reported increases in the number of poor neighborhoods (40 percent or more low-income) as well as the proportion of poor individuals living in them.

Unfortunately, projections by the U. S. Census Bureau suggest more growth in the population of children at risk in the next century. Natriello et al. (1990) noted some of these projections for 2020:

- 33 percent increase (or 4 million) in the number of children living in poverty, leaving 26 percent (or 16.5 million) of all children in poverty.
- 18 percent increase (or 3 million) in the number of children not living with both of their parents. This will bring the total to 20 million.
- 41 percent increase (or 5 million) in the number of children living with mothers who have not completed high school, bringing the total to 18 million.
- The number of children with a primary language other than English will double to over 5 million.

In view of these findings, it is not surprising that researchers have begun to focus more closely on at-risk children documenting both their problems and the factors that influence their adjustment. The number of scholarly publications devoted to at-risk children in the late 1980s reflects this growing concern (Horowitz & O'Brien, 1989; Natriello, et al. 1990; Slavin, Karweit, & Madden, 1989; Spencer & McLoyd, 1990; Slaughter & Epps, 1987). Despite the more focused attention to the problems of at-risk populations, many of the most important questions are just beginning to be answered; many questions are just beginning to be asked.

Research aimed at preventing the negative effects associated with at-risk status may offer the greatest benefit to children and families. Two areas that have clear implications in this regard are the effects of intervention programs on children's development and the identification of alterable factors that influence children's adjustment.

Evaluating the effects of intervention programs (i.e., Head Start) has been one of the most prevalent research endeavors with at-risk populations (Haskins, 1989; White, 1985-1986). The results of such programs have indicated that intervention programs have significant short-term effects on children's cognitive ability, but

these effects fade considerably after two or three years. White (1985-86), for example, meta-analyzed over 300 intervention programs, mostly for disadvantaged children, and found a substantial immediate effect (one-half a standard deviation), but over time the effects faded substantially. More recently, Haskins (1989) summarized the results of experimental preschool programs and Head Start and concluded that these programs produced significant short-term gains in scholastic achievement but that "gains on standardized IQ and achievement tests as well as on tests of socioemotional development decline within a few years" (p. 278). Due to these results, some investigators (Haskins, 1989; Wachs & Gruen, 1982) have called for major research efforts on the nature of fading effects of interventions. Efforts in this regard may offer insight about the factors that are responsible for carrying forward and maintaining effects once interventions have ceased.

Regarding the factors that influence the efficacy of intervention on children's development as indexed by achievement test scores, a wealth of research has been done, but not a great deal with at-risk populations. Available research indicates that cognitive readiness upon school entry has substantial, lasting effects on cognitive performance (Butler, Marsh, Sheppard, & Sheppard, 1985; Carter, 1984); parent education (high school graduation) positively influences children's success in school (Entwisle & Alexander, 1990; Steinberg et al. 1984); retaining children in grade has negative effects on children's achievement and adjustment (Jackson, 1975; Shepard & Smith, 1989); school adjustment and psychological well-being are related (Kellam et al., 1975); and home environmental conditions influence children's development, including early stimulation and parent responsiveness (Bradley et al., 1989).

Also, it has been found that parents of children at risk have high expectations for their children but often do not have the resources or experiences to help meet their expectations (Alexander &

Entwisle, 1988; Lazar & Darlington, 1982).

There is diversity in the population of children at risk, more than would be expected given their similar characteristics. Kellam et al., (1975), for example, found home ownership within at-risk communities to be greater than expected. Slaughter and Epps (1987) found considerable variation in the home environment of low-income families. It is these kinds of factors which may lead many children to overcome their disadvantages, and go on to lead successful lives (Brambring, Losel, & Skowronek, 1989; Dugan & Coles, 1988). This implies, of course, that risk should be conceptualized as a continuum of experiences rather than an absolute standard.

Yet given the magnitude of the problems of children at risk, research has simply not gone far enough in understanding their lives. More systematic efforts on a wide range of topics need to be made on their behalf. This can even be said for studies of intervention, a topic that has had a great deal of attention. About Head Start, Haskins (1989) noted that "it is surprising that after 20 years, we still do not have good long-term studies of Head Start. The American public spends more than $1 billion per year on Head Start, and yet we have little credible evidence of the positive outcomes . . . that we know are possible" (p. 280).

Models of adjustment that incorporate family, school, instructional, and individual factors of the adjustment process of children at risk are needed to guide research on children at risk. These models must take into account the multiple influences of the family, educational and social context, and individual behavior. However, beyond purely exploratory models, specification of these models implies that the relevant factors can be identified and validly measured. Before embarking completely on this topic, some individual factors need to be clarified. Often, investigators tend to assume that models and factors used to understand children not at risk also apply to children at risk. This assumption may not be warranted.

Different factors and processes may be at work that necessitate separate analyses.

Based on a selected review of the literature, the following questions appear relevant to research with children at risk:

(a) What is the prevalence of children's academic and social competencies as well as problem behaviors?

(b) What role do schools and families play?

(c) What is the level of diversity within at-risk populations?

(d) To what extent do differences in home environmental conditions account for differences in cognitive performance?

(e) What kind of parent involvement is needed to foster academic development?

(f) Which particular instructional methods, teacher behaviors, and school practices bolster performance?

(g) What factors play a role in the continuity and discontinuity of children's development?

Research addressing these questions and others would benefit from a focus on multiple influences. Data collected from multiple sources on a wide range of home, parental, school, and social context factors, as well as multiple child outcomes may provide a more comprehensive context of schooling and development. Longitudinal studies are also important for tracing patterns of development and change over time. Studies occurring early in children's lives are particularly important to examine the onset of risk factors and their possible prevention. Finally because of the inherent complexity of human development, analytical techniques that are consistent with this complexity deserve more attention. Multivariate analyses, for example, have the ability to jointly consider several explanatory and outcome factors which may result in a better understanding of children at risk.

Previous Results of the Longitudinal Study

To address these and other issues, several analyses of the Longitudinal Study of Children at Risk (LSCAR) data set have been

completed. LSCAR traces the school adjustment of children who participated in government-funded preschool and/or kindergarten programs in the Chicago Public Schools. Begun during children's kindergarten year in 1986, LSCAR is in its seventh year of operation (1991-1992). During the first six years, the study has (a) documented the effects of early childhood intervention, (b) identified family and school factors influencing early school adjustment, and (c) developed and tested models of the early schooling process. This perspective specifically avoids inaccurate and harmful portrayals of children at risk as "defective" or as participants in "failed" environments (e.g., a "culture of poverty").

Influence of alterable factors: Childhood intervention, parent involvement, and grade retention. Factors under the influence of families and schools may be the best opportunity for improving at-risk children's school adjustment. Several studies have taken this research perspective. The Chicago Public Schools (Chicago Pubic Schools, 1987) evaluated the Chapter II Child-Parent Center (CPC) all-day kindergarten program implemented in 1986. The program is a comprehensive school-based approach designed to enhance reading readiness and parental involvement for low-income children. Results indicated that the program was successfully implemented as learning activities and family-school relations were consistent with the design. CPC preschool and kindergarten participants performed significantly better than non-CPC participants in reading readiness and mathematics at the end of kindergarten. Also, teachers reported significantly greater involvement by parents of CPC children. A follow-up study (Reynolds, 1989) found that preschool participation was associated with greater parental involvement in school, which affected the Grade 1 outcomes of academic achievement and teacher ratings.

Evaluating the total preschool-to-Grade 3 intervention program, Reynolds (1993) found that when intervention services were

discontinued in Grades 2 or 3, the effects of preschool and kindergarten components faded substantially by Grade 3. Only children who were continuously enrolled in intervention programs for five or six years exhibited higher competence behaviors (reading achievement, math achievement and a lower incidence of grade retention) than the comparison group which received only a kindergarten intervention program.

Reynolds (1992a) tested relationships among reports of parent involvement (i.e., teacher, child, and parents) and achievement in Grades 2 and 3. Although the correspondence among reports of parent involvement at home and in school was low, measures from all sources were significantly associated with reading and mathematics achievement after controlling for the effects of sociodemographic control factors (e.g., sex, family background, grade retention). Teacher reports of parents' school involvement had the greatest relationship with achievement. Parent reports of school involvement also had a significant positive relationship with achievement, but reports of home involvement (i.e., read to child, cook with child, discuss school progress with child) were unrelated to achievement. The latter finding may be due to low variability in parent reports.

Reynolds (1992b) evaluated the effects of grade retention in the primary grades on Grade 4 adjustment outcomes. Using a comprehensive model of school adjustment, retention status (20 percent were retained) was predicted with 85 percent accuracy. Grade retention was significantly associated with lower reading (Effect Size (ES) = -.75) and mathematics achievement (ES = -.65), and was by far the greatest contributor to variation in achievement, including prior achievement in Grade 1. The effects of grade retention on teacher ratings of school adjustment were negligible; effects on children's perceived competence were modestly positive (ES = .31). These findings suggest that alternative policies to grade retention should be implemented with inner city children at risk.

Additional findings of LSCAR indicate that early school mobility is associated with lower achievement in reading and mathematics up to Grade 3 even after controlling for the influence of sociodemographic background factors and child. To the extent that schools or families can limit the frequency of mobility or moderate its potentially harmful effects, children may benefit. In addition, early motivational patterns appear to bolster adjustment outcomes, suggesting their importance in addressing children's early schooling needs (Reynolds, 1991, Bezruczko & Reynolds, 1992). Finally, three studies looked at the writing of LSCAR students (Bezruczko & Mavrogenes, 1992; Mavrogenes & Bezruczko, 1992; Mavrogenes & Bezruczko, in press). In year four, the writing consisted of answers to two open-ended questions on the student surveys. In year five, compositions were elicited from 186 students on a choice of five topics. The main conclusions from these studies were that schools must improve writing instruction and that affective characteristics such as student self-confidence and teacher expectations may influence the quality of students' compositions.

As would be expected, parent educational background, socioeconomic status, and sex (in favor of girls) have shown to be consistently related to adjustment outcomes. Of course, prior achievement has by far the greatest effects. These factors, however, are less amenable to alteration than other background factors. Consequently, they have been used primarily as control variables.

Models of school adjustment. Other LSCAR studies have developed and tested models of the adjustment process. Results have aptly demonstrated that adjustment is marked by multiple and complex influences in which several factors contribute. The models have also been shown to fit the data. That is, they explain reasonably well the process by which early school adjustment unfolds. Reynolds (1989) developed and tested a social-psychological model of first grade outcomes. Reading achievement, mathematics achievement, and teacher

ratings of socioemotional maturity were influenced by three blocks of factors derived from the research literature: readiness attributes (prekindergarten, school socioeconomic status, cognitive readiness, and sex), intervening kindergarten influences (motivation, peer achievement, kindergarten achievement), and intervening first year influences (school mobility and parent involvement in school). This specification was designed for testing the complex effects of schooling, including indirect effects. It was found that cognitive readiness impacted achievement by influencing other factors such as kindergarten motivation and parent involvement (indirect effects). The study also indicated the positive direct effects of parent involvement, the positive indirect effects of preschool, and the negative direct effects of school mobility on achievement that have not been apparent in other studies (Also see the previous section).

A second grade follow-up study (Reynolds, 1991) further probed the model, indicating that the model explained a significant amount of variation in early school outcomes. Of the several factors having direct, indirect, and mediating effects, cognitive readiness, motivation, school mobility, and parent involvement in school were notable. Cognitive readiness continued to influence achievement in second grade by influencing the intervening factors of motivation and kindergarten achievement. Also, the negative effect on achievement of changing schools after kindergarten increased from first to second grade.

Reynolds (1992c), testing a mediated model of preschool effects on Grade 3 achievement, also found support for the interdependency of family, school, and individual factors on development. For example, the transmission of preschool effects depended on several family and school factors experienced after preschool attendance. These included cognitive school readiness at kindergarten entry, teacher ratings of school adjustment in Grade 1, parent involvement in school activities and the avoidance of school mobility.

Analysis of complementary models through Grade 5 provide further support to the complex process of school adjustment. Bezruczko and Reynolds (1992) and Reynolds and Bezruczko (in press) postulated that school adjustment - defined by reading achievement, teacher ratings, and self-perceptions of competence - is a sequential process of four groups of factors: readiness attributes that children bring with them to school (e.g., gender, family background), early adjustment factors in kindergarten and Grade 1 (achievement and teacher ratings), and intervening support-based (parent involvement, school program services, and literacy) and life-event factors (school mobility, special education placement, and grade retention). Findings indicated that support-based and school life-event factors contributed to adjustment beyond that explained by the readiness attributes and early adjustment factors.

Present Sixth Grade Study

These earlier studies illuminate some of the influences on children at risk of school failure due to poverty. The early schooling process is a network of complex influences to which several factors contribute. Many of these factors are under the influence of family and schools. Although these data add to our understanding of the adjustment of children at risk in the inner city, several issues remain unstudied. One is that previous studies have not comprehensively probed the social and instructional processes within schools and classrooms that influence adjustment. Such factors may range from basic school and classroom characteristics (e.g., size, composition, organization) to process measures that reveal the functioning of the school and classroom. For example, schools and classrooms with a strong academic emphasis, high structure, frequent accountability, high teacher expectations and support for student progress are positively associated with higher achievement and better adjustment (Mortimore et al., 1988; Rutter et al., 1979). Also, several classroom characteristics have been found to be moderately to

strongly related to children's adjustment outcomes, including reinforcement of positive behavior, time-on-task, rule clarity, frequent homework assignments, and multiple instructional strategies (Bloom, 1976; Moos, 1979; Walberg, 1984). Given the complexity of measuring such factors, detailed assessment of the schools and classrooms is necessary. Unfortunately, such data are rare for inner-city populations. In the present study, in-depth observations have been made of children's proximate school and classroom learning environments through classroom observations as well as interviews with teachers. Several school-level characteristics also were obtained to describe the learning environments which children experience.

Another relevant issue regards the measurement of children's adjustment. Although studies of intervention tend to examine academic, adjustment is a broad concept that includes social and psychological dimensions that co-occur. For example, children who perform poorly in school may also be disruptive in class. Although these adjustment dimensions are similar, they are also conceptually distinct and need to be measured concurrently to get a full picture of the rates, determinants, and consequences of adjustment. An important consideration in measuring adjustment is to determine the prevalence of competence and problem behaviors, especially for children who were initially at risk of school failure and associated problems. For example, knowledge of particular adjustment problems both in and out of school can be used to target interventions for children with the greatest need. Determining the rate of such problems also has implications for the timing and duration of interventions. To help assess the prevalence of these competence and problem behaviors, the *Teacher-Child Rating Scale* (T-CRS) has been used. This standardized instrument measures socioemotional adjustment along seven dimensions with two over-arching clusters -- Competence and Problem Behaviors. Moreover, because children's own perceptions of behavior and adjustment are important determinants of success (Moos, 1979), their

self-ratings were also obtained, as were teacher ratings of the students' performance in school.

Finally, comprehensive approaches to understanding children's adjustment must include the family as a major focus of investigation. Thus, a prominent feature of the study is to describe and better understand parents' contribution to children's adjustment. Previous analyses of this data set indicated that parent reports of involvement at school and home had relatively small effects on academic achievement. One reason for this is that parents may influence their children in ways other than behavior (at home or in school). The home atmosphere parents help create, their attitudes and values toward education, and their monitoring behavior have all shown significant relationships with adjustment (White, 1982). The social and economic context of parent behavior is also important to understand, especially because low-income families often face severe economic hardships and stressors. Finally, sample nonresponse may have also contributed to the relatively low effects of parental behavior on children in previous studies, since many hard-to-reach parents have not been surveyed or interviewed in previous studies. Consequently, telephone interviews with a random sample of nonrespondents have been conducted and will be reported in the present study.

Study Questions

The present study, relying on data collected during children's sixth grade year (1991-1992), addresses three major questions.

A. What are children's levels of school adjustment along academic, social, and psychological dimensions? What is the prevalence of competence and problem behaviors?

B. What are the characteristics of the classroom and school learning environments to which children are exposed?

C. What are the effects of school, instructional, family, and individual factors in adjustment, especially those that are under the influence of families and schools? These

factors -- measured from multiple sources -- include the school environment, teacher instructional strategies and attitudes, parental attitudes and behavior, and child attitudes and behavior.

CHAPTER 2

STUDY METHODS

Sample Selection

The study sample includes 1,235 children (95 percent African American, 5 percent Hispanic) who were active in Grade 6 in the Chicago Public Schools. This sample is 79 percent of the original sample of 1,539 children who enrolled in government-funded kindergarten programs in the 1985-1986 school year. The sample retention rate is extraordinary given that the typical rate over three waves of data collection is about 50 percent (Kessler & Greenberg, 1981). The study sample is similar to the original sample on nearly all measured characteristics such as family background, sex, and school SES.

Children enrolled in one of four kindergarten programs (Chapters 1 and 2 Child-Parent Centers; Chapter 2 Kindergarten; and the Chicago Effective Schools Project (CESP), a local all-day kindergarten program from which six schools were randomly selected). Entry into these programs requires residency in an area eligible for Educational Consolidation and Improvement Act (ECIA) Chapter 1 services and applicants were accepted on a most-in-need basis.

A unique feature of this sample is that three of the four groups participated in the CPC preschool-to-Grade 3 intervention program for different lengths of time (up to six years). The program has five distinct features: (a) opportunity for continuous program services from preschool to third grade in a stable learning environment, (b) comprehensive support services that include a head teacher and support staff, (c) individualized instruction through reduced class size and tutoring, (d) emphasis on reading readiness skills and affective development, and (e) parent involvement in school activities.

Approximately 70 percent of the total sample participated in government-funded preschool programs (65 percent Child-Parent Center, 5 percent Head Start).

Children were at multiple risk of school difficulties. All children were ethnic minority and attended kindergarten schools in poverty neighborhoods. Over 90 percent of the surveyed parents reported their child was eligible for a partial or full lunch subsidy. A substantial number of parents (41 percent) reported that they did not graduate from high school, although, because of missing data and unreliability of parent reports, this may be a conservative estimate.

Instruments and Data Collection

In Grade 6, data were gathered from classroom and school observations, student surveys and interviews (subsample only), teacher surveys and interviews, parent telephone interviews, standardized tests, and school records. (The student, teacher, and parent interviews are of a subsample only.) Copies of the instruments and response frequencies are available for review (see Bezruczko & Reynolds, 1993).

A wide range of social-psychological data have been collected from children, parents, and teachers from 1986 (kindergarten) to 1992 (Grade 6). A partial list of these variables includes prekindergarten experience, cognitive readiness, parent involvement, family background and environment, school mobility, retention, school attitudes, motivation, yearly cognitive achievement, composition samples, and teachers' assessment of child progress every spring. More specific information is described below.

Standardized test scores. To assess the mastery of basic skills in reading comprehension and mathematics, children completed the *Iowa Tests of Basic Skills* (ITBS, Form H Level 11 or 12; Hieronymus & Hoover, 1990) in the spring of 1992 as part of the public school's citywide testing program. Reading comprehension includes 49 items on proficiency in understanding text passages. Mathematics total achievement includes 95 items on computation, concepts, and problem solving. Reliability and predictive validity of the tests are among the highest of all standardized achievement tests. Internal

consistency reliabilities are .93 and .95, respectively, for reading and mathematics. For the analyses below, grade-equivalent scores were based on the 1988 normative sample.

Teacher ratings. The *Teacher-Child Rating Scale* (T-CRS; Hightower, Spinell, & Lotyczewski, 1989; Hightower, Work, Cowen, Lotyczewski, Spinell, Guare, & Rohrbeck, 1986) was used to measure children's socioemotional development. For this instrument, teachers rated 38 student behaviors in schools across seven dimensions which form two domains of adjustment. The 20-item **Competence** domain surveys the following:

ITEM	EXAMPLE
Frustration Tolerance	"Accepts things not going his/her way")
Assertive Social Skills	"Participates in class discussions"
Task Orientation	"Completes work"
Peer Social Skills	"Has many friends"

Items defining these behaviors were rated from 1 (Not at all) to 5 (Very well). The 18-item **Problem** domain surveys the following:

ITEM	EXAMPLE
Acting Out Behavior	"Disruptive in class"
Shy-Anxious Behavior	"Withdrawn"
Learning Problems	"Poorly motivated to achieve"

Items were rated from 1 (Not a problem) to 5 (Very serious problem). The sum of the item responses within each domain were used for the analysis.

Psychometric characteristics of the T-CRS indicate that it reliably and validly measures children's adjustment. Internal consistency reliabilities of the dimensions average over .90 and test-retest reliabilities (at 10 weeks) average over .70 (Hightower et al., 1986). Evidence of validity derives from the moderate intercorrelations of items within dimensions, the ability of items to discriminate between girls and boys, and the significant correlations of item responses with teacher grades, achievement test scores, and

of item responses with teacher grades, achievement test scores, and parent ratings (Hightower et al., 1986).

In addition, the teacher survey assessment form was used to complement the T-CRS by assessing socioemotional maturity, parent involvement in school, and course performance in reading and mathematics. Teachers also noted any delinquency behavior of students. With the exception of course performance, items were rated from 1 (poor/not at all) to 5 (excellent/much). Socioemotional maturity was a sum of six items.

Parent telephone interviews. Parent surveys were designed to gather information about children's home environment, frequency of school-related activities, and attitudes of parents and their children toward school success. Data were gathered from mailed questionnaires in years two and four and from telephone interviews in year six. Overall, parents (mostly mothers) of 802 students responded and provided information on their education and income (eligibility for lunch subsidy). Other information obtained included the frequency with which they read, cook, discuss school progress with child as well as participate in school activities. For completeness, these responses were combined with those from Grade 4 in summarizing responses.

Student survey assessment. For this survey, children responded to items about their attitudes toward school, behavior at home and in school, competencies in school, and family involvement in their education. Items were rated from 1 (Strongly Disagree) to 4 (Strongly Agree). Item responses were summed to form two scales. The perceived school competence scale consisted of 12 items identified by principal components analysis. The perceived school environment scale consisted of seven items about the level of support and task orientation of the learning environment.

Classroom observations/interviews. To assess the type and frequency of instructional activities in the classroom as well as the school environment, 28 schools were randomly selected from the total number of schools in which children were enrolled in Grade 6. In addition, the eight schools having the largest number of LSCAR students were also included. In each sampled school, at least two classrooms were observed which enrolled study children. The Classroom Observation Form assessed the learning environment in six areas: teacher reinforcement system, teacher behavior toward children, classroom strategies, orderliness in the classroom, amount of learning observed, and type of instruction. Also, at least one teacher and one student per school were interviewed about their perceptions of school and home problems.

School characteristics. Data on schools from the Illinois State Report Card were used to describe school characteristics. These include school size, class size, per-pupil expenditures, school racial and ethnic composition, socioeconomic composition, and several performance indicators (achievement, grade retention, special education placement).

Data Analysis

Descriptive and explanatory analyses were conducted to address the major study questions. Response frequencies, total and subgroup means, and correlational analysis were used to describe the characteristics of schools, families, and children. Hierarchical regression analysis was then performed to identify and describe determinants of children's adjustment.

CHAPTER 3

SCHOOL ADJUSTMENT AND PERFORMANCE

This section describes children's school adjustment in Grade 6 across several measures of academic and social performance. The following measures of adjustment are examined in this section: (a) reading and mathematics achievement, (b) reading and mathematics grades, (c) school absences, and (d) teacher ratings of competence and problem behaviors.

Academic Adjustment

Reading comprehension. ITBS scores in reading and math for several sample groups are reported in Table 1. The mean grade-equivalent score in reading comprehension for the total sample was 5.1 or the 26th percentile. Never-retained sixth graders, of course, had higher scores ($\underline{M}$ = 5.5) than fifth graders who had been retained at least once ($\underline{M}$ = 4.0). Without exception, girls scored higher than boys in all subgroups. Overall, they scored 5.4 grade equivalents, six months higher than boys.

The distribution of scores was skewed substantially toward the bottom range. Over one-half the sample scored in the first quartile. The percent of children scoring in the third and fourth quartiles was less than 20 percent, especially for boys. More boys were in the first quartile than girls, and 41 percent of the sample are more than two years behind others in their age group in reading performance. Indeed, only 13 percent of the sample performed at or above the national average for sixth graders (50th percentile or 6.8 grade equivalents).

Mathematics achievement. Performance in mathematics paralleled that of reading achievement, although scores were slightly higher. The mean grade-equivalent score for mathematics for the total sample was 5.5 (27th percentile). Never- retained sixth graders scored 5.9 and retained fifth graders scored 4.2. Girls again outperformed boys

Table 1

Grade 6 ITBS Achievement by Group

Group	N	Reading comprehension GE	%ile	Quartile 1	2	3	4	Mathematics Total GE	%ile	Quartile 1	2	3	4
Total Sample	1206	5.1	26	58	30	10	2	5.5	27	57	25	12	6
Sixth graders	916	5.5	28	53	32	12	3	5.9	31	51	26	16	7
Girls	514	5.7	30	49	34	14	3	6.0	32	48	28	16	8
Boys	402	5.3	26	59	28	11	2	5.8	29	54	25	14	7
Fifth graders	290	3.8	17	74	22	4	0	4.2	16	77	19	2	2
Girls	102	3.9	17	75	18	7	0	4.2	16	78	16	4	2
Boys	188	3.8	16	73	24	3	0	4.2	16	76	20	2	2
Total girls	616	5.4	28	53	32	12	3	5.7	29	53	26	14	7
Total boys	590	4.8	23	63	28	8	1	5.3	25	61	23	11	5

	N	Reading grade Mean	%D/F	%C	%B/A	Math grade Mean	%D/F	%C	%B/A	Absences %0-3	%4-12	%13-
Total Sample	802	2.0	34	36	30	1.9	36	36	28	31	45	23
Sixth graders	609	2.1	27	37	36	2.1	30	36	34	33	45	22
Girls	336	2.4	19	37	45	2.2	26	33	41	35	46	19
Boys	273	1.9	37	36	27	1.9	36	29	35	30	43	27
Fifth graders	193	1.4	56	36	8	1.5	52	36	12	27	48	25
Girls	69	1.5	51	38	11	1.6	49	38	13	37	44	19
Boys	124	1.3	59	35	6	1.4	54	35	11	22	50	28
Total girls	405	2.2	24	37	39	2.1	30	34	36	35	46	19
Total boys	397	1.7	44	36	20	1.7	41	39	20	27	45	27

Note. Sixth grade group includes six seventh graders; fifth grade group includes one third grader, 19 fourth graders, and 18 children in special education (they are usually retained).

in math achievement, although the difference was only two months. Examining the distribution of scores, a majority of children occupied the first quartile. Only 23 percent of sixth graders, for example, were above the 50th percentile nationally. Overall, 18 percent scored at or above the national average of 6.8 grade equivalents (all children).

Performance on the individual math subtests indicated relatively better performance on computation (Total $\underline{M}$ = 5.8) than on concepts

(Total $\underline{M}$ = 5.5) or problem solving (Total $\underline{M}$ = 5.2). The low scores in problem solving represent underdeveloped higher-order thinking skills. On all the subtests, well over half the sample scored in the first quartile.

Reading grade. Teacher-rated marks in reading indicated the typical child earned a C in sixth grade. Girls were one-half a grade higher, and they earned nearly as many A's and B's as other marks. Fifth graders, however, were performing in the D range ($\underline{m}$ = 1.4), in which a majority were given a D or F for a final grade. The number of A's and B's earned was greater than would be predicted by children's low achievement test scores.

Math grade. Teacher-rated grades in math were similar to those in reading -- about a C average. Girls earned higher grades than boys and retained children received the lowest grades. About 35 to 40 percent of sixth graders earned A's and B's.

Absences. Approximately one-third of the sample were rarely absent from school (zero to three days). About 45 percent were absent from 4 to 12 days during the school year. Twenty to 25 percent were absent more than 12 days from school. Absences were unrelated to grade in school. Girls, however, had fewer absences than boys. When girls were absent they were more likely to miss only zero to three days.

Special Education and Retention. Two additional indicators of academic adjustment were the school competence measures of special education placement and grade retention. Twelve percent of the sample in Grade 6 (124 students), were placed in mainstreamed and self-contained special education classes. The distribution was as follows: 87 learning disabled; 20 emotionally behaviorally disordered; 20 speech and language impaired; 16 emotionally mentally handicapped; 2 hearing impaired; and 1 other. More boys than girls were placed in special education.

About two percent of the sample (N = 34) were retained in Grade 5 for the 1991-1992 school year. This rate is somewhat lower than in previous years. In total, 25 percent of the sample were retained at least once by Grade 6. Of these, 20 children were retained twice. Boys were more often retained than girls.

Social Adjustment

Teacher ratings of competence and problem behaviors are shown in Tables 2 through 4. They address aspects of children's social adjustment, an important ingredient of overall developmental functioning. Overall, results indicate that about 40 percent demonstrated general competence, 30 percent showed marginal competence, and 30 percent had serious problems in adjustment. Girls showed significantly better adjustment than boys on all dimensions.

Competence behavior. Summary ratings of the T-CRS are shown in Table 2. They indicate that children were rated in the middle range of competence behavior (M = 60.8). Of the four competence subscales, Peer Social Skills and Assertive Social Skills were, on average, children's highest competencies. Frustration Tolerance and Task Orientation were rated lower, indicating lower competence. Estimated rates of competence are indicated by the category " percent high rating," which is the percent of children above the per-item average of three scale points. Approximately one-half (47 percent) of the sample met this requirement for the Competence Total Scale. About 40 percent met the criterion for Frustration Tolerance and Task Orientation, and about 50 percent for Peer Social Skills and Assertive Social Skills. Thus, 47 percent of the sample were classified generally competent (Competence Total).

Notably, girls had higher ratings than boys on all competence dimensions and items. This was particularly true for Competence Total, Task Orientation, and Frustration Tolerance.

Table 2

Total and Subscale Scores on the Teacher-Child Ratings Scale (T-CRS) for Competence/Problem Behavior

Scale	Total (n = 813)			Girls (n = 406)			Boys (n = 407)		
	Mean	SD	% high rating	Mean	SD	% high rating	Mean	SD	% high rating
Competence Total[a]	60.8	16.7	47	64.3	17.2	57	57.2	15.5	37
Frustration Tolerance	14.3	4.9	37	15.3	5.0	43	13.3	4.6	30
Assertive Social Skills	15.5	4.8	49	16.0	5.0	52	15.0	4.6	45
Task Orientation	14.4	5.5	39	15.9	5.5	51	12.8	5.1	26
Peer Social Skills	16.7	4.8	54	17.2	4.8	59	16.1	4.7	50
Problems Total[b]	37.8	15.7	17	33.8	14.6	11	41.7	15.7	23
Acting Out	12.7	6.9	21	11.0	6.2	13	14.4	7.2	29
Shy-Anxious	10.1	4.5	6	9.7	4.3	5	10.4	4.6	7
Learning Problems	15.0	7.3	34	13.0	6.9	23	17.0	7.2	44

Note. The items that were grouped into subscales for Competence and Problems Totals appear in Tables 3 and 4.

[a]High rating defined as average score per item greater than 3.0 on the 5-point scale.

[b]High rating defined as average score per item greater than 2.0 on the 5-point scale.

Response frequencies for the individual competence items are shown in Table 3. For the 20 competence items, higher competence was demonstrated for Peer Social Skills and Assertive Social Skills, especially the former. The percent rated "well" or "very well" ranged from 33 to 49 percent, with most ratings in the 40 percent range. The peer social skills of "Is friendly toward peers" (49 percent) and "Well-liked by classmates" (44 percent) were rated relatively high. Ratings for Task Orientation and Frustration Tolerance were somewhat lower. The items "Ignores teasing" (23 percent), "Copes well with failure" (25 percent), "Well organized" (25 percent), and "A self-starter" (29 percent) were rated "well" or "very well."

Problem behavior. In contrast to competence behavior, higher scores on the problem subscales reflected greater severity of problems. Teacher ratings indicated relatively moderate degrees of problem behaviors (Problem Total $\underline{M}$ = 37.8), although teachers may be less likely to report severe behavioral problems than they are to judge behavior positively. For this reason, the average per-item

Table 3

Prevalence of Competence Behaviors Rated by Teachers on the Teacher-Child Rating Scale (T-CRS)

Subscale/item	Percent rated		
	Well or Very Well	Moderat. Well	A Little/ Not at All
Frustration Tolerance			
Accepts things not going own way	31	31	38
Ignores teasing	23	29	47
Accepts imposed limits	34	35	31
Copes well with failure	25	36	39
Tolerates frustration	25	35	40
Assertive social skills			
Defends own views under pressure	41	35	24
Comfortable as leader	33	27	40
Participates in class discussions	41	29	30
Expresses ideas willingly	36	31	33
Questions rules that seem unfair	38	28	34
Task Orientation			
Completes work	36	30	34
Well organized	25	30	45
Functions well with distractions	28	28	44
Works well without supervision	33	31	36
A self-starter	29	24	47
Peer Social Skills			
Has many friends	43	36	21
Is friendly toward peers	49	32	19
Makes friends easily	42	35	23
Classmates wish to sit near/child	39	32	29
Well-liked by classmates	44	34	22

scale value of two defined "percent high rating. "Learning problems were the most serious difficulty (M = 15.0, 21 percent high ratings), Acting Out problems were in the middle range (M = 12.7, 21 percent high ratings), and Shy-Anxious problems were the least significant (M = 10.1, only six percent received high ratings). These findings indicate that the most prevalent problems of children are academic rather than emotional or social. Indeed, this could be predicted from the low achievement test scores reported earlier.

Girls exhibited significantly fewer problem behaviors than boys. Mean differences on Acting Out and Learning Problems were especially notable. Problem behaviors by item are reported in Table 4. Ratings included "serious or very serious," "mild or moderate," and "not a problem," As shown, learning problems were the most prevalent problem as 32 and 33 percent, respectively, were rated as having serious or very serious problems with work habits and underachieving. Only about 30 percent of children were rated as not having a problem with academic performance and motivation. Acting Out problems were rated serious or very serious for about 20 percent of the sample and not a problem for about one-half the sample. Again, these findings indicate that academic problems in school are the most serious difficulties facing these children at risk. Teachers also filled in open-ended comments about delinquency or problems approaching delinquency. Of the 813 teacher responses, 95 children or 12 percent were identified as exhibiting delinquency-type behaviors. Among the most frequently cited were fighting, disruptive behavior, and truancy. This estimate may be a lower-bound estimate because of substantial nonresponses and the lack of awareness by teachers of all behavioral problems outside of school.

Relationships Among Adjustment Indicators

Correlations among the adjustment indicators are listed in Table 5. Nearly all the intercorrelations were of moderate to high magnitude. As expected, reading and math achievement (r = .78) and Competence Total and Problems Total (r = -.75) had the highest correlations. Correlations between achievement and Competence/Problem behaviors were in the .45 to .50 range. Reading and math grades also correlated moderately with achievement scores and teacher ratings (rs = .58-.62). School absences had relatively low correlations with achievement scores and teacher ratings (rs = .14-.22) as did grade retention and special education with teacher ratings (rs = .19-.21).

Table 4

Prevalence of Problem Behaviors Rated by Teachers

Subscale/item	Percent rated as		
	Serious or Very Serious	Mild or Moderate	Not a Problem
Acting Out			
Disruptive in class	17	38	45
Fidgety, diff. sitting still	16	34	50
Disturbs others while working	20	35	45
Constantly seeks attention	17	33	50
Overly aggressive to peers	16	30	54
Deviant, obstinate, stubborn	22	29	49
Shy-Anxious			
Withdrawn	5	28	67
Shy, timid	5	33	62
Anxious, worried	6	33	61
Nervous, frightened, tense	6	26	68
Does not express feelings	9	40	51
Unhappy, sad	7	30	63
Learning Problems			
Underachieving	32	40	28
Poor work habits	33	36	31
Poor concentration, limit. attent.	25	40	35
Difficulty following directions	20	40	40
Poorly motivated to achieve	24	39	37
Learning academic subjects	26	40	34

Changes from Grade 5 to 6

Also investigated were gains in reading and mathematics achievement from Grades 5 to 6. For the total available sample, 14 percent performed at the national average in reading in Grade 5. In Grade 6, 12 percent of the sample performed at the national average. In grade equivalents mean performances were, respectively, 4.2 and 5.1.

For mathematics achievement, the percentage of children scoring at or above the national average was 19 percent for both Grade 5 and 6. Grade-equivalent means were, respectively, 4.6 and 5.5.

Table 5

Intercorrelations of School Adjustment Measures

Measure	Reading ach	Math ach	Problems total	Comp total	Reading grade	Math grade	Absences
Reading achievement	1.00	.78	-.46	.47	.62	.49	-.14
Math achievement		1.00	-.46	.49	.59	.54	-.15
Problems total			1.00	-.75	-.58	-.55	.22
Competence total				1.00	.62	.57	-.20
Reading grade					1.00	.77	-.24
Math grade						1.00	-.28
Absences							1.00

The incidence of grade retention between Grades 5 and 6 was two percent, as the cumulative retention rate increased from 23 percent to 25 percent. This was a small increase relative to previous years. Notably, Grade 1 was the time of most retentions (11 percent) because many children experience difficulties associated with learning to read. A common response of schools is to retain them in grade.

Classification of Adjustment

Of additional interest were estimates of the prevalence of adjustment defined as "successful" and "unsuccessful." Although such classification is somewhat arbitrary, identification of children at risk who are well adjusted despite their risk status is critically important in better understanding the adjustment process. Adjustment was defined as follows.

Scholastic adjustment. Three criteria determined the extent of scholastic success in school: (a) Reading achievement test scores at or above the national average for sixth graders (6.8 grade equivalents or the 50th percentile rank), (b) mathematics total achievement test scores at or above the national average for sixth graders (6.8 grade equivalents or the 50th percentile), (c) being a sixth grader during the 1991-92 school year without any history of grade retention, and (d) never having been placed in special education (mainstreamed or self-contained).

Social Adjustment. Four criteria determined children's social adjustment: (a) Competence Total scores greater than 60 (average per item value greater than 3.0), (b) Problems Total scores less than 36 (average per item value less than 2.0), and (c) no record of teacher ratings of delinquency behavior in either fifth or sixth grades. Also, no individual subscale score beyond the per-item average of 3.0 and 2.0 for Competence and Problem domains, respectively, were allowed. If children's scores were missing in (a), scores from the previous year on a six-item scale of teacher ratings were used. Those missing scores in (b) were filled with similar problem-based items from the previous (i.e., "Is withdrawn," "Is disruptive"). Children missing on (c) were assigned the values of items administered in Grades 3 or 4.

The criteria of both dimensions of adjustment are consistent with many previous studies of children's scholastic and social adjustment. The multiple criteria employed provide comprehensive measures of adjustment.

The results of the classifications in Table 6 indicated that 8.7 percent of the total sample met all four scholastic adjustment criteria, 12.7 percent met three of the criteria, 49.6 percent satisfied two criteria, 21.4 percent met only one criteria, and 7.5 percent met none of the criteria.

A greater percentage of children displayed relatively high social adjustment as 28.4 percent of the sample met all three criteria, 35.3 percent met two criteria, 29.1 percent met one criteria, and 7.2 percent met none of the criteria. For both scholastic and social adjustment, girls did significantly better than boys on all indicators. The correlation between scholastic and social adjustment scales was .28.

Combining academic and social indicators resulted in the Index of Total Adjustment. Fourteen percent (14 percent) of the sample met six or seven criteria and were classified as well adjusted, 17.6 percent

Table 6

Indicators of Scholastic and Social Adjustment in Grade 6 by Gender

Indicator		Percentage of sample		
		Total	Boys	Girls
Scholastic adjustment				
1. ITBS Reading > 6.7		12.3	8.9	15.7
2. ITBS Mathematics > 6.7		18.8	15.1	22.4
3. No history of grade retention		75.1	66.9	83.0
4. No special education placement		87.6	83.0	92.2
	Total 0-1	28.9	38.4	19.7
	2	49.6	45.2	53.9
	3	12.7	9.7	15.7
	4	8.7	6.7	10.7
Social Adjustment				
5. T-CRS Competence > 60		39.2	30.8	47.5
6. T-CRS Problems < 36		59.1	51.3	66.7
7. No history of delinquency		86.6	81.3	91.7
	Total 0-1	36.3	45.9	26.9
	2	35.3	33.9	36.6
	3	28.4	20.2	36.5

met five of the criteria and were classified as moderately adjusted, 24.2 percent (four criteria) were marginally adjusted, 24.2 percent (three criteria) were unsuccessfully adjusted, and 20 percent (0 to 2 criteria) were classified as poorly adjusted. Girls performed best on the Index of Total Adjustment as 18.2 percent were well adjusted, 21.8 percent moderately adjusted, 28.5 percent marginally adjusted, 20.6 percent unsuccessfully adjusted, and 10.9 percent poorly adjusted. Percentages for boys were, respectively, 9.7, 13.3, 19.8, 27.9, and 29.3.

Adjustment Across School Contexts

To investigate the role of the school environment in influencing children's school adjustment, performance on the Index of Total Adjustment was calculated for three different school contexts. The criteria was the percentage of students in each school who scored at or above the national average in reading and mathematics achievement. Schools in which zero to 15 percent of the students did so (n = 125) were rated poor, schools in which 16 to 25 percent of the students did

so (n = 99) were rated marginal on academic performance, and schools in which over 25 percent of the students performed at or the above the national average in achievement (n = 66) were rated good. The number of children in the study sample enrolled in these schools were, respectively, 680, 359, and 196. This trichotomy of schools was distinguished not only by differences in achievement but by differences in school size, race/ethnicity composition, poverty, and parent-teacher contacts. Schools rated as "good" had fewer students, were more integrated, had less poverty, and more parent-teacher contacts than the two other school types.

Table 7 shows the adjustment of children by the three school types. As the school environment improves so does the rate of children's individual school adjustment. Most strikingly, the percentage of children classified as well adjusted (27.6) was over three times higher in schools rated "good" than in schools rated "poor" (9.1 percent). Likewise, almost one-half of children (49.1 percent) enrolled in schools rated "poor" were poorly adjusted in school.

School Correlates of Adjustment

To determine the contribution of school characteristics to children's school success, relationships with the three adjustment indices were examined. As shown in Table 8, the following school variables were significantly associated with total adjustment scores: academic achievement, percent mobility, percent low income, minutes of math instruction, and number of students. School achievement (measured by percent of students scoring at or above the national mean in reading and math) had the highest correlation, indicating that children attending schools with higher academic achievement were, on average, more academically and socially adjusted. Gender (in favor of girls), parent education, and eligibility for free lunch were significantly correlated with school total adjustment scores.

Table 7

Adjustment Rates (in percents) by Three School Types

Index of Total Adjustment	Relative academic performance of school: Poor	Marginal	Good	N
Poorly adjusted (0 to 3)	49.1	41.2	32.7	546
Marginally adjusted (4 to 5)	41.8	42.9	39.8	516
Well adjusted (6 to 7)	9.1	15.9	27.6	173

Additional analyses of these data via multiple regression analysis revealed that school academic achievement uniquely contributed to children's total school adjustment after controlling for the influence of other school and child characteristics. Girls, children of high school graduates, and children of parents not eligible for free lunch also had significantly higher total adjustment scores.

Moreover, children enrolled in schools with larger proportion of teachers with master's degrees were better adjusted than other children. Although results were similar for social adjustment, school-level mobility rather than schools' prevalence of master's degrees was a significant predictor for academic adjustment.

Summary

The scholastic performance in reading and math of children was in the 25th percentile or about one-and-a-half years behind the typical sixth grade child in the U. S. Thirteen and 18 percent of children scored at or above the national average in reading and mathematics, respectively. The typical child had about a C average and 20 percent were absent 13 or more times during the school year. Children's social adjustment was somewhat better. Teachers rated 47 percent of the children as exhibiting minimal competence and 17 percent as exhibiting serious problem behavior. They were rated relatively high in assertive social skills and peer social skills but also in learning problems and acting out behavior. Children were rated lower in

Table 8

School and Child Correlates of Adjustment

Characteristic	Total adjustment	Social adjustment	Academic adjustment
Schools			
Percent low income	-.14	-.09	-.14
Percent white	.03	.05	-.01
Percent black	-.001	-.02	.02
Percent hispanic	-.01	-.003	-.02
No. of students	.13	.10	.10
Academic achievement	.27	.20	.23
Parent-teacher contacts	.01	-.02	.04
Per-pupil expenditures	-.09	-.06	-.08
Minutes of language instr.	-.09	-.10	-.04
Minutes of math instr.	.19	.14	.17
Percent mobility	-.22	-.12	-.24
Class size	.07	.05	.06
Percent truancy	-.05	-.05	-.03
Percent with master's	.01	.04	-.02
Children			
Girls	.24	.19	.20
Parent education	.15	.07	.17
Free lunch eligibility	.17	.15	.13
Age at school entry	.01	-.05	.06
School SES in kinder.	-.02	-.02	-.01
Perceived school envir.	.11	.13	.04

Note. Values greater than .07 (absolute values) are significant at the .05 level.

frustration tolerance. Teachers also reported 12 percent of children as displaying delinquency-type behavior.

Combining scholastic and social adjustment indicators into an Index of Total Adjustment, 14 percent of the sample were classified well adjusted, 18 percent moderately adjusted, 24 percent marginally adjusted, 24 percent unsuccessfully adjusted, and 20 percent poorly adjusted. Girls were consistently better adjusted than boys both academically and socially.

The rate of total adjustment varied substantially by school context. Schools characterized as relatively "good" (i.e., higher

achievement, fewer students, lower poverty, and greater parent-teacher contacts) had three times more well adjusted children than schools of rated relatively "poor," Schools' academic performance in reading and mathematics was the dominant school characteristic predicting individual children's academic and social adjustment.

CHAPTER 4

SCHOOL AND CLASSROOM LEARNING ENVIRONMENT

Information on the school and classroom learning environment of LSCAR children comes from a variety of sources. First, a special field study looked at both schools and classes containing the largest numbers of children (N = 8 schools) and then at a random sample of other schools and classes (N = 28 schools). Instruments used were (1) classroom observation forms, (2) teacher interview forms, and (3) neighborhood and school observation forms. A second source consists of surveys sent to all children in the study and their teachers at the end of the year. A third source is general information on schools and children from the CPS State Report Card for 1990-1991 and from individual school profiles. Finally, some data is presented about performance on the *Iowa Tests of Basic Skills* (ITBS). These sources will be looked at in individual groups and then a final section will summarize results and implications.

Classroom Observations

LSCAR staff observed 61 classrooms in 36 schools. These observations, lasting from 30 to 60 minutes, were conducted between December 1991 and March 1992. The median observed student on-task percentage was 85, with a range from 15 to 100 percent. Other questions on the observation form were concerned with the motivation systems used by the teachers, the interactions between teachers and children, the type of teacher instruction, the amount of learning observed in the classrooms, and the degree of orderliness in the classrooms.

Most of the teachers observed were using an extrinsic system of motivation (72 percent). Extrinsic motivation includes checks or points for negative or good behavior, competitions of all kinds (prizes, for example), star charts, praise, threats, reprimands, and punishment. Forty-three percent of teachers used an intrinsic system.

This included interesting work on real-life tasks, encouragement, free choice, peer tutoring, child-directed pace, and lively whole-group participation. (Because some teachers used both types of motivation, the percentage is greater than 100). Twenty percent of the teachers seemed to use no explicit motivational system, and it was not possible to discern the system in 10 percent of cases.

Cross tabulations were calculated between the child interview question "On which school subjects do you try the hardest?" and the variables obtained from classroom observations. The cross tabulations between this child question and the teacher motivational system seemed to indicate that the latter made no difference. In other words, the number of subjects in which children tried hard was not related to the teacher's motivational system.

Teachers' behavior toward children was described as cruel and abusive (13 percent), cold and directive (57 percent), or warm and supportive (30 percent). While relatively rare, cruel and abusive behavior occurred in the form of profane language directed at children, as well as teachers' subjecting children to public ridicule. The cross tabulations showed that type of teacher behavior did make a difference. Children said they tried hard more often when the teacher was cold and directive, although they tried hard in more subjects when the teacher was warm and supportive.

Classroom strategies used by teachers were observed as follows: whole group (90 percent of classrooms observed), children doing routine desk work (74 percent), teacher/child interaction (46 percent), small groups (13 percent), and interest areas/projects (12 percent). The type of instruction was also classified as mundane instruction (71 percent) and innovative instruction (36 percent). The category mundane instruction included children working in workbooks or on questions from the chalkboard, insufficient explanation of a new concept, children reading from their basals one by one around the room, children giving answers to workbook pages one by one, copying

spelling words from the board, or looking up lists of words in the dictionary. Innovative or extraordinary instruction included careful step-by-step explanation of an assignment with children actively participating at each step, children in groups working on projects, free choice, peer tutoring, and writing or math labs with special teachers and small groups. The cross tabulations indicated that children responded best to whole-group instruction, teacher/child interaction, and routine deskwork, rather than interest areas/projects or small-group work. They also tried harder on assignments made during mundane instruction than on those made during innovative instruction.

The type of learning observed in the classrooms, as judged by the observers, was classified as no learning (12 percent), passive learning (28 percent), about average learning (36 percent), or children actively engaged in learning (25 percent). No learning was characterized by classrooms that were out of the teacher's control (i.e., students idly walking around the room, throwing objects, and so on). Passive learning was characterized by children quietly seated at their desks but not participating in the educational activity observed or responding to teacher directions. Average learning represents students who were attentive and responsive to teacher directions but not enthusiastic or motivated in their actions. Children actively engaged in learning displayed initiative and excitement in their responses to teachers and classroom actions. This variable seemed to make a difference in the cross tabulations. Children tried hardest when they were learning at an average rate, or they tried hardest on the most subjects when they were actively engaged in learning.

The amount of orderliness in the classrooms was rated as no order (8 percent), somewhat ordered (25 percent), or well ordered (67 percent). Finally, an anticipated result occurred -- children tried the hardest in relatively ordered atmospheres.

Teacher Interviews

Sixty-one teachers were interviewed by LSCAR staff in the 36 schools observed. Fifteen questions attempted to elicit their views on their school and its leadership, their class, and their literacy curriculum. They were experienced teachers, with a median 15 years of total teaching experience (range from two to 33 years) and four years at their present school (range from half a year to 26 years). Ninety percent said they enjoyed working in their schools.

Teachers were asked about the major problems of their schools. Forty-seven percent of their answers focused on school factors. These included faculty problems (20 percent)--laziness, not working together, mobility, low morale; school administrative problems (21 percent)--poor support, too many class interruptions, too many supervisors; problems with facilities, materials and equipment (25 percent); curriculum problems (18 percent)--not enough on basics, not enough for the gifted, not enough individual attention; and scheduling or central administrative problems (16 percent)--too big a range in class, not enough time, too much retention and record-keeping, and program cuts. Family and child-related factors outside the school accounted for 53 percent of teacher answers about school problems. Fifty-five percent of these answers involved problems in the family or neighborhood (poor parent cooperation, poverty, gangs and drugs) and 45 percent student characteristics (poor discipline, emotional problems, mobility, truancy, tardiness, and low test scores).

Teachers were also asked about the major strengths of their schools. Most of their answers (85 percent) had to do with school factors, such as a supportive, cohesive, and dedicated faculty (33 percent); a supportive, cooperative, and innovative administration (23 percent); strong and varied special programs for children with a good basic curriculum (35 percent); and safe well-maintained facilities and adequate materials (9 percent). One example given of a dedicated staff was raising of money by talent shows to send cheerleaders to

California and other children to Russia and Washington. Some answers about school strengths concerned out-of-school factors (16 percent), including helpful parents and strong community support (68 percent) and children with potential (32 percent).

In connection with the educational leadership in the schools, the primary answers given by teachers about the goals of their schools were to improve test scores (35 percent) and to see the children succeed (30 percent). Other answers included improving discipline, teaching, and parent cooperation. Most of the teachers (75 percent) said they were satisfied with the direction of their schools, teachers worked together (72 percent), and teachers participated in making school decisions (70 percent). They said their greatest resource when trying to solve problems were administrators (34 percent), other teachers (26 percent), themselves (22 percent), counselors and resource persons (11 percent), and parents (5 percent). Eighty-two percent said their principals provided strong leadership. Unsolicited comments about principals were mostly positive (62 percent) while 38 percent were negative.

Four questions were asked about teachers' classes. They answered that 49 percent of the children targeted as being part of the LSCAR study were well-adjusted, 27 percent adjusted, and 22 percent not adjusted (behavior problems, family problems, personality problems, poor effort and attitude, poor attendance, and gang activities). Because these are ratings of a select group of students and derive from a single source, they should be interpreted with caution. Most of the classes (53 percent) were not "ability grouped," and the rest which were "ability grouped" were about evenly divided among high, medium, and low. Teachers said that only 37 percent of all their children were at grade level. When asked why children were not at grade level, 51 percent of the answers concerned school-related factors and 49 percent family-related factors. School factors were lack of basic skills, unreliable tests, and poor teaching; family-

related factors were lack of parental supervision, low-income families, and discipline problems. The respondents suggested a variety of ways to bring children up to grade level: 33 percent suggested providing more individual attention (tutoring, aides) and special after-school programs; 29 percent mentioned improving teaching (more patience, raising motivation, emphasizing basics more); and 19 percent proposed eliciting more parental support, especially to increase the value parents place on education.

The last section on the teacher interview asked four questions on teachers' composition and reading instruction. Their reading program consisted mostly of basals (41 percent), worksheets and dittos (29 percent), whole language (7 percent), recreational reading (6 percent), reading laboratories (5 percent), literature books (3 percent), and newspapers (2 percent).

As for composition instruction, 44 percent produced writing folders to show the observers, although 15 percent of these were considered sub-standard (very short or few pieces). The types of writing observed were varied: journals, poems, autobiographies, four types of essays, letters, notetaking, book reports, and a class newspaper. Of the 78 answers given by teachers to the question on how they teach writing, 64 percent of the answers could be considered in accordance with current research on the teaching of writing (brainstorming, rewriting, editing, modelling, cross-curriculum integration, special writing labs with trained teachers, teacher workshops) and 36 percent inappropriate (teacher correcting and grading, teacher controlling subject and organization, single paragraphs only). Most of the teachers (76 percent) said they emphasized mechanics and grammar using a textbook and workbook. Half of them said their classes studied grammar every day and 31 percent said two or three times a week. Most of the children (57 percent) wrote once a week or less, according to their teachers. Some of the teacher comments about teaching writing were "We don't do writing that

often," "It's the hardest thing to teach," and "The composition emphasis is new, the biggest stress has been on reading."

Neighborhood and School Observations

The last type of data collected in the special field study was information on schoolwide and neighborhood characteristics (see pages 18-20). The number of schools observed with their neighborhoods was 36. A definite majority (83 percent) of the observations rated the schools as well-ordered, but only 31 percent found children actively engaged in learning. Fifty-eight percent rated the amount of learning observed as average and 11 percent noted that children were idly passing time. On the question about what the schools appeared to emphasize, 37 percent of the answers were ITBS test performance; 18 percent, helping children attain their potential; 14 percent, discipline and order; 12 percent, objectives and accountability,; 9 percent, increasing parental support; 8 percent, stimulation and enrichment; and 2 percent, strong African American pride.

The question about surroundings asked what type of neighborhood was immediately contiguous to the school. The most frequent answer (35 percent) was vacant lots and buildings and boarded-up houses. Other answers were industrial and commercial buildings (27 percent), decent homes (24 percent), housing project (11 percent), and mixed (housing project and decent houses) (4 percent). In connection with these descriptions of the neighborhood and some hesitation on the part of the children about the safety of their neighborhoods (from the child surveys and interviews), it might be added that the LSCAR staff agreed that the hallways and classrooms of school buildings were safe and secure. The school building would sometimes stand as a kind of fortress in the midst of a dangerous neighborhood.

Child Surveys

Table 9 presents percentages of children agreeing with questions having to do with the learning environment. On the one hand, children were more positive than their teachers in many areas: teacher

Table 9

Percentages on Learning Environment Questions: Teacher and Child Surveys

Questions	High/ Moderately High	Strongly Agree/ Agree
Child Survey (N=788)		
Teacher Effectiveness		
My teacher will go out of his/her way to help me.		87
A lot gets done in my class.		81
Attachment to school		
I feel that I belong in this school.		79
A lot of good students go to this school.		84
School Expectations		
A lot is expected of me in this school.		86
Building Maintenance		
My school is clean and well-maintained.		67
Safety		
I feel safe coming to and going home from this school.		73
Discipline/Order		
There are many dieruptions in this class.		66
Student misbehevior ie e major problem in this school.		63
Teacher Survey (N=815)		
Class Ability		
Rate the eversge ability level of this child's class.	18	
Behavior		
In this class, student discipline is a major problem.	24	
In this school, student misbehevior is a major problem.	30	
In this class, students work well with each other.		34
Parents		
Parents work well with teachers in this school.	25	

effectiveness (84 percent agreeing), attachment to school (82 percent), high expectations in school (86 percent), good building maintenance (67 percent), and neighborhood safety (73 percent). This latter figure differs somewhat from the student interviews, where, under probing, 43 percent said their neighborhood was safe and 57 that it was not. On the other hand, children were more negative about discipline and order than the teachers, 66 percent agreeing that there were many disruptions in their classes and 63 percent agreeing that student misbehavior was a major problem in their schools.

Significant correlations were found between a composite of learning environment questions and other items involving student perceptions on the survey. The learning environment questions included the following: "There are many disruptions in this class, a lot gets done in my class, my school is clean and well-maintained, I feel that I belong in this school, a lot of good students go to this school, I feel safe coming to and going home from this school, and a lot is expected of me in this school." The correlations provided insight into children's perceptions of a positive environment. For instance, correlations with peer sociability were .32 (getting along with others) and .25 (classmates like me). For child/school characteristics (trying hard, liking school, not getting bored in school, getting good grades, doing homework, enjoying composition writing) correlations ranged from .16 to .22. For family support, correlations were .18 for parent asking questions about school and .17 for parent making sure homework gets done.

Teacher Surveys

As can be seen in Table 9, few teachers rated high or moderately high the ability levels of their classes, how well children work with each other, and how well parents work with teachers (18 to 34 percent). On the other hand, they student discipline as a major problem in the class and school (24 and 30 percent rated high or moderately high, respectively).

Table 10 presents significant correlations between some aspects of the learning environment as perceived by teachers and such student characteristics as achievement, social skills, parent participation, school skills, and self-confidence. The mean correlations for the child characteristics are quite similar: .28 for achievement, .29 for social skills, .30 for parent participation, .29 for school skills, and .28 for self-confidence. These correlations reveal which factors contribute to the learning environment. It might also be noted that the lowest correlations are for parents working well with teachers

Table 10

Significant Correlations Between Teacher Answers to Learning Environment and Other Questions

Questions	Average Ability Level of Class	Children Work Well With Each Other	Parents Work Well With Teachers
Teacher Survey (N = 781 to 806)			
Child Achievement			
Comprehends what is read.	.44	.28	.22
Able to write well-organized compositions.	.44	.30	.23
Child's final grade in reading.	.41	.26	.15
Child's final grade in math.	.33	.22	.11
Social Skills			
Gets along well with others	.31	.41	.16
Parent Participation			
Parent participates in school activities.	.28	.24	.39
School Skills			
Concentrates on work	.37	.31	.21
Follows directions.	.36	.34	.21
Participates in group discussions.	.30	.28	.21
Takes responsibility for actions.	.29	.39	.25
Self-confidence			
Is self-confident.	.36	.31	.20

(.11 to 39), the next lowest for children working well with each other (.22 to .41), and the highest for the ability level of the class (.28 to .44).

State Report Card and School Profile Data

Table 11 compares LSCAR schools and non-LSCAR Chicago public elementary schools for the year 1990-1991 (1991-1992 data were not available). LSCAR schools had more children per school, smaller annual per pupil expenditures, and a smaller percentage of teachers with master's degrees. But they also had a smaller Grade 6 class size and fewer teachers absent more than 20 days. They served more African American children and fewer Latino, White, and Asian children. Their children were less mobile and less often in special education, and more regular in attendance, but more of them were retained and more

came from low-income families. LSCAR children's school behavior was better than that of children in the other city elementary schools: fewer suspensions of various kinds and less chronic truancy. But LSCAR children trailed other children in reading and math performance on the *Illinois Goal Assessment Program* (IGAP) by large margins. In addition, their parents had fewer school contacts, as judged by percentages of parent-teacher contact and report card pickup.

ITBS Reading and Math Performance

As presented in Table 12, some interesting results appeared in connection with ITBS test performance. For one thing, better performing schools seem to be more racially integrated and to have fewer children. Another point is that the LSCAR schools have not been doing well in terms of their children being at grade level in reading and math: more than 75 percent of schools having LSCAR children contained only 25 percent or fewer children at grade level in these subjects.

Summary

Our investigation of LSCAR children's learning environment included a variety of sources: classroom observations, teacher interviews, neighborhood and school observations, child and teacher surveys, information from the State Report Card for 1990-1991 and from individual school profiles, and data on test performance. In addition, cross tabulations were calculated between the child interview question "On which school subjects do you try the hardest?" and the variables obtained from classroom observations.

These sources revealed numerous positive aspects of the environment: a) most classrooms were well ordered; b) most principals provided strong leadership; c) most teachers were experienced and enjoyed their work; they were satisfied with the directions their schools were taking; they worked well together and participated in making school decisions; d) teachers saw the major strengths of their schools as cohesive and dedicated faculties, cooperative and

Table 11

State Report Card and School Profile Data for the Chicago Public Schools (1990-1991).

Characteristic	LSCAR Schools	Other Elementary Schools
School Characteristics		
Number of schools	293.0	321.0
Number of students per school	682.0	666.0
Average class size, Grade 6	26.6	27.8
Annual per pupil expenditure	$4395.00	$5238.00
Percent of teachers with master's degree	.06	.14
Percent of teachers absent > 20 days	.0004	.0008
Race		
Percent African American students	72.6	50.1
Percent Latino students	18.0	29.3
Percent White students	7.9	16.4
Percent Asian students	1.4	3.6
Student Characteristics		
Percent mobility	36.2	44.7
Percent stability	86.9	83.9
Percent retention	16.7	13.3
Percent in special education	.09	.13
Percent attendance	92.5	89.4
Percent low-income families	83.7	64.9
Discipline		
Percent in-school suspension	.003	.02
Percent out-of-school suspension	.05	.07
Percent suspensions over 3 days	.01	.02
Percent multiple suspensions	.008	.02
Percent chronic truancy	.02	.04
Test Results		
IGAP reading test performance, grade 6*	191.5	220.1
IGAP math test performance, grade 6*	178.5	213.0
Parents		
Percent parent-teacher contact	75.1	80.7
Percent report card pickup	.88	.91

*IGAP is an acronym for Illinois Goal Assessment Program. For reading, the district average scale score was 198 and for math 192 (standard error for both = 1).

Table 12

School Size, Racial Composition, LSCAR Schools and 1991 ITBS Test Performance[a]

Characteristics	Children at or above grade Level on ITBS 0-14%	15-25%	> 25%
School size (number of students)	719	693	597
Racial composition and school performance[b]			
White	.9%	4.1%	27%
African American	80%	79%	48%
Latino	19%	15%	21%
LSCAR Schools	42%	35%	22%

[a]Scores are based on the reading and math subtests of the Iowa Tests of Basic Skills (ITBS).

[b]These figures do not add up to 100 percent because Asian and American Indian children have not been included.

innovative administrators, strong special programs for children, and safe facilities; e) children thought the teachers effective and that they held high expectations; they felt attached to their schools and agreed that the buildings were well maintained; f) LSCAR schools had smaller Grade 6 class sizes than the other city elementary schools and fewer teachers were absent more than 20 days; and g) LSCAR children were less mobile than other city elementary children and more stable; fewer were in special education; they attended school more regularly, and exhibited fewer discipline problems (as measured by suspensions and truancy).

At the same time, negative elements were found about LSCAR children's learning environment. Teachers discussed the major problems of their schools. These included the poor families and neighborhoods, unmotivated children, faculties not always working together, and unsupportive administrators. They rated the ability levels of their classes low and said their children did not work well together, nor did parents work well with teachers. Although teachers said their LSCAR children were fairly well adjusted, they thought their children were not up to grade level because of their lack of basic skills and lack of parental supervision. Some teachers seemed familiar with the latest research on teaching reading and writing, but

most of them stuck with the usual basal reading programs and an emphasis on grammar and mechanics. LSCAR schools were larger than other city elementary schools, they had a much smaller annual per-pupil expenditure and a smaller percentage of teachers with master's degrees. LSCAR children were more frequently from low-income African-American families, retained more often, and performed lower on IGAP reading and math tests. Their parents had fewer school contacts and fewer report card pickups. Data from ITBS test performance tend to support these conclusions. Children in LSCAR schools were not often at grade level in reading and math, and better performing schools were more racially integrated and had fewer children. In short, the schools of LSCAR children can be characterized as low-achieving, embedded in largely poor neighborhoods, and primarily racially isolated.

Some areas of the learning environment appeared to be mixed. For instance, teachers rated discipline low as a major problem in their classrooms and schools (24 - 30 percent rated high). Children, however, with perhaps more objectivity than teachers, agreed 63 to 66 percent that there were many disruptions in classes and that misbehavior was a major problem in their schools. Another example of an inconsistent aspect of the learning environment is the school neighborhood. While many neighborhoods consisted of vacant lots and buildings and boarded-up houses, quite a few well-kept homes were seen, even right next to a housing project. Also, in the interviews children admitted some hesitation about the safety of their neighborhoods, but the schools themselves seemed safe in both hallways and classrooms.

Another mixed, even puzzling, aspect of the learning environment was the teaching style and children's responses to it. Teachers were observed using mainly an extrinsic motivational system, but the type or amount of such a system (extrinsic or intrinsic) did not seem to make a difference on children's efforts. A majority of teachers were also observed as being cold and directive, and the children tried hard more often in such an atmosphere, although they tried hard in more subjects

when teachers were warm and supportive. Instruction was predominantly whole group, with children doing routine desk work and mundane assignments. Children tried hardest in whole- group instruction with routine deskwork, mundane assignments, and teacher/student interaction, rather than when interest areas, projects or small groups were the methods of instruction. Most learning was rated as about average and children tried hard most often under such conditions, although they tried hard on most subjects when actively engaged in learning.

CHAPTER 5

CHILD PERCEPTIONS OF SCHOOL AND HOME

In this chapter the following topics are discussed: children's perceptions of their home life; child attitudes toward learning; and indicators of school success. Data came from face-to-face interviews with 84 randomly selected children, survey questionnaire responses of 815 children, and writing compositions of 196 children. When appropriate, achievement test scores and teacher ratings of children's adjustment are cited.

Data gathered from the child surveys, interviews, and compositions provide a snapshot view of the family background of the children and the influence of the home environment. This information should help the reader better understand what motivates the children and what their values appear to be.

Child Interviews of Home Life

The families of the interviewed children were composed of many different configurations, 18 percent were households with one adult, 53 percent with two adults, and 29 percent with over two adults. Many of the adults worked, as reported by the 66 children who were so queried; all but six of them (90 percent) said at least one adult worked, and 42 percent reported that more than one adult worked. Most of the adults worked in service occupations, industry, and transportation; however, one-third of the children said they did not know where the adult worked or in what occupation.

Safety is a critical element in the lives of these children. Responses to the child questionnaires showed that 73 percent felt safe going to and coming home from school, with 9 percent indicating that they felt quite unsafe. Quite a different response was obtained from the interviewed children who were asked about the safety of their neighborhoods, for only 43 percent said they were safe. These children would often ponder the question before answering and comment about the fact that they could play outside, but there were gangs and

drugs in the neighborhood. Many of those who ultimately said it was safe seemed to accept the danger they encountered as a natural part of the environment.

Travel provides both stimulation and background knowledge needed for learning. The schools, especially through funded programs, often provide field trips to museums, zoos, and other educational sites, but the experience of going across town, whether by public transportation or by car, is a different kind of educational experience. Responses from the interviews indicate that at least 60 percent of the families do travel together in the metropolitan area. Child interviews revealed that 85 percent had travelled outside of Illinois, most of them to visit family members, and that 65 percent of the children had been on more than one trip. The desire and effort to attend reunions and extended-family events was very evident in the responses.

Parents, or caregivers, are the primary source of stability for these children. Parent importance becomes obvious when considering interview responses. Only five percent indicated adverse feelings about any adult in the family, with 58 percent having an extremely loving family relationship. The most important persons in the child's life were Mom (77 percent), Dad (26 percent), siblings (20 percent), and Grandma (16 percent). A typical response to the question, "Who is the most important person in your life?" was, "My mother. She brought me into the world and takes good care of me."

When asked what the family does together, only four interviewed children mentioned watching TV. Most responses were about going someplace together rather than doing things together at home. They said they go to movies, visit relatives, shop, go to restaurants, and visit museums, zoos, and other recreational sites. There were some interactive activities in about a third of the homes, for 30 percent reported playing games together as a family, and four percent mentioned having family discussions.

Part of the role of the family, which sometimes means the extended family, is to provide money for the child to spend. Most of the children reported receiving an allowance, 80 percent over $5 a week, and even those who got no allowance said they could ask for and receive money and most of the time. There were no complaints or comments about not having enough money to spend. In fact, one boy explained that he rarely got money to spend, but he shared it when he did get it. Allowances were reported from $1 to $30, and the average child received about $9. Four children reported earning money from selling things, and 20 percent said they saved some of their allowances.

In an effort to discover more about their lives, the interviewees were asked to tell about the best and worst things that had happened to them. The interviewers found that about 15 percent of those asked could name nothing good or bad, and many who did answer did so with difficulty. Perhaps they had never thought about nor considered the importance of occurrences in their lives or perhaps these children felt uncomfortable discussing this issue with strangers.

As can be seen in Table 13, getting things (28 percent) and experiencing family relationships (28 percent) were the primary positive happenings that were cited, with going places (18 percent) and achieving something (10 percent) also named by some. Sickness, pain, and loss of a loved one were the worst things that were reported (58 percent), but being disciplined, especially unfairly, fighting, and getting poor school grades were also mentioned. The family relationships that were cited as being the best thing that happened in a child's life revealed eight cases of the birth of a sibling and eight cases of a father's presence.

Child Surveys of Home Life

As shown in Table 14, most of the children reported that their parents provide them with educational support. For example, 87 percent of the respondents indicated their parents make sure that they

Table 13

Events in Children's Lives: Child Interviews

The Best Thing	N	%	The Worst Thing	N	%
No response	11	15	No response	10	14
Getting things	20	28	Death	17	24
Going places	13	18	Sick or hurt	24	34
Achieving something	7	10	Fighting	7	10
Family experiences	20	28	Disciplined	9	13
			Low report card	4	6

do their homework, 81 percent indicated that their parents think education is very important, and 70 percent of the interviewed children stated that homework enforcement was one way their parents helped them. Eighty-eight percent of the children also reported that their parents asked a lot of questions about school; however, only 32 percent of the parents were reported as doing things at school. When interviewees were asked who helped them the most, responses were: Mom - 54 percent, siblings - 27 percent Dad - 15 percent.

The self-concepts of the children appear to be very strong, for 96 percent of them agree with the statement, "I like myself." Beginning with the first student survey in 1989, this has been the item with the highest level of agreement, with only four percent disagreeing. Contrasting with this response, however, 11 percent say they do not think they are smart, and 16 percent say their classmates do not like them. Evidently these items, as well as grade retention (over 25 percent have been retained in grade), fail to influence their self-esteem.

Child Compositions on Home Life

A third source of child perceptions of their home life is the compositions written by a sample of 196 children in Grade 5 (1991). They were asked to write as much as they could about one of five topics: My Home, My Family, My Best Friend, My School, or My City. These essays reveal a great deal about the children's home life,

Table 14

Percentages of Agreement on student Surveys

Questions	Strongly Agree /Agree
Effort	
I try hard in school	95
I get good grades in school	75
I give up when school work gets hard	20
I do better in school than my classmates	45
I do my homework	87
I answer questions in class	91
Behavior	
I get in trouble in school	46
Motivation	
I like school	87
I get bored in school	46
School is important	98
When in school, I would rather be someplace else	25
I feel I belong in this school	79
I enjoy composition writing	73
Self-Concept	
I am smart	90
I like myself	96
Peer Social Skills	
My classmates like me	84
I get along well with others	82
Expectations	
My teacher expects me to do well in school	98
A lot is expected of me in this school	86
Parents	
My parent thinks education is very important	81
My parent expects me to go to college	94
My parent asks me a lot of questions about school	88
My parent makes sure I do my homework	87
My parent does things at school	32

especially the first three topics. For instance, 19 of the children wrote on the topic My Home. In spite of the mention of negative factors such as the lack of a father, death, bad behavior, hostility, or fear of homelessness, the overwhelming mood was optimism. The children appreciated the beauty of their homes (28 percent), the

cleanliness (28 percent), the love, fun, and togetherness found there (34 percent). An analysis of the total number of subjects discussed reveals that 16 percent reflected pessimism or negativeness, 23 percent neutrality or no affection, but 61 percent were optimistic and upbeat.

My Family was the topic chosen by 45 children. Again, 19 percent of the sample revealed personal problems: joblessness, gambling, fighting, parental neglect and anger, drugs, lack of a father, fire. A few topics (7 percent) revealed a lack of affection or neutrality, when only material possessions or physical characteristics were described. The largest number of topics (74 percent) was the love within the family, the fun they have, how they share with and help and support each other, the shared values (respect, kindness, religion, care, trust, honesty), and the many things the family does together, such as going on trips and picnics, attending family reunions, watching movies and sports, sharing holidays, fishing and shopping together.

The greatest number of children (68), not unexpectedly, chose the topic My Best Friend. Eleven percent of the subjects discussed were negative, such as fighting and making up, fighting and not making up, whippings, gangs, drugs, jail, and threats. Some subjects (16 percent) were neutral, such as physical description. But the majority of subjects were positive (74 percent). Fifty-nine of the 68 writers (87 percent) told of the many things they and their friends do together: playing games or sports, walking, biking, jumping rope, sharing secrets, going to birthday parties and movies, watching TV, sharing clothes, doing homework, sleeping over at each other's houses, and going shopping. They wrote of the fun and sharing (especially money) with friends, their support and help, and the shared values (loyalty, kindness, religion, problem solving, anti-drugs, keeping promises, planning for the future).

Child Interviews of Attitudes

Children's attitudes toward school and learning were gathered from survey questionnaires and face-to-face interviews. These two data sources complement each other well. Surveys cover a wide breadth of topics for a large number of children and interviews cover a few topics in greater depth than is possible in questionnaires. Notably, the survey responses have been remarkably consistent, rarely deviating from previous results by more than two or three percentage points and, in many cases, remaining the same for several years. Because the returned forms represented about two-thirds of the children each year, annual consistency in their responses suggests that surveys can provide reliable information about this population.

Interviewed children were asked in which subjects they tried hardest. Math was mentioned by 58 percent of the children, reading, social studies, and spelling by about 15 percent each, and writing and science by a few children. Reasons given for their efforts revealed that children who chose math were evenly divided between three reasons for trying hard: because they like it; because it is hard; and because it is a needed skill for the future--especially to understand money. The few children who said they tried hard in reading did so because it was needed, with one trying because of liking it. Those trying in the other subjects did so either because they liked it or because it was hard.

From these results it is apparent that interest in math is high, possibly accounting for higher test results in math than in other subjects. It is also likely that progress in reading achievement may not be possible without more interest in it.

Child Surveys of Attitudes

Other questions on the student surveys (Table 14) reveal aspects of the children's effort and motivation and teachers' expectations. Although on two questions involving effort children agreed or strongly agreed, 91 percent and 95 percent ("I answer questions in class," "I

try hard in school"), other effort questions were lower: "I get good grades in school" (75 percent), "I do better in school than my classmates" (45 percent), and "I give up when school work gets hard" (20 percent). As for motivation, most children agreed that school is important (98 percent). But other questions revealed a lower degree of motivation: "I get bored in school" (46 percent), "When in school, I would rather be someplace else (25 percent)," "I feel I belong in this school" (79 percent), and "I enjoy composition writing" (73 percent). According to the children, school expectations were high, both on the part of teachers (98 percent agreed or strongly agreed that their teachers expect them to do well in school) and of the school (86 percent agreed or strongly agreed that a lot is expected of them in their schools).

Correlations among individual responses to the student survey provide insight about their motivations and attitudes toward learning. "I like school," a positive attitude recorded by 87 percent of the children, had a low (below .30) significant correlation with all but three student characteristics on the survey. The three insignificant items were getting along with, being liked, and doing better in school than classmates. Thus, school motivation for these children has little relationship to friends or achievement.

Even though most children (95 percent) indicated they tried hard, suggesting little difference between them, all student characteristics correlated significantly with "I try hard." The highest correlations were with doing homework (r = .39), parent demanding homework (r = .37), and getting good grades (r = .33). The relationship between parents making the children do their homework and the doing of homework was quite strong (.43), as was that between doing the homework and getting good grades (.40); however, the correlation between parents demanding homework and getting good grades was only .23, suggesting that many children who were motivated on their own to do homework received good grades.

Although almost all children (96 percent) say they like themselves, only 84 percent say their classmates like them. Composition writing is enjoyed by 73 percent, a low percentage for the survey, and correlates with such items as trying hard (.26), not being bored (.27), and parent asking student questions about school (.26). Only 32 percent said their parent does things at the school, and no items correlated significantly with this item.

Teacher Surveys

According to the teacher surveys (Table 15), the academic/school skills of these children were not strong. In such areas as concentration, following directions, taking responsibility, and final grades teachers rated only 22 to 34 percent of these children as above average. Self-confidence and getting along well were somewhat higher (38 and 42 percent respectively), but parent participation was low (21 percent) and number of absences rated average or below was high (77 percent). Teachers indicated 43 percent of the children were above average in their participation in group discussions.

Correlations with School Attitudes

To determine the significance of child attitudes, three items were combined to form an attitude measure. Likewise, several items concerning children's perceptions of their competencies were combined into a perceived school-competence measure. As in previous years, the first six items on the teacher survey were combined as a measure of children's socioemotional maturity. In addition, the *Teacher-Child Rating Scale* (T-CRS) yielded several scores that could be correlated with the others. Table 16 shows the significant correlations with school attitudes and perceived school competence. As can be seen, only the correlation between perceived school competence and school attitudes was substantial ($r = .48$).

Correlations with Perceived Competence

In their answers to the survey, children gave their own perceptions of their relative school success. Several items were combined to

Table 15

Ratings on Teacher Surveys

Questions	Above Average/Good and Excellent/Much (Percentage)
School Skills	
Concentrates on work	32
Follows directions	34
Participates in group discussions	43
Takes responsibility for actions	34
Comprehends what is read	34
Able to write well-organized compositions	22
Final grade in reading	30
Final grade in math	28
Self-Concept	
Is self-confident	38
Peer Social Skills	
Gets along well with others	42
Parent Participation	
Parent participates in school activities	21
Parent picked up one or more report cards	16
Absences	
Number of absences during this school year	23

create a scale termed "Perceived Competence." Table 16 shows the correlations with other scales, all of which were significant. The fact that this scale correlated equally well with both teacher surveys and with the attitude scale, all of them at or above .45, indicates a fair degree of consistency between the two teacher scales. As might be expected, two sub-sections of the *Teacher-Child Rating Scale* correlated most strongly with Perceived Competencies. These were Learning Problems, which had a -.46 correlation and Task Orientation, with a .47 correlation.

In April 1992, the reading and math achievement of all children were assessed using the *Iowa Tests of Basic Skills* (ITBS). The results are reported in Chapter 4. Regarding child survey responses, the correlation between test scores and the student survey item "I get

Table 16

Correlations Between Subscales

Scale	Instrument	Correlation
School Attitudes		
Perceived Competencies	Student Survey	.48
School Environment	Student Survey	.31
Student Maturity	Teacher Survey	.20
Total Competencies	Teacher-Child Rating Scale	.21
Total Problems	Teacher-Child Rating Scale	-.18
Perceived Competencies		
School Attitude	Student Survey	.48
Student Maturity	Teacher Survey	.47
Total Competencies	Teacher-Child Rating Scale	.45
Total Problems	Teacher-Child Rating Scale	-.45
Learning Problems	Teacher-Child Rating Scale	-.46
Task Orientation	Teacher-Child Rating Scale	.47
Reading Test Scores	Iowa Tests of Basic Skills	.37
Math Test Scores	Iowa Tests of Basic Skills	.39

good grades" was .30. Although good grades correlated with parents demanding that homework be done, and those children who did their homework were more likely to score well on the ITBS (r = .24), there was no correlation between parents demanding homework and ITBS scores, suggesting that completion of homework by force may not increase achievement. The child survey items, "I am smart," and "I give up when work gets too hard," correlated with ITBS reading and math scores at .28 and .30, respectively. Most other items on the child survey had low correlations with the ITBS (.10-.21), but no correlation was found between scores and whether children liked school, thought their classmates liked them, or were bored in school. Even the child attitude scale correlation with all ITBS scores was a low .10.

There were some correlations between test scores and items on the teacher surveys. A significant .32 correlation with the statement, "Parent participates in school activities," was an unexpected finding since a similar item on the child survey found no correlation with test scores. There was evidence that the ability level of the class

affected test performances, for there was a .41 correlation between reading test scores and the teachers' assessments of the average ability of the class. Both sections, competencies and problems, of the *Teacher-Child Rating Scale* (T-CRS) correlated with ITBS reading scores at .46, which was the same correlation the T-CRS had with the Perceived Competencies section of the student survey.

Summary

Several major findings emerged from this analysis of child perceptions. First, the families were diverse in structure and experience. Although single-parent families were the most prevalent, two-parent families and multi-extended-families were notably represented. Moreover, children's commitment to and affection toward their family was quite evident in their answers to many interview questions. Contrary to expectations (since all children in the study were enrolled in kindergarten programs that were funded because of poverty), almost all children reported living with at least one working adult. Money was not viewed as a problem by most children, for they usually received a generous allowance or were given money as desired or needed. Not one child (of 84 interviewed) complained about lack of money, an intriguing finding since many children of middle-class parents protest the lack of funds they feel they "need." Only in Grade 1 had parent involvement in the school shown a significant positive correlation with test scores, but a .32 correlation was found with teacher survey results concerning parents' participation in school activities, a hopeful sign even though the child survey responses showed no such correlation. Safety, however, outside of school was an important concern for many.

Almost all children reported liking themselves even though a quarter of them had repeated a grade. There was no indication that academic performance affected self-esteem positively or negatively. Attitudes toward school were highly correlated with student perceptions of their own competence, but not with being liked or

getting along with others.

As for the compositions, a major finding was the overwhelming optimism expressed in the midst of the many problems faced by poor black children. While the children were well aware of these problems, they buried them in the many positive facets they saw in their environment. Families members were supportive. If a parent or parents were missing, other relatives stepped in to provide sustenance, support, help, and guidance.

CHAPTER 6

PARENT ATTITUDES AND BEHAVIOR

This section summarizes parent reports of their attitudes and behaviors toward their children at home and in school. Results derive primarily from survey questionnaires completed in the spring of 1990 (Grade 4) and telephone interviews of nonrespondents in the summer of 1992 (Grade 6). Some data on family background (e.g., education and income) come from the 1988 (Grade 2) survey questionnaire, which differed in content from the Grade 4 and 6 instruments. The number of responding parents in 1992, 1990, and 1988 were, respectively, 258, 500, and 536. These included 965 different parents, 758 in 1992 and 1990. Due to the lack of data on all children's families, the results presented in this section are likely to be more favorable than those which include all study families.

Analyses comparing the characteristics of children from families who responded to the parent questionnaire (or interviews) and from families (n = 477) who did not respond indicated that nonrespondents had children with lower reading and mathematics achievement (three months each), lowers self-perceptions of competence in Grade 5, and more likelihood of being retained in grade and more chance of being male. But these differences were relatively small in magnitude; three months difference in reading achievement is .22 standard deviation units. In addition, children of nonresponding parents did not differ from other children in preschool participation, community involvement, socioeconomic status in kindergarten, and teacher ratings of school adjustment in Grade 5. Thus, the findings reported are not likely to be substantially different from the remaining nonresponding parents. But the diversity of experiences reported confirms that a wide range of families was sampled.

Family Characteristics

Table 17 presents characteristics of the responding parents or guardians. Ninety percent were the children's mothers. Three percent were the children's fathers, and seven percent were female guardians such as an aunt or grandmother. The typical parent or guardian was 35 years old in 1992 (Grade 6 for most children). Thus, they were, on average, 24 years old when their child was born. About 24 percent of the responding parents were teenagers (20 years old or younger) at their child's birth (31 years old or younger in 1992).

Twenty-seven percent of the parents reported that they were married at the time of assessment (1990 or 1992), 45 percent have never been married, 12 percent are divorced, 12 percent are separated, and 4 percent are widowed. Similarly, 64 percent reported no adult male was present in the home, and 36 percent reported one or more male adults present (e.g., spouse, uncle, or grandfather).

The typical parent respondent is raising three children but 13 percent have five or more children. Sixteen percent reported that they own their own home. Not surprisingly, this is well below the 50 percent national rate of home ownership.

Education, Socioeconomic Status, and Employment

Fifty-nine percent of responding parents reported they are high school graduates; only eight percent indicated they have four-year college degrees or higher. Of the 41 percent of parents who are school dropouts, nearly all left during high school. Forty-three percent of the sample indicated they are employed at least part time (32 percent full time and 11 percent part time). Twenty-eight percent reported they were unemployed, 24 percent considered themselves homemakers, four percent were disabled, and two percent were retired. Although direct measures of family income were unavailable, 92 percent of the sample were eligible for full (83 percent) or reduced (nine percent) price lunch subsidies from the federal government. A full subsidy requires an income of approximately $12,800 or less for a

Table 17

Charecteristics of Respondents to the Parent Questionnaire

Charecteristic	Mean	N
Percent mothers	89	965
Year of birth	1955	694
Percent married	27	726
Percent adult male present	36	726
Number of children	2.86	965
Percent high school graduates	59	965
Eligibility for free lunch	1.25	965
Percent employed full or part-time	43	726
Percent home ownership	16	732
Years at present address	7.42	709

family of four. A reduced subsidy requires an income of approximately $17,000 or less.

Attitudes Toward School

By large margins, parents had positive attitudes toward school and their child's education. Over 90 percent of respondents agreed or strongly agreed that they like going to their child's school (92 percent), that school is important to get a good job (98 percent), and that they like helping their child with school work (99 percent). About 90 percent agreed or strongly agreed that their child's school does a good job informing them of school events and that school reform will improve their child's education.

Moreover, the majority of parents were satisfied with the education their child is receiving at school; 32 percent were very satisfied, 49 percent were satisfied, 10 percent were unsatisfied, four percent were very unsatisfied, and five percent were unsure.

Expectations of School Success

Parents expect their children to go far in school. As shown below, 97 percent reported that their child would at least graduate from high school. Thirty-five percent were expected to get a four-year college degree, and 15 percent would go to graduate school.

How far in school will your child get?

1%	Grade 8
2%	Some high school
29%	Complete high school
17%	Some college
35%	Complete 4-year degree
2%	Some graduate work
13%	Complete graduate degree

Children's Effort In and Out of School

Parents perceived that their child was happy in school and tried hard in school (88 and 87 percent agreed or strongly agreed, respectively). Children's learning behaviors, however, were not quite as positive. Only 52 percent of parents reported their child goes to the library once a week or more, that 59 percent read books for pleasure more than once a week, and that 52 percent write notes or stories more than once a week. Although many parents (45 percent) indicated their children "never" get in trouble in school, 45 percent reported they "sometimes" do, and 10 percent reported that they "often" get in trouble at school.

Interactions with Child and Monitoring

Parents rated several types of interactions with their children. The rate of interactions occurring more than weekly or rated as occurring "often" are reported in Table 18. Helping their child with homework (85 percent) and discussing school progress (79 percent) were the most frequently reported activities. Occurring less frequently were helping in child's classroom, participating in school activities, and going on trips to other cities.

Community Participation

Of further interest was parents' involvement in the school and community at large. Table 19 presents their membership in several school and community organizations. Because many low-income families in inner cities feel disenfranchised, their connection to school and community support structures may be especially important in their lives.

Table 18

Percent of Parent-Child Interactions That Occur More Than Once a Week or "Often"

Interaction	Percent
Reading	44
Cooking	52
Help with homework	85
Discuss school progress	79
Help in classroom	7
Talk to teacher	40
Participate in school activities	14
Limit TV time	41
Go on trips to other cities	16
Go to museums or zoo	22

Also of interest was whether schools take the initiative in involving parents in their children's school. Forty-one percent of parents reported that they "often" get invited to school events, 46 percent "sometimes" do, and 13 percent "never" do. These results suggest that schools take substantial initiative in encouraging parental involvement in school.

Prevalence of Economic and School Problems

Parents were asked to report whether they have experienced economic and school-related hardships in the present or past. As shown in Table 20, a substantial percentage of families have had problems in the past buying food, paying for rent or mortgage, paying for electricity, and finding a good job. Nearly 60 percent have had two or more economic hardships in the past. The prevalence of school-related problems was somewhat lower as only 32 percent of parent respondents indicated having two or more such problems in the past.

Generally, the prevalence of hardships was lower in the present (at time of assessment). The mean number of present problems for both economic and school-related hardships was lower and fewer respondents reported experiencing two or more problems. Among the most improved

Table 19

Percent of Membership or Participation in School and Community Organizations

Membership/ Participation	Percent
ECIA Council	5
School Council	7
PTA or other school group	22
Community organization	16
Church or religious group	49
Political organization	6
Attended school council meetings	49
Voted in 1989 school elections	64
Total -- None of above	13
One or two	49
Three or more	38
Mean number	2.2

conditions were having enough money to buy food, paying rent or mortgage, and communicating with school. Problems finding a good job, finding a safe place to live, and buying new clothes increased rather than decreased in prevalence from past to present.

Relationships with Children's Outcomes

Table 21 shows associations between selected parent questionnaire ratings and Grade 6 child outcomes. These outcomes include ITBS reading and math achievement and teacher ratings of Competence and Problem Behaviors.

Correlations were generally low but in most cases were statistically significant in the expected direction. Because many hard-to-reach parents did not respond to surveys or interviews these correlations are probably conservative estimates. Parent expectations of their child's educational attainment had the highest correlation with the outcomes (rs in .30 range). Parent education and free lunch eligibility had correlations with child outcomes in the .20 range; other sociodemographics had even lower correlations. The number of present hardships (rs in .15 range) was more negatively associated

Table 20

Prevalence (in percents) of Economic and School-Related Hardships: Past and Present

Hardship/problem	Past problem	Present problem
Economic		
Enough money to buy food	39	19
Paying rent or mortgage	37	19
Paying gas or electric bill	38	29
Paying medical bills	29	19
Buying new clothes	33	44
Finding a good job	38	42
Getting transportation	31	16
Finding safe place to live	32	39
Percent with 0	26	29
Percent with 1	16	17
-with 2 or more	56	54
School-related		
Finding the right school	30	23
Communicating with school	28	12
Getting child to try hard	32	25
Getting child to behave	27	15
Mean number of hardships	1.2	0.7
Percent with 0	46	57
Percent with 1	22	21
-with 2 or more	32	22

Note: a) The mean number of past and present hardships reported by parents was 2.8 and 2.2 respectively
b) The mean number of past and present hardships reported by parents was 1.2 and 0.7 respectively.

with child outcomes than the number of past hardships (rs in .10 range). This would be expected given that child outcomes were assessed at nearly the same time as were present problems.

Among the family process measures, parents' involvement in and attitudes toward school were more associated with adjustment outcomes than parent-child interactions at home. For example, the items "I like going to my child's school" (r = .18), "School does a good job informing me of school events" (r = .15), and "Parent satisfaction with education at school" (r = .24) were positively associated with competence ratings. Surprisingly, parent-child interactions (e.g., "Read to child", "Help child with homework") had negative correlations

Table 21

Correlations between Selected Parent Factors and Child Outcomes

Parent factor	Reading achiev.	Math achiev.	Competence ratings	Problems ratings
Family sociodemographics				
Parent education	.17	.18	.06	-.04
Free lunch eligibility	.18	.17	.07	-.09
Single parent	-.12	-.13	-.10	.11
Employment	.16	.17	.06	-.05
Number of children	-.12	-.13	-.02	.01
Home ownership	.09	.15	.15	-.15
Family Processes				
I like going to my child's school	.09	.10	.18	-.15
Read the newspaper	.12	.15	.08	-.08
Parent expectations	.26	.32	.28	-.27
School does good job informing me of events	.10	.12	.15	-.14
Take child to zoo/museum	.08	.10	.08	-.08
Talk to teacher	-.01	-.03	.04	.06
Participate in school activities	.08	.11	-.02	.01
Satisfaction with education at school	.16	.19	.24	.18
Read to child	-.07	-.07	.01	.01
Cook with child	-.03	-.04	.07	-.004
Help child with homework	-.09	-.09	-.04	.05
Community participation	.11	.12	.11	-.07
Number of past hardships	-.08	-.11	-.11	.08
Number of present hardships	-.12	-.18	-.17	.13

Note. Values greater than .07 are significant at the .05 level.

with child outcomes, although they were low. We speculate that parents may have associated responses to items that surveyed parent helping behavior with children who have problem behaviors. Community participation (organizational memberships) and parents' frequency of reading the newspaper also were positively associated with child outcomes, especially for achievement. These results indicate that parents' time-use reflects on their child's school adjustment.

Family Explanations of Variation in Child Outcomes

Of further interest were the contributions of family sociodemographic factors and family process factors to differences in children's social and academic adjustment. Multiple regression analysis was performed by first entering family sociodemographic variables and then the family process variables. This procedure tested the independent influence of the relatively alterable family processes.

As shown in Table 22, results indicated that the family process variables significantly contributed to adjustment outcomes independently of sociodemographic factors. Their variance contributions ranged from seven percent (reading comprehension) to 13 percent (competence behavior). Thus, these children's adjustment is due not just to differences in family background such as low income, but to parents' expectations and attitudes as well as to how they spend their time.

Parent expectations of their child's educational attainment and parent satisfaction with their child's education at school were consistent predictors of the four measures of academic and social adjustment. Community participation (membership in school and community groups) and the number of present hardships significantly contributed to achievement outcomes as well as to competence behavior.

Among the sociodemographic factors, parent education, free lunch, and home ownership predicted adjustment, though only home ownership contributed uniquely above and beyond the family process variables. Entry of parent-child home interaction variables did not improve the prediction of children's adjustment. Again, their lack of contribution may be a result of parents perceiving the items as indicative of problem behavior rather than as naturally occurring behavior.

Table 22

Variance Contributions to Academic and Social Adjustment

Variables entered	Step variance	Total variance	Significant predictors
Reading comprehension			
1. Sociodemographics	.07	.07	Parent ed, Free lunch
2. Family processes	.07	.14	Parent exp, Comm. partic, Satis. with educ.
Mathematics total achievement			
1. Sociodemographics	.08	.08	Parent ed, Free lunch, Homeowner
2. Family processes	.11	.19	Parent exp, Pres problems, Satis. with educ.
Teacher-rated problems			
1. Sociodemographics	.03	.03	Homeowner
2. Family processes	.09	.12	Parent exp, Satis. with educ.
Teacher-rated competence			
1. Sociodemographics	.03	.03	Homeowner
2. Family processes	.13	.16	Parent exp, Comm. partic, Pres problems, Satis. with educ., Partic in school act

Summary

Despite their socioeconomic hardships, parents had positive attitudes toward their children's school and education. Even though some of the children get in trouble at school, their parents rated them as generally happy in school and motivated to learn. Parents' most frequent interactions with their children were helping with homework and discussing school progress. Reading to children, monitoring TV time, and participating in school activities occurred less frequently.

A major finding of this survey is that these low-income families in the inner city are diverse in their education and socioeconomic backgrounds as well as their attitudes and behaviors toward their children. This is reflected in respondents' differences in educational background, marital status, and homeownership. For

example, in some families both parents have graduated from high school, own their own homes, and are stable members of the community. Other families, however, are composed of transient single parents with low educational attainment. Moreover, interactions and expectations were very different among families. These results reveal that the families of these children are far from the *monolithic perception* of the inner-city underclass.

Parents themselves were not greatly involved in the community as reflected by their membership in various organizations and school functions. Their limited community involvement may be due, in part, to the number of economic and school hardships they have experienced. Such day-to-day concerns about having enough money for food and medical services may leave less time to become more involved in the community.

Differences among parents in their time-use and their attitudes and behaviors toward their children were major contributors to children's academic and social adjustment in Grade 6. Particularly important were high expectations for educational attainment and satisfaction with their child's school. Both factors are reminders of the importance of school success in these children's lives.

CHAPTER 7

DISCUSSION AND RECOMMENDATIONS

This study reported on the academic and social adjustment of 1,235 mostly black children who began their schooling in 26 government-funded kindergarten programs in September 1986 and finished their sixth grade year in 295 schools in June 1992. These children have a history of poverty since most, if not all, grew up in poverty neighborhoods. The majority live in single parent families, and many live with parents who have not graduated from high school. Thus, they represent among the most economically disadvantaged children in the Chicago Public Schools.

Three major questions were addressed in this study:

A. What are children's levels of school adjustment along academic and social/psychological dimensions?

B. What are the characteristics of the classroom and school learning environments to which children are exposed?

C. What are the effects of family, school, and individual factors on academic and social adjustment, especially those that are under the influence of families and schools?

These questions pose special interest to educators and policy makers because they intend to help improve children's success in school and in life. They are addressed after a brief summary of the longitudinal study.

Why is this study important?

Several characteristics make this study unique and add to its capacity to provide important data on the lives of children at risk. First, this study has traced a large sample of children since 1986. Thus its longitudinal character provides a more accurate portrayal of children's academic and social development.

Second, the study is comprehensive in that it covers a broad range of questions at multiple levels. It is assumed that the influences on their school success are multiply determined through a

complex interplay of family, school, community and individual factors. Inherent in this perspective is that behavior is the result of the interaction between children's individual characteristics and the social environments in which they are involved.

Third, the study has collected data from a wide range of sources. These data provide richness and detail not possible from any particular source. School records, classroom observations, interviews, and survey questionnaires from the perspective of children, teachers, and parents have been utilized. Also collected has been data at the macro level such as school and community characteristics as well as the micro level of the classrooms and school building. These two levels reinforce each other.

Fourth, factors that are alterable in an educational context are emphasized rather than status characteristics (e.g., sex, race, and family background). These include instructional factors, school-based factors, family-child interactions, and parent attitudes and behavior. Because they are manipulative, they can be targeted for preventive interventions.

Finally, this study is relevant because it has a history of trying to better understand at-risk children's school success as well as their needs. For example, in previous years the study has clarified influences on school adjustment of early childhood intervention, preschool participation, parent involvement, and school mobility.

What Are Children's Levels of School Adjustment Along Academic and Social/psychological Dimensions?

The general pattern of results indicates that the typical child's academic adjustment was relatively poor. More than 50 percent of the sample scored in the first quartile in reading and mathematics achievement and, on average, were one-and-a-half to two years behind the national average of sixth-graders. Twenty-five percent have been retained in grade, and even more were judged by teachers to have

learning problems.

Although academic adjustment was poor for many children, social adjustment was relatively good. Teachers rated children as having relatively good social skills and relatively few emotional problems (shy-anxious behavior). Only 12 percent were identified as showing delinquency-type behavior (e.g., fighting, truancy). Forty to fifty percent were considered socially adjusted. Their problems were primarily with learning, and to a degree, with acting out behavior.

Overall adjustment (combining scholastic and social adjustment) indicated that 32 percent of the children were classified as moderately or well adjusted in Grade 6 despite the low socioeconomic status and high risk environments in which they grew up. This finding indicates substantial resiliency among many children. However, because 24 percent of the sample were classified as marginally adjusted and 44 percent were classified as unsuccessfully or poorly adjusted, a substantial number remain well behind their sixth grade cohorts. These children are most at risk of maladaptive behavior such as dropping out of school, engaging in delinquency behavior, unemployment and drug abuse. Certainly, more targeted educational programs and opportunities are needed. Because academic and social problem behaviors co-occur, a focus on both academic and social adjustment appears necessary. Efforts that focus only on academics are likely to be unsuccessful. An important strategy may include monitoring children's competence and problem behaviors on a larger scale since the prevalence of their needs are unclear.

What Are the Characteristics of the School and Classroom Learning Environments to Which Children are Exposed?

The school environments in which these children live are racially isolated (90 percent minority per school), socioeconomically poor (84 percent of families have children enrolled in schools where the average income is below the federal poverty level), and not well funded financially (per-pupil expenditure is $4,300). Regarding

achievement, only 12 percent of the study children were enrolled in schools in which over 25 percent of students scored at or above the national average in academic achievement (reading and math). Moreover, the schools were larger than other elementary schools in the Chicago Public Schools and had lower per-pupil expenditures. These results indicate, in detail, the magnitude of the problems facing many schools. What is surprising is that as many children perform as well as they do under these conditions. Children are at risk of school failure not only because of their economic circumstances but because of the school environments they experience. Exposure to these environments may increase or decrease children's opportunities to succeed.

Findings from classroom observations and teacher interviews lend support to the importance of the school environment and instructional climate in learning. Both teachers and children reported relatively high levels of satisfaction with their schools. However, satisfaction and the quality of learning are not necessarily related. Although most classrooms were observed to be orderly and absent of discipline problems, in only 25 percent of classrooms were children judged as actively engaged in learning. This may be due to the additional finding that in 74 percent of the observed classrooms children were doing routine desk work. In only 13 percent of the classrooms were small group activities taking place. Moreover, the children, surprisingly, did not seem to respond to innovative or exemplary teaching practices that were found in some classrooms, and tended to try hardest for teachers who were characterized as cold and directive.

What Are the Effects of Family, School, and Individual Factors on Academic and Social Adjustment, Especially Those That are Under the Influence of Families and Schools?

Parents. Parents who are more satisfied with school are more likely to have children who are better adjusted. This relationship occurred independently of family background and other factors. This

finding emphasizes the importance of aligning the interests of families and schools in educational improvement efforts and reinforces this priority to school reform efforts. Study results indicate that to the extent that schools can impact parent attitudes through encouraging and reinforcing their involvement at home and school, children may directly benefit.

Parent expectations appear to be another factor that predicts children's successful school and social adjustment. Although many previous studies indicate that parent expectations have only a limited role in children's adjustment (Seginer, 1983), parent expectations may be more important for low-income children because they have fewer opportunities and economic resources from which to draw on at home and school. Thus, parental attitudes and expectations may be a more dominant force which impacts their children's attitudes, which in turn influences their school adjustment.

A surprising result was the generally positive evaluations of parents toward their child's education at school when the overwhelming majority of schools had very low achievement. For example, in only one-fifth of the schools in the study were more than 25 percent of students performing above the national average in reading and mathematics. There are three explanations for this result. First, satisfaction is a relative perception. In comparison to the alternatives they are aware of -- even worse schools or withdrawal from school -- parents may have good reason to be satisfied with their child's eduction and school. Also given parents' own educational experiences, they may be more likely to be satisfied with their own children's education. Second, parents criteria for satisfaction may not be schools' academic emphasis. Rather, close proximity to home, quality of relations with teachers, and children's level of happiness in school may be the over-riding factors in determining satisfaction. Finally, parents may have a low threshold of satisfaction -- they are too easily satisfied with their child's education. Cross-cultural

studies of American and Japanese parents have consistently found that parents of U. S. schoolchildren are much more likely to be satisfied with their children's education than are Japanese parents, even when U. S. children's school achievement is lower (Stevenson, 1992). This lower standard of satisfaction may be present among the parents in this study.

Schools. The major characteristic of schools that influenced children's academic and social adjustment was academic performance. Children benefitted significantly from being in schools with higher proportions of academically successful students, even after taking into account many other factors. On the contrary, school neighborhood poverty, school size, class size, racial composition, rate of school mobility, and truancy were not associated with children's academic and social adjustment. The relative homogeneity of school characteristics may have been responsible for these findings.

Children's perceptions of the school environment also were positively and significantly related to schools' academic achievement. This finding not only confirms the relevance of school achievement to children but suggests a mechanism by which school achievement influences children's school adjustment. That the academic performance of schools influences children's school success is consistent with previous research on school effectiveness (Edmonds, 1979; Rutter, 1983). Consequently, to the extent that schools can improve their academic performance children's academic and social adjustment may be positively impacted.

Child attributes. Children's perceptions of the home environment were positively associated with their academic and social adjustment in school. Overwhelmingly, children expressed great appreciation of their homes and emphasized its beauty, cleanliness, and the fun that they have there. Over 80 percent indicated that their parents make them do their homework, and even more (84 percent) indicated that parents ask a lot of questions about school. Social relations among

family members were high, and children tended to value them. Their interactions emphasized going places rather than doing things together, and considerable emphasis was put on visiting out of state family members. All of these factors were positively associated with school adjustment. However, of all child attributes, sex was the best predictor of school adjustment as girls were, on average, better adjusted than boys.

Children's perceptions of self and of school were similar to those of their home. They had very positive attitudes toward themselves, and these positive perceptions were positively associated with their academic and social adjustment. Almost all children indicated their teachers wanted them to do well, and a similar number indicated that a lot is expected of them in school. A fairly large proportion (46 percent), however, indicated that they get bored in school. Many also reported that disruptions occurred frequently in class.

Clearly, a wide gulf exists between children's attitudes toward themselves and family (high) and their academic performance and adjustment (low). A likely explanation is that the children have not yet internalized their school performance into their self-identity. This process of internalization begins during early adolescence, which is only just beginning. Also, children may define themselves based on their peer social relations rather than their school adjustment. Consequently, they are able to tolerate their poor school adjustment.

Diversity of Attributes and Experiences

Another notable finding of the study was the diversity of characteristics and behavior of low-income children and their families. Although children began kindergarten with similar socioeconomic circumstances and risk status, several factors differed substantially among children during the schooling process. For example, a substantial proportion of parents graduated from high school, were part of intact families, and owned their own homes.

Rarely are such attributes of low-income families discussed in a positive light. Such variation should be acknowledged.

Parents and children's attitudes and behavior also varied greatly in the sample. A substantial number of parents (50%) expected their children to not only finish high school but go on and complete college. About four of five parents reported discussing school progress and helping child with homework; 40 percent reported they talk to teachers often. Also, 64 percent indicated they voted in the 1989 school council elections. These numbers are even more impressive given that 70 percent of parents reported having past or present economic hardships. Moreover, the vast majority of children reported (in both questionnaires and interviews) relatively high self-concepts, that they think school is important, and that they are motivated to learn. Although some children were low on these characteristics, they were the exceptions rather than the norm. These results are in stark contrast to the traditional characterization of low-income families in the inner city as part of a "culture of poverty." Rather, the findings of this study support the contextual model of development -- a dynamic process of behavior structured by the demands and opportunities of the environment as influenced by the family, school, community, and individual child. This conception of behavioral influence is evident in many recent studies (Alexander & Entwisle; Comer, 1988; Reynolds, 1991), and today considered the dominant perspective on children at risk.

Thus, the characterization of these children, commonly portrayed in news media and lay press, as emotionally scarred and irreparably damaged by their poverty backgrounds is simply not applicable to the majority of these children. From every data source in the study (children, parents, teachers) extending over its six years, the same message comes through. These children are happy, optimistic, showing high self-esteem and enjoying their childhood. They are fully expecting to lead meaningful adult lives -- despite their economic

poverty. Yes, they confront danger in their daily lives, and their sacrifices have been intense. Many have lost family members to drugs and violence, and many daily live in fear for their own lives. Their persistence, however, in the face of social disaster and economic deprivation, is prominent and indomitable, and all indications are that it prevents them from succumbing to despair. The following recommendations are presented:

1. Better identify children for intervention efforts, institute regular needs assessments of children's competence and identify problem behaviors. Use of the *Teacher-Child Rating Scale* was the first attempt in this study to document the prevalence of academic and social problem behaviors. Although the needs of children at risk are great, a better understanding of specific educational and social needs of well-defined populations are important in designing and targeting interventions. This study found that the prevalence of academic problems is somewhat higher than that of social or emotional problems. Because many of the children in this sample participated in extensive early childhood programs, both problems are likely to be higher for the total student population in the Chicago Public Schools. Beginning early in children's schooling (e.g., first grade), needs assessments of children's strengths and problem areas would provide schools with useful and specific information. Notably, these assessments do not require standardized achievement tests. The *Teacher-Child Rating Scale* is a relatively short standardized instrument whose results are moderately to highly correlated with achievement test scores yet provide information about academic and social adjustment.

2. Parent involvement practices should take into account parents satisfaction with their child's education. The finding that parents satisfaction with their child's education predicted children's school success rather than the sheer amount of parent involvement in school suggests that parent perceptions of their child's education is directly relevant to children's school adjustment. Consequently,

mandated school reforms and parent involvement practices will only be successful to the extent that there is widespread satisfaction by parents and other significant others toward children's education. For example, recent research suggests that the quality of parent involvement is more important than the amount of involvement in influencing children's school success (Reynolds, Weissberg, & Kasprow, 1992). Thus, rather than just seeking increased parent involvement in schools, perceived quality and satisfaction also should be fostered.

3. Incorporate socially oriented programs into instruction in order to reduce behavioral problems in schools. Results clearly indicate that even though children's problems are primarily scholastic, they co-occur with social-behavioral problems such as disruptive behavior and truancy. Thus, efforts to improve children's adjustment must consider both academic and social causes. For example, remedial reading instruction as a sole focus of programs will prove inadequate unless affective and behavioral problems also are addressed. Remedial instruction is irrelevant if children are not sufficiently motivated to learn, are consistently absent, or are frequently disruptive. Programs that emphasize social problem-solving may be necessary. Such programs teach prosocial behavior such as assertiveness, negotiation, caring, and thinking skills. For example, the New Haven Social Development Program (Weissberg, Jackson, & Shriver, 1993; Weissburg, Caplan, Bennetto, & Jackson 1990) teaches children to inhibit acting out behavior such as violence and fighting through reasoning about the potential negative consequences of these actions. These approaches are absent in many schools and may be particularly valuable for children at risk.

4. Early detection and prevention programs are needed on a much larger scale to address the magnitude of problems facing children at risk. Based on children's generally poor school performance and adjustment in Grade 6, programmatic efforts need to start well before middle school to prevent the onset of many problem behaviors.

Increased opportunities for comprehensive early childhood education such as those offered by the Child-Parent Centers appear certainly needed, especially since only about 25 percent of eligible children receive such services. An even more effective approach may be programs that span from preschool to Grade 3. Reynolds (1993) found that children participating in the Child-Parent Centers from preschool to Grades 2 or 3 had substantially higher reading and math achievement and lower rates of grade retention than those participating in just preschool and kindergarten components. Few children have such opportunities in the Chicago Public Schools.

Schools also need to monitor children's performance closer so that they can be referred to appropriate programs and services before problem behaviors worsen. For example, instead of retaining children who are poorly adjusted at the end of the school year, after-school and summer remedial programs are alternatives that have a much better chance of success. Grade retention as a school practice is now regarded as a failure and harms low-income and minority children more than many others (Reynolds, 1992b). Recommendations 1 and 2 above regarding improving the quality of parent involvement and implementing social problem solving programs should also be seriously considered.

5. Classroom and instructional environments of the schools must be a target of intervention efforts. The preponderance of schools with limited financial resources and with overwhelming numbers of poor-achieving children suggests that changes at the level of the classroom, school, and community are needed to enhance children's academic and social adjustment. Even though many parents were satisfied with their child's education, only about 25 percent of the sample can be classified as achieving even a moderate level of academic and social adjustment. Targeted initiatives at the remaining 75 percent must, at a minimum, alter the school environments of learning in a positive way. The provision of a more diverse range of instructional activities would be a valuable beginning. Much

classroom instruction is whole-class and children perform routine seat work. Greater use of small-group activities, cooperative learning, and individual projects would complement traditional whole-class instruction well.

Although the aforementioned factors -- quality family-school relationships, extended early childhood interventions, and alternative school policies -- are important, larger school and community factors should also be considered. For example, parents may profit from the opportunity to enroll their child in any school that will best meet the child's academic and social needs. The basis of this recommendation is that providing families with comparative information on alternative educational opportunities for their children is beneficial. Although most parents appear to be satisfied with their child's school, many may not be aware that other schools could be serve their child's needs better. Families should have the opportunity to explore such possibilities. To limit wasteful transportation time and neutralize the potentially harmful effects of school mobility, such a school would, preferably, be in close proximity to the child's residence.

6. Encourage teachers to better use intrinsic reinforcement in their classrooms. Beginning with kindergarten entry, children need to value learning and school experiences for their own sake not just because they have to or will be rewarded if they do. Earlier studies with this sample indicated that children who try hard in school and concentrate on school work performed much better in school than other children. Instilling and reinforcing such motivational behaviors are critical to successful learning. Often, this means explaining to children the importance of education and learning not just to do well on tests but to enhance one's knowledge and understanding.

7. Provide children the opportunity to engage in leisure reading activities. The observed emphasis on whole-class activities and routine desk work in the classrooms indicate that more individually oriented activities should be encouraged. Providing greater opportunities for reading both in and out of school may be one method. Allowing more time in class for independent reading, giving reading assignments that do not require reports, and recommending books to read outside of school may increase opportunities for reading.

Future Studies

Future investigations in this longitudinal study should continue to trace children's academic and social adjustment. The transition to middle school now underway provides the opportunity to monitor children's self-concept and affective development. These factors may be instrumental in school success as well as decisions to drop out of school.

Although addressed in other studies with this sample, the impact of children's early childhood intervention experiences should continue to monitor longer-term effects. Particularly fruitful would be more detailed studies of the classroom and teacher practices that may maintain or enhance the effects of early childhood intervention programs. Given the importance of better understanding the multiple influences on children at risk, future investigations in this study promise to delve deeper into this realm.

References

Alexander, K. L., & Entwisle, D. R. (1988). Achievement in the first 2 years of school: Patterns and processes. Monographs of the Society for Research in Child Development, 53(2, Serial No. 218).

Bezruczko, N., & Mavrogenes, N. (1992) Relationships between proximity of social learning and children's intellectual development. International Journal of Psychology, 27, 231.

Bezruczko, N., & Reynolds, A. J. (1992, April). A model of reading growth. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Bezruczko, N., & Reynolds, A.J. (1992). Schools, Families, and Children: Performance Evaluation Summary. Chicago: Chicago Public Schools.

Bloom, B. S. (1976). Human characteristics and school learning. New York: McGraw-Hill.

Bradley, R. H., Caldwell, B. M., Rock, S. L., Ramey, C. T., Barnard, K. E., Gray, C., Hammond, M. A., Mitchell, S., Gottfried, A. W., Siegel, L., & Johnson, D. L. (1989). Home environment and cognitive development in the first 3 years of life: A collaborative study involving six sites and three ethnic groups in North America. Developmental Psychology, 25, 217-235.

Brambring, M., Losel, F., & Skowronek, H. (Eds.). (1989). Children at risk: Assessment, longitudinal research, and intervention. New York: Walter de Gruyter, Inc.

Butler, S. R., Marsh, H. W., Sheppard, M. J., Sheppard, J. L. (1985). Seven-year longitudinal study of the early prediction of reading achievement. Journal of Educational Psychology, 77, 349-361.

Carter, L. F. (1984). The sustaining effects study of compensatory and elementary education. Educational Researcher, 13(7), 4-13.

Chicago Public Schools. (1987). Chapter 2 all-day kindergarten program final evaluation report: Fiscal 1986. Chicago: Department of Research and Evaluation: Author.

Coll, C. T. G. (1990). Developmental outcomes of minority infants: A process-oriented look into our beginnings. Child Development, 61, 270-289.

Comer, J. P. (1988). Educating poor minority children. Scientific American, 259(5), 42-48.

Dugan, T. F., & Coles, R. (Eds.). (1988). The child in our times: Studies in the development of resiliency. New York: Brunner/Mazel.

Edmonds, R. R. (1979). Effective schools for the urban poor. Educational Leadership, 37(1), 15-27.

Entwisle, D. R., & Alexander, K. L. (1990). Beginning school math competence. Minority and majority comparisons. Child Development, 61, 454-471.

Entwisle, D. R., & Hayduk, L. A. (1982). Early schooling: Cognitive and affective outcomes. Baltimore: Johns Hopkins University Press.

Garbarino, J. (1982). Children & families in the social environment. New York: Aldine Publishing Co.

Haskins, R. (1989). Beyond Metaphor: The efficacy of early childhood education. American Psychologist, 44, 274-282.

Hieronymus, A. N., & Hoover, H. D. (1990). Iowa Tests of Basic Skills: Manual for school administrators (Supplement). Chicago: Riverside.

Hightower, A. D., Spinell, A., & Lotyczewski, B. S. (1989). Teacher-child rating scale (T-CRS) guidelines. Rochester, NY: Primary Mental Health Project, Inc.

Hightower, A. D., Work, W. C., Cowen, E. L., Lotyczewski, B. S., Spinell, A.,Guare, J. C., & Rohrbeck, C. A. (1986). The teacher-child rating scale: A brief objective measure of elementary children's school problem behaviors and competencies. School Psychology Review, 15, 393-409.

Horowitz, F. D., & O'Brien, M. (1989). Special issue in child development. American Psychologist, 44, 95-445.

House, E. R. (1989). Policy implications of retention research. In L. A. Shepard and M. L. Smith (Eds.), Flunking grades: Research and policies on retention (pp. 202-213). Philadelphia: Falmer Press.

Jackson, G. B. (1975). The research evidence on the effects of grade retention. Review of Educational Research, 45, 613-635.

Kellam, S. G., Branch, J. D., Agrawal, K. C., & Ensminger, M. E. (1975). Mental health and going to school: The Woodlawn program of assessment, early intervention, and evaluation. Chicago: University of Chicago Press.

Kessler, R. C., & Greenberg, D. F. (1981). Linear panel analysis: Models of quantitative change. New York: Academic Press.

Kopp, C. B. (1983). Risk factors in development. In P. H. Mussen (Ed.), Handbook of child development: Vol. 2. Infancy and developmental psychobiology. New York: Wiley.

Lazar, I., & Darlington, R. (1982). Lasting effects of early education: A report from the consortium for longitudinal studies. Monographs of the Society for Research in Child Development, 47(2/3, Serial No. 195).

Mavrogenes, N. A., & Bezruczko, N. (in press). Influences on writing development. Journal of Educational Research.

Mavrogenes, N. A., & Bezruczko, N. (1992). Influences on the writing development of disadvantaged children. Presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Mincy, R. B., Sawhill, I. V., & Wolf, D. A. (1990). The underclass: Definition and measurement. Science, 248, 450-453.

Moos, R. (1979). Evaluating educational environments. San Francisco: Jossey-Bass.

Mortimore, P., Sammons, P., Stoll, L., Lewis, D., & Ecob, R. (1988). School matters. Berkeley, CA: University of California Press.

National Assessment of Educational Progress. (1985). The reading report card. Princeton, NJ: Educational Testing Service.

Natriello, G., McDill, E. L., & Pallas, A. M. (1990). Schooling disadvantaged children: Racing against catastrophe. New York: Teachers College Press.

Orfield, G. (1988). Race, income, and educational equality: Students and schools at risk in the 1980s. In School success for students at risk (pp. 45-71). Orlando, FA: Harcourt, Brace, Jovanovich, Publishers.

Reynolds, A. J. (1989). A structural model of first-grade outcomes for an urban, low socioeconomic status, minority population. Journal of Educational Psychology, 81, 594-603.

Reynolds, A. J. (1991). Early schooling of children at risk. American Educational Research Journal, 28, 392-422.

Reynolds, A. J. (1992a). Comparing measures of parent involvement and their effects on academic achievement. Early Childhood Research Quarterly, 7, 441-462.

Reynolds, A. J. (1992b). Grade retention and school adjustment: An explanatory analysis. Educational Evaluation and Policy Analysis, 14, 101-121.

Reynolds, A. J. (1992c). Mediated effects of preschool intervention. Early Education and Development, 3, 139-164.

Reynolds, A. J. (1993, March). Effects of a preschool plus follow-on intervention program for children at risk. Paper presented at the biennial meeting of the Society for Research in Child Development, New Orleans.

Reynolds, A. J., & Bezruczko, N. (in press). School adjustment of children at risk through fourth grade. Merrill-Palmer Quarterly.

Reynolds, A. J., Weissberg, R. P., & Kasprow, W. J. (1992). Prediction of early social and academic adjustment of children from the inner city. American Journal of Community Psychology, 20, 599-624.

Rutter, M., Maughan, B., Mortimore, P., Ouston, J., & Smith, A. (1979). Fifteen thousand hours: Secondary schools and their effects on children. Cambridge, MA: Harvard University Press.

Rutter, M. (1983). School effects on pupil progress. Research findings and policy implications. Child Development, 54, 1-29.

Seginer, (1983). Parents' educational expectations and children's academic achievements: A literature review. Merrill-Palmer Quarterly, 29, 1-23.

Shepard, L. A., & Smith, M. L. (Eds.). (1989). Flunking grades: Research and policies on retention. Philadelphia: Falmer Press.

Slaughter, D. T., & Epps, E. G. (1987). The home environment and academic achievement of Black American children and youth: An overview. Journal of Negro Education, 56, 3-20.

Slavin, R. E., Karweit, N. L., & Madden, N. A. (1989). Effective programs for students at risk. Boston: Allyn and Bacon.

Slavin, R. E., Madden, N. A. (1989). What works for students at risk: A research synthesis. Educational Leadership, 4-13.

Spencer, M. B., & McLoyd, V. C. (Eds.). (1990). Special issue on minority children. Child Development, 61, 263-589.

Steinberg, L., Blinde, P. L., & Chan, K. S. (1984). Dropping out among language minority youth. Review of Educational Research, 54, 113-132.

Stevenson, H. W., & Stigler, J. W. (1992). The learning gap: Why our schools are failing and what we can learn from Japanese and Chinese education. New York: Summit Books.

Tuma, J. M. (1989). Mental health services for children: The state of the art. American Psychologist, 44, 188-199.

Wachs, T. D., & Gruen, G. E. (1982). Early experience & human development. New York: Plenum.

Walberg, H. J. (1984). Improving the productivity of America's schools. Educational Leadership, 41, 19-27.

Weissberg, R. P., Caplan, M., Bennetto, L., & Jackson, A. S. (1990). The New Haven Social Development Program: Sixth-grade social problem solving module. New Haven, CT: Yale University.

Weissberg, R. P., Jackson, A. S., & Shriver, T. P. (1993). Promoting positive social development and health practices in young urban adolescents. In M. J. Elias (Ed.), Social decision making and life skills development: Guidelines for middle school educators (pp. 45-77). Gaithersburg, MD: Aspen Publications.

White, K. R. (1985-1986). Efficacy of early intervention. Journal of Special Education, 19, 401-416.

White, K. R. (1982). The relation between socioeconomic status and academic achievement. Psychological Bulletin, 91, 461-481.