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TECHNICAL REPORT

Retaining Students in Grade

A Literature Review of the Effects of
Retention on Students' Academic
and Nonacademic Outcomes

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Prepared for the New York City Department of Education



RAND EDUCATION

The research described in this report was prepared for the New York City Department of Education and conducted within RAND Education, a unit of the RAND Corporation.

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PREFACE

Many states and districts are moving toward test-based requirements for promotion at key transitional points in students' schooling careers, thus ending the practice of "social promotion" — promoting students without regard for how much they have learned. The rationale is that repetition of the grade will give students an additional year to master the academic content they failed to master the previous year, and, thus, students should be less at risk for failure when they go on to the next grade. Opponents of grade retention argue that prior research has shown that grade retention disproportionately affects low-income and minority children, and is associated with low self-esteem, problem behaviors, and an increased risk of dropping out of school.

In 2003–2004, the New York City Department of Education (NYCDOE) implemented a new promotion and retention policy for 3rd-grade students in New York City (NYC) public schools. The policy was extended to grade 5 in 2004–2005, grade 7 in 2005–2006, and grade 8 in 2008–2009. NYCDOE asked the RAND Corporation to conduct an independent longitudinal evaluation of the 5th-grade social promotion policy and to examine the outcomes for two cohorts of 3rd-grade students. This study—conducted between March 2006 and August 2009—examined (1) policy implementation, factors affecting implementation, and implementation progress over time; (2) the impact of the policy on student academic and socioemotional outcomes; and (3) the links between implementation and desired outcomes.

The study included a systematic and rigorous review of the literature on grade retention and its effects on a variety of short- and long-term student outcomes. This report presents the results of the literature review and is one of three reports documenting the findings of the evaluation of the NYC promotion policy. The second report (Marsh, Gershwin, et al., 2009) provides lessons learned from other districts and states implementing test-based promotion policies similar to that of NYC. The third report (McCombs, Kirby, and Mariano, 2009) provides findings from the overall evaluation. All three reports should interest policymakers, practitioners, and researchers involved in designing, implementing, or studying interventions to improve outcomes for low-performing students.

This research was conducted by RAND Education, a unit of the RAND Corporation.

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SUMMARY

Grade retention refers to the practice of keeping students at the same grade level for an additional year. The rationale behind retention is that it gives low-achieving students an extra year to catch up to the grade-level standard. As part of an increasing emphasis on standards and accountability, many districts are making decisions about grade retention based on student scores on district or state standardized tests. While eliminating social promotion has considerable intuitive and political appeal, it has also raised important concerns, partly because prior studies have shown that students do not appear to benefit from being retained in grade and, indeed, that retention may increase their risk of dropping out of school.

PURPOSE OF THIS REPORT

In 2003–2004, the New York City Department of Education (NYCDOE) implemented a new promotion and retention policy for 3rd-grade students in New York City (NYC) public schools. The policy was extended to grade 5 in 2004–2005, grade 7 in 2005–2006, and grade 8 in 2008–2009. NYCDOE asked the RAND Corporation to conduct an independent longitudinal evaluation of the 5th-grade social promotion policy and to examine the outcomes for two cohorts of 3rd-grade students. This study—conducted between March 2006 and August 2009—examined (1) policy implementation, factors affecting implementation, and implementation progress over time; (2) the impact of the policy on student academic and socioemotional outcomes; and (3) the links between implementation and desired outcomes.

As part of the overall study, we conducted a systematic and rigorous search of the literature on grade retention—in particular, what was known about the characteristics of retained students and the short- and longer-term effects on student outcomes (both academic and nonacademic). This report presents the results of this literature review and helps place the findings of the larger evaluation in the context of previous studies.

METHODS

A systematic search of the literature was conducted to identify relevant studies published since 1980. Three selection criteria were used for inclusion: relevance, methodological rigor, and time of publication. To be included, a study had to examine K–12 grade retention, and the results needed to address at least one of the following issues: (1) characteristics of retained students and (2) effects of grade retention on any of six student outcomes, i.e., academic achievement, socioemotional

outcomes, behavioral outcomes, propensity to drop out of school, postsecondary education, and employment outcomes. The study had to be either a work of empirical research that used well-established statistical methods or a systematic and rigorous review of past research. Empirical studies were required to use a credible comparison group or statistical method to control for selection bias. Studies based mainly on descriptive statistics were excluded. For a review essay to be included, it had to use a clear analytical method for synthesizing past research, such as a systematic literature search process, selection criteria for inclusion, or statistical procedures for combining the results of past studies (for example, meta-analysis). Only studies published between 1980 and 2008 were included in this review.

Based on the criteria of relevance and publication date, a screening of titles and abstracts yielded a total of 178 studies. Of the 178 studies, 54 failed to meet the methodology criterion, 29 were not particularly relevant to the topics covered here, two were not yet published, and two failed to meet both the relevance and methodology criteria. As a result, 91 met all three criteria and were included in this review. Among the 91 selected studies, 87 were empirical, three were meta-analyses, and one was a systematic review of past research.

OVERALL FINDINGS

Our review of these 91 studies produced the following conclusions:

- Relative to students who are promoted, retained students are more likely to be male, minority, younger than their peers, of low socioeconomic status, and living in poor households and single-parent families. They are also more likely to have poorer academic performance prior to retention; significantly lower social skills and poorer emotional adjustment; more problem behaviors, such as inattention and absenteeism; more school transfers; poorer health; and disabilities. Parents of retained students are more likely to have lower IQ scores and lower levels of cognitive functioning, lower educational levels, lower occupational levels, less commitment to parenting responsibilities for their children's education, lower expectations of their children's educational attainment, and less involvement in school.
- In general, retention does not appear to benefit students academically. In most of the studies included here, we find negative relationships between retention and subsequent academic achievement. On the other hand, a few studies have found academic improvement in the immediate years after retention. Even so, these gains are often short-lived and tend to fade over time. Findings from the few studies using rigorous methods to adjust for selection bias have been mixed as well—with some showing short-term gains and others reporting gains that disappeared over time.

- Retained students have a significantly increased risk of eventually dropping out of school.
- Compared with their peers, retained students also appear less likely to pursue postsecondary education and more likely to have poorer employment outcomes in terms of earnings (although only a few studies have looked at this outcome).
- Findings on social, emotional, attitudinal, and behavioral outcomes among the retained students compared with their promoted peers appear mixed, with some studies reporting positive outcomes and others finding insignificant or even negative results.

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ABBREVIATIONS

ANCOVA	analysis of covariance
ANOVA	analysis of variance
BCPS	Baltimore City Public Schools
BMG	below modal grade (for age)
BPI	Behavior Problem Index
CAT	California Achievement Test
CPS	Chicago Public Schools
CTBS	Comprehensive Tests of Basic Skills
ECLS-K	Early Childhood Longitudinal Study—Kindergarten cohort
ERIC	Education Resources Information Center
FCAT	Florida Comprehensive Assessment Test
GED	General Education Development
GPA	grade point average
ITBS	Iowa Tests of Basic Skills
IV	instrumental variables
MANOVA	multivariate analysis of variance
NELS	National Education Longitudinal Study
NHES	National Household Education Surveys Program
NYC	New York City
NYCDOE	New York City Department of Education
OLS	ordinary least squares
R-CBM	Reading Curriculum-Based Measurement
RD	regression discontinuity

SES

socioeconomic status

TAAS

Texas Assessment of Academic Skills

1. INTRODUCTION

Retention as a remedy for poor academic performance has been hotly debated and extensively studied for decades. In an era emphasizing educational accountability, policies of determining grade retention based on students' scores on standardized tests have been adopted by many states and school districts in an effort to end social promotion.¹

GRADE RETENTION: PROS AND CONS

Grade retention, also known as "nonpromotion," "being retained," "flunking," "repeating a grade," and "being held back," is the practice of keeping students at the same grade level for an additional year, usually because of poor academic performance or emotional immaturity.² The rationale behind retention is that it gives low-achieving students an extra year to catch up to the grade-level standard. The assumption is that "by catching up on prerequisite skills, students should be less at risk for failure when they go on to the next grade" (Shepard and Smith, 1990, p. 84). Critics of grade retention contend that it fails to benefit children academically in the long run, hurts children's self-esteem, leads to behavioral problems often associated with being over-age for grade, has a correlative relationship with dropping out of school, and incurs significant financial costs of having children repeat a grade (Anderson, Jimerson, and Whipple, 2005; Bowman, 2005; Byrd, Weitzman, and Auinger, 1997; Eide and Goldhaber, 2005; Tanner and Galis, 1997; Xia and Glennie, 2005).

In contrast, *social promotion* refers to the practice of promoting students with their class or completion group whether or not they have obtained the requisite skills for the next grade, as judged by standardized or classroom assessments. The practice is justified on the grounds that a child, if not promoted along with his or her peers, may incur psychological and emotional damages, such as low self-esteem or a low sense of self-worth. Opponents of social promotion argue that such practice creates many problems: It can frustrate unprepared but promoted students by placing them in grades in which they are not ready for the work; it sends a message to students that they can get

¹ As of 2005, 18 states had policies that specified an assessment to be used in determining student eligibility for promotion or retention, and several others authorized local authorities to establish promotion policies or consider specific criteria for promotion (Zinth, 2005). However, our survey of state Web sites in 2006 and 2008 indicated that states and districts changed the content of policies over time and sometimes decided to end their policies. Thus, at any given time, it is surprisingly difficult to identify the number of states and districts implementing test-based promotion policies.

² Children in kindergarten or 1st grade are typically recommended for retention by teachers on the grounds of emotional immaturity for exhibiting problem behaviors, such as acting out, anxiety, or inattention.

by without working hard, adversely affecting student motivation and work effort; it forces teachers to deal with underprepared students while trying to teach the prepared students; it gives parents a false sense of their children's progress; it leads employers to conclude that diplomas are meaningless; and it "dumps" poorly educated students into a society in which they are not prepared to perform (Hartke, 1999; Thompson and Cunningham, 2000).

As part of an increasing emphasis on standards and accountability, grade retention has often been advocated and adopted in conjunction with the use of testing to end social promotion. A test-based promotion policy typically uses standardized tests as the main criterion to make high-stakes decisions about whether a student should be promoted to the next grade. Such promotion policies are very different from the traditional form of teacher-initiated retention, under which retention decisions are typically based on the assessments of teachers and parents. While teachers may use test scores as the basis for retaining students in grade, their decisions are influenced by many additional sources of information, such as student attendance, grades, and behavior, as well as intangible factors—such as their own attitudes toward retention and their perceptions of the students. As a result, teacher-initiated retention decisions are likely to be more subjective (Allensworth, 2005; Greene and Winters, 2006).

Test-based promotion policies are often implemented with additional short-term remedial supports, such as after-school programs, summer schools, early identification, and interventions targeted toward at-risk students. The premise of such policies is that the threat of retention, along with additional intervention programs, will both motivate and help students meet grade standards. Supporters argue that the threat of retention will provide incentives for students to work harder, for parents to monitor their child's progress, and for teachers to focus on the development of basic skills among low-achieving students, all of which should lead to increases in student achievement (Allensworth, 2005; Jacob, Stone and Roderick, 2004; Roderick and Engel, 2001; Roderick, Nagaoka, and Allensworth, 2005; Roderick, Bryk, et al., 1999). However, critics of test-based promotion policies believe that standardized tests tend to narrowly direct teaching efforts and school resources toward raising student test scores at the expense of teaching other important skills. They contend that such tests result in measurement error and often fail to accurately define a student's achievement in a subject area. Moreover, a single measure may not adequately describe a child's progress, and students may score abnormally lower than their true ability as a result of transient idiosyncratic factors during the testing day (Hartke, 1999; Heubert and Hauser, 1999; Lorence and Dworkin, 2006; Roderick and Nagaoka, 2005; Roderick, Nagaoka, and Allensworth, 2005; Thompson and Cunningham, 2000).

PURPOSE OF THIS REPORT

In 2003–2004, the New York City Department of Education (NYCDOE) implemented a new promotion and retention policy for 3rd-grade students in New York City (NYC) public schools. The policy was extended to grade 5 in 2004–2005, grade 7 in 2005–2006, and grade 8 in 2008–2009. NYCDOE asked the RAND Corporation to conduct an independent longitudinal evaluation of the 5th-grade social promotion policy and to examine the outcomes for two cohorts of 3rd-grade students who were subject to the 3rd-grade promotion policy. This study—conducted between March 2006 and August 2009—examined (1) policy implementation, factors affecting implementation, and implementation progress over time; (2) the impact of the policy on student academic and socioemotional outcomes; and (3) the links between implementation and desired outcomes.

As a first step toward understanding what was known about the effects of grade retention on students' academic and socioemotional outcomes, we conducted a systematic and rigorous search of the literature on grade retention—in particular, what was known about the characteristics of retained students and the short- and longer-term effects on student outcomes (both academic and nonacademic). A preliminary review found that the literature on promotion policy implementation was sparse and not very rigorous. Most of this literature tended to address more generally the elements of a successful promotion policy, often using exemplars rather than generalizable and rigorous research. As such, we do not include it here. This report focuses on the effects of grade retention and helps place the findings of the larger evaluation with respect to students' academic and socioemotional outcomes in the context of prior studies.³ This is one of three reports (the second is a report on lessons learned from other states and districts who implemented promotion policies similar to that of NYC and the third a final report on the study) documenting the results of the overall RAND evaluation.

ORGANIZATION OF THIS REPORT

The remainder of this report is organized as follows. Chapter Two presents a description of the methods used to conduct the literature review, and discusses the conceptual and methodological characteristics of the reviewed studies. The report then synthesizes research findings on the characteristics of retained students (Chapter Three) and the effects of grade retention on six different outcomes including academic achievement, socioemotional outcomes, behavioral outcomes, propensity to drop out of school, postsecondary education, and employment outcomes

³ We also reviewed the few studies that examined the effect of supportive interventions on student outcomes. While these are not reviewed here, they are presented as part of the final report (McCombs, Kirby, and Mariano, 2009).

(Chapter Four). Chapter Five briefly summarizes our findings from the literature. For each of the studies reviewed here, the Appendix provides a summary, including the research questions, data and methods, and findings.

2. METHODOLOGICAL ISSUES

LITERATURE SEARCH AND SELECTION CRITERIA

A systematic search of the literature was conducted to identify relevant studies published since 1980. Key words used in the search included grade retention, grade repetition, academic retention, in-grade retention, student retention, early retention, school retention, grade failure, academic failure, non-promotion, retained, flunked, failed, promotion, social promotion, student promotion, promoted, and other synonyms. Electronic databases searched include Resources in Education, Education Resources Information Center (ERIC), Google Scholar, PsycINFO, Education Abstracts, Academic Search Premier, Education Full Text, Ingenta Connect, JSTOR, Sociological Abstracts, and Social Science Abstracts. Additional studies were identified through a review of the bibliographies of the retrieved publications.

Three selection criteria were used for inclusion: relevance, methodological rigor, and date of publication. The research was required to examine grade retention in K–12 grades, and results had to address at least one of the following issues: characteristics of retained students and effects of grade retention on at least one of six student outcomes (academic achievement, socioemotional outcomes, behavioral outcomes, propensity to drop out of school, postsecondary education, and employment outcomes). The study had to be either an empirical study that used well-established statistical methods or a systematic and rigorous review of past research. Empirical studies were required to use a credible comparison group or statistical method to control for selection bias. Studies based mainly on descriptive statistics were excluded. For a review essay to be included, it had to use a clear analytical method for synthesizing past research, such as a systematic literature search process, selection criteria for inclusion, or statistical procedures for combining the results of past studies (for example, meta-analysis). Only studies published between 1980 and 2008 were included in this review.

Based on the criteria of relevance and publication date, a screening of titles and abstracts yielded a total of 178 studies. Of the 178 studies, 54 failed to meet the methodology criterion, 29 were not particularly relevant to the topics covered here, two were not yet published, and two failed to meet both the relevance and methodology criteria. As a result, 91 met all three criteria and were included in this review. Among the 91 selected studies, 87 were empirical, three were meta-analyses, and one was a systematic review of past research.¹ Table 2.1 summarizes the number of studies per topic area.

¹ The Appendix provides details of each study reviewed here.

Table 2.1. Number of Studies, by Topic

Topic	Total Number of Studies	Number of Empirical Studies	Number of Reviews
Characteristics of retained students	32	32	0
Demographics	24	24	0
Family and parental characteristics	15	15	0
Cognitive and academic functioning	16	16	0
Socioemotional and behavioral development	12	12	0
Health	3	3	0
Effects of grade retention	77	73	4
Academic achievement	55	52	3
Socioemotional outcomes	29	26	3
Behavioral outcomes	21	19	2
Propensity to drop out of school	17	16	1
Enrollment in postsecondary education	2	2	0
Employment outcomes	2	2	0

While the three meta-analyses and one review of past research met our selection criteria, they all had limitations. The meta-analysis by Holmes and Matthews (1984) focused on elementary and junior high school grades, and included published studies as well as dissertations and master's theses.² The publication dates of these studies range from 1929 to 1981, with the majority conducted between 1960 and 1975. The meta-analysis by Holmes (1989) was largely an update of the earlier meta-analysis by Holmes and Matthews (1984) and synthesized findings from 63 studies published between 1929 and 1987.³ Both meta-analyses were based on studies mostly conducted more than 30 years ago, which were dated and often lacked statistical controls for selection bias.

Jimerson (2001) reviewed 20 research articles published between 1990 and 1999. Most of these studies suffered from small sample size, with 14 of the 20 studies having fewer than 100 retained or promoted students. Only three studies had sample sizes larger than 1,000 in both retained and comparison groups. The meta-analysis did not weight the study effects by sample size.

² The 44 studies reviewed by Holmes and Matthews (1984) consisted of 18 published studies, 14 dissertations, and 12 master's theses.

³ The 63 studies reviewed by Holmes (1989) consisted of 20 published studies, 22 dissertations, 18 master's theses, and three unpublished papers. Forty-four of these studies were included in an earlier meta-analysis by Holmes and Matthews (1984).

Jimerson, Anderson, and Whipple (2002) conducted a systematic review of dropout literature that examined grade retention with both associative and predictive models. This review included 17 studies published between 1970 and 2000. Unlike the three meta-analyses, it did not use statistical methods to synthesize findings. Rather, the authors provided a narrative discussion of the findings from the 17 studies.

CONCEPTUAL/METHODOLOGICAL ISSUES IN RETENTION STUDIES

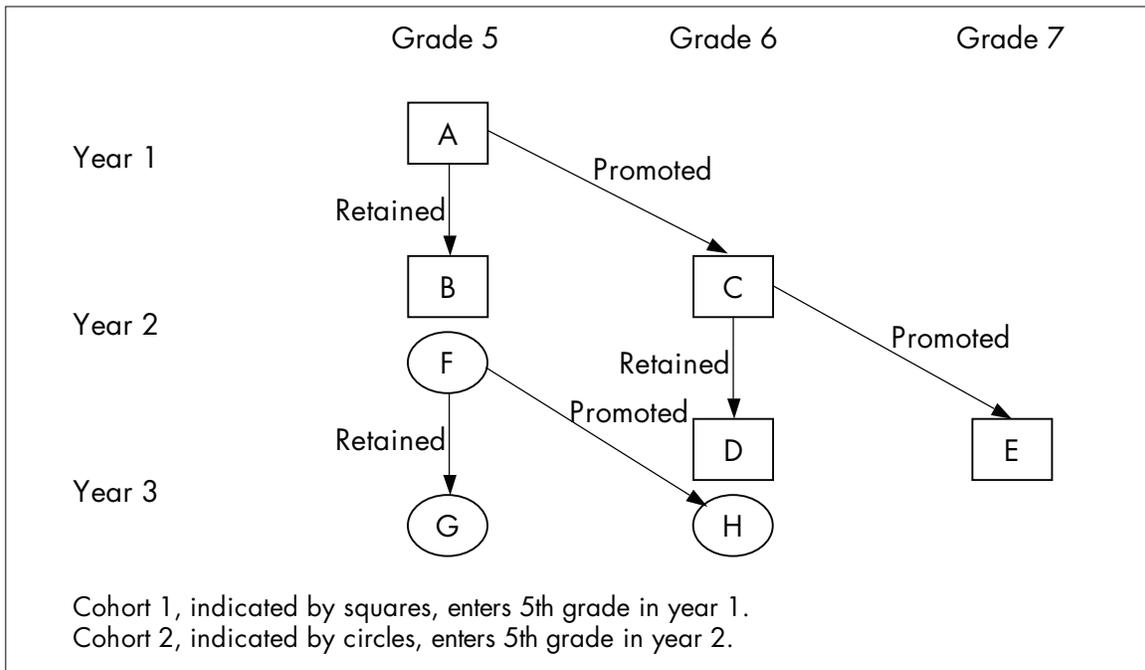
Studies included in this review used a variety of analytical approaches. They differed on issues such as types of comparisons, comparison groups, and statistical methods, which may affect findings.

Types of Comparisons

Three types of comparison strategies were used in the retention literature: same-age comparison, same-grade comparison, and "across-year" comparison. Same-age comparison compares retained students with their peers who are of the same age but promoted to higher grade levels. Same-grade comparison uses performance of retained and promoted students measured at the same grade as the basis of comparison. There are two variations of same-grade comparisons. In the first variation, outcomes of retained students measured in a given year are compared with outcomes of the same-age promoted peers measured a year earlier. Essentially, it involves comparing data from different years for the retained and promoted students (Holmes, 1989; Karweit, 1999; Roderick and Nagaoka, 2005). The second variation of same-grade comparison uses younger, nonretained students as the comparison group. In other words, the comparison groups are in the same grade with but are younger than the retained students at the time the comparison is made (Alexander, Entwisle, and Dauber, 2003; Hong and Yu, 2008; Tanner and Galis, 1997).

An example helps illustrate the differences between same-age and same-grade comparisons. Suppose a student is retained in 5th grade for one year. At the end of his retention year, a same-age comparison would compare his current performance with that of his former classmates, who are now completing their 6th-grade year (i.e., comparing B with C, as illustrated in Figure 2.1). The first variation of same-grade comparison would compare the retained student's performance at the end of the repeating year with the outcomes of the 6th graders measured one year earlier when they were his classmates (i.e., comparing B with A). Both outcomes are measured at the end of the 5th grade, but in two different years. The second variation of same-grade comparison would compare the retained student's performance at the end of the retention year with that of his current 5th-grade classmates who are one year younger than the retained student, assuming that both are on grade when they enter 5th grade (i.e., comparing B with F).

Figure 2.1. Illustration of Comparison Strategies



SOURCE: Adapted from Alexander, Entwisle, and Dauber (2003).

Hong and Yu (2008, p. 409) provide a succinct summary of the issues that arise with respect to both same-age and same-grade comparisons:

The essential problem here is how to identify an appropriate comparison group for the retained group. Previous studies have compared the outcomes of the retained children either with their new classmates who were experiencing the grade for the first time (i.e., same-grade comparison) or with their same-age peers who had been promoted to the next grade (i.e., same-age comparison). Obviously, in same-grade comparisons, most retained students cannot be matched with their new classmates on age. Hence, the comparison group provides little counterfactual information about how the retained students would fare had they been promoted. Even in same-age comparisons, the retained group and the promoted group are still vastly different on average in many prior characteristics. Adjustment by means of a linear model or multivariate matching sharply constrains the number of background variables that can be controlled [Little, 1985; R. Stone, 1993]. In particular, most promoted children have little or no risk of ever being retained. When the two groups are barely comparable, statistical adjustment for a limited number of background variables cannot be relied upon to remove bias.

They argue for using propensity score matching methods to define a credible comparison group.

Studies evaluating Chicago’s 1996 policy and Florida’s 2002 policy to end social promotion used “across-year” comparisons. Students in a given grade who were subject to a test-based promotion

policy were compared with students enrolled in that grade in the years before the promotion policy was enacted.

Comparison Groups

Within each type of comparison strategy, three kinds of comparison groups can be used: a nonmatched group of regularly promoted students, a comparison group of low-achieving but promoted students, and a matched comparison group. The nonmatched group of regularly promoted students is often randomly selected from all promoted students. The low-achieving but promoted comparison group consists of promoted students with a same level of low achievement as retained students. These low-achieving but promoted students were often recommended for retention by teachers or had similar grades or achievement test scores as retained students. The matched comparison group uses some kind of statistical procedure (for example, propensity score matching) to ensure that the comparison group is statistically comparable to the retained group on a number of selected variables, such as gender, race, age, grade, socioeconomic status (SES), prior academic achievement, and family background.

Statistical Methods

Studies included in this review used a variety of statistical methods. The most frequently-used statistical method is to control for confounding factors by including covariates (such as demographics, family background, school factors, and prior achievement) in the model. Many studies also used hierarchical models to take into account the nested nature of educational data, in which students are clustered within classrooms, schools, and districts. As pointed out by Raudenbush (1988), hierarchical models allow parameters at a lower level of aggregation to vary as a function of parameters at the next-higher level, which helps address the aggregation bias problem. Moreover, such models enable specification of appropriate error structures, including random intercepts and random coefficients, thus addressing the misestimated precision problem associated with nested data structures (Raudenbush, 1988). Of the studies that used hierarchical models, the majority employed hierarchical linear models, with many using a two-level model (student and school level) and others using a three-level model (time, student, and school level) (Allensworth, 2004; Guevremont, Roos, and Brownell, 2007; Hong and Yu, 2008; McCoy and Reynolds, 1999; Nagaoka and Roderick, 2004; Reynolds, 1992; Roderick and Nagaoka, 2005; Silbergglitt, Appleton, et al., 2006; Silbergglitt, Jimerson, et al., 2006). Several studies used hierarchical logistic models for dichotomous dependent variables (for example, whether a student drops out of school)

(Allensworth, 2005; Hong and Yu, 2008; Goldschmidt and Wang, 1999; Ou and Reynolds, 2008; Reynolds, 1992; Willson and Hughes, 2006).⁴

Despite the advantages of addressing issues associated with nested data, hierarchical models are not designed to solve the omitted variable bias problem. In other words, the estimated treatment effect (i.e., difference in outcomes between retained students and comparison groups) may be due to factors other than retention or variables included in the model. To control for omitted variable bias, several studies used propensity score methods (Hong and Raudenbush, 2005; Hong and Yu, 2007, 2008; Wu, West, and Hughes, 2008). D'Agostino (1998) offers a useful summary of how and why propensity scoring works:

In observational studies, investigators have no control over the treatment assignment. The treated and non-treated (that is, control) groups may have large differences on their observed covariates, and these differences can lead to biased estimates of treatment effects. Even traditional covariance analysis adjustments may be inadequate to eliminate this bias. The propensity score, defined as the conditional probability of being treated given the covariates, can be used to balance the covariates in the two groups, and therefore reduce this bias. In order to estimate the propensity score, one must model the distribution of the treatment indicator variable given the observed covariates. Once estimated the propensity score can be used to reduce bias through matching, stratification (subclassification), regression adjustment, or some combination of all three. (p. 2265)

[B]y definition the propensity score is the conditional probability of treatment given the observed covariates $e(X) = \text{pr}(Z=1 | X)$, which implies that Z and X are conditionally independent given $e(X)$. Thus, subjects in treatment and control groups with equal (or nearly equal) propensity scores will tend to have the same (or nearly the same) distributions on their background covariates. Exact adjustments made using the propensity score will, on average, remove all of the bias in the background covariates. Therefore bias-removing adjustments can be made using the propensity scores rather than all of the background covariates individually. (p. 2267)

A few studies used an instrumental variables (IV) approach to estimate the causal relationship between grade retention and student outcomes (Eide and Showalter, 2001; Greene and Winters, 2004, 2007; Jacob and Lefgren, 2002; Matsudaira, 2008). The IV approach addresses selection bias by including in the estimation model an exogenous variable, or instrument, that predicts retention but is otherwise unrelated to the student outcome of interest. For the IV approach to work properly, the instrument needs to satisfy two conditions: (1) the instrument is strongly correlated with the independent variable of interest (in this case, grade retention), and (2) the only reason for any association between the instrument and the outcome variable is the association between this

⁴ Hierarchical models are not mutually exclusive with propensity score, instrumental variables, and regression discontinuity estimation strategies. The former accounts statistically for the nested structure of educational data, while the latter use natural experiments to estimate causal effects.

instrument and the independent variable of interest (Angrist and Lavy, 1999; Angrist, Imbens, and Rubin, 1996; Staiger and Stock, 1997). The standard IV estimation strategy is to use two-stage least squares regression: In the first stage, the probability of being retained is predicted as a function of the instrument plus a set of independent variables that are also included as covariates in the second stage, and the estimated probability of being retained replaces the observed retention indicator as an independent variable in the second stage.

Because retention is a function of academic performance, finding a suitable instrument requires reliance on exogenous shifts or discontinuities in retention policies. For instance, Eide and Showalter (2001) used the IV approach as their primary estimation strategy to examine the effect of grade retention on dropping out of school and labor market earnings in adulthood. The instrument used in their estimation was the number of days between a child's birthday in the first year that the child is eligible to enter kindergarten and the statutorily determined kindergarten entry date that varies across states. According to the authors, birthdays across days of the calendar year typically follow a uniform distribution, and the kindergarten entry date across states are presumably exogenous; thus, this instrument is likely exogenous from outcomes, including dropping out of school and labor market earnings. They further argue that the instrument is plausibly related to the probability of being retained, because younger children are more likely to be held back for a year to allow for academic and social development. Another example of an instrument in retention studies is from the evaluations of the test-based promotion policy in Florida, in which Greene and Winters (2004, 2007) used a dichotomous variable of whether or not students were subject to retention policy as the instrument to predict the probability of being retained. In addition, Jacob and Lefgren (2002) and Matsudaira (2008) employed an IV approach within a regression discontinuity (RD) framework.⁵

More recently, researchers have begun using an RD design in an attempt to estimate the causal relationship between grade retention and student outcomes. An RD design (Imbens and Lemieux, 2008; Shadish, Cook, and Campbell, 2002) compares the relationship between a treatment variable and an outcome variable, where assignment to the treatment is determined by a value on an observable assignment variable, such as a score on an academic assessment. "Treatment" status (such as enrollment in mandatory summer school) is determined by whether a student scores above or below a particular cut score on the assignment variable. Those who score below the threshold are exposed to the intervention, while those who score above are not (a case of sharp discontinuity). It might also be the case that some who are above the threshold also get treated while some below the threshold do not (a case of fuzzy discontinuity), although there is an

⁵ Chapter Four provides more details on studies using an RD design.

increased probability of being treated for those below the cut point. This approach exploits the fact that subjects included in the comparison and the intervention groups differ only with respect to the assignment variable (and with respect to any other variable correlated with it); thus, one controls for the confounding factors by contrasting marginal participants and marginal nonparticipants, where the term *marginal* refers to those units *not too far* from the threshold for selection (Battistin and Rettore, 2002). The difference in outcomes between these two groups then measures the mean causal impact of the treatment. However, this method yields a local treatment effect, generalizable only to those scoring near the cutoff on the assignment variable. RD models are most often implemented in a two-stage least squares framework (Imbens and Lemieux, 2008) and, therefore, are related to IV models. Cook (2008) points out that the strengths of the RD design are that it can be used in a particular set of circumstances in which a randomized experiment might not be feasible, and in these circumstances, the RD design is superior to all known quasi-experimental methods. As such, in Chapter Four, while we summarize findings across all the reviewed studies, we also provide more detailed findings from the studies that used an RD design.

Age at Retention

Conventional wisdom holds that students retained at a younger age tend to benefit from an additional year in the same grade. Children in early grades (typically, kindergarten or 1st grade) are often retained on the grounds of behavioral problems stemming from socioemotional immaturity, and an additional year, according to the popular belief, is “a gift of time” for children to reach the maturity level required for academic success (Hong and Yu, 2008; Jimerson, Carlson, et al., 1997; Mantzicopoulos and Morrison, 1992; Pianta, Tietbohl, and Bennett, 1997; Shepard and Smith, 1989).

However, our review, which encompasses 11 empirical studies on the academic effects of retention in kindergarten or 1st grade, does not support this notion. In general, the majority of research shows that, contrary to popular belief, retention during kindergarten or 1st grade usually fails to improve academic performance and often has negative effects on student achievement in the long run (Baenen, 1988; Balitewicz, 1998; Hong and Raudenbush, 2005; Hong and Yu, 2007; Johnson, Merrell, and Stover, 1990; Setencich, 1994; Wu, West, and Hughes, 2008; Meisels and Liaw, 1993).

In addition, we found four studies that examined whether the timing of grade retention matters in terms of academic effects. Two studies reported no statistically significant difference between students retained in early grades and those retained in later grades (Baenen, 1988; Silbergliitt, Appleton, et al., 2006). Two showed that retention in later grades was associated with more negative outcomes than retention in early grades (Hagborg et al., 1991; Meisels and Liaw, 1993).

Length of Follow-Up

In our review, the length of follow-up appears to matter in evaluating the academic effects of retention. Studies that followed students for three years or more tended to find dissipating effects on academic outcomes over time (Baenen, 1988; Hong and Yu, 2007; Lorence and Dworkin, 2006; Lorence et al., 2002; Mantzicopoulos and Morrison, 1992; Peterson, DeGracie, and Ayabe, 1987). Other studies even reported that short-term effects disappeared just two years after the retention decision (Nagaoka and Roderick, 2004; Roderick and Nagaoka, 2005). While the majority of studies reported that short-term academic gains among retained students completely disappeared several years later and retained students eventually fell behind again (Baenen, 1988; Mantzicopoulos and Morrison, 1992; Nagaoka and Roderick, 2004; Peterson, DeGracie, and Ayabe, 1987; Roderick and Nagaoka, 2005), studies that followed Texas 3rd-grade students for more than six years found positive effects that persisted, but decreased in magnitude, over time (Lorence and Dworkin, 2006; Lorence et al., 2002).

Teacher Ratings

Studies that examined socioemotional, attitudinal, and behavioral outcomes used several different methods to measure these outcomes, including student self-reported measures, parental reports, and teacher ratings.⁶ Studies that use teacher ratings to measure student socioemotional or attitudinal outcomes are subject to threats to validity because teacher ratings may be influenced by teachers' attitudes toward grade retention. For example, teachers who support retention policies may be more likely to report negative attitudes among retained students.

Regression to the Mean Effects

Regression to the mean refers to the phenomenon that low-performing students will likely achieve somewhat higher test scores when retested, while students with very high scores tend to score lower on a second test. Since students can have good and bad testing days, those who score abnormally low (or high) are very likely to have scores that underestimate (or overestimate) their true ability. They will naturally do better (or worse) and score closer to the mean on a second test. If the retention decision is based primarily on a single test, retained students are very likely to be those who had a bad testing day and tended to score higher the next year. As a result, findings of positive academic effects could be due to regression artifacts.

To control for the regression to the mean effects, researchers examining Chicago's test-based promotion policy used growth-curve models to derive student achievement growth after retention

⁶ Parental reports were used only to measure behavioral outcomes, while student self-reported information and teacher ratings were used to measure socioemotional, attitudinal, and behavioral outcomes.

and compared the average estimated achievement growth of retained and comparison groups. They reported lower achievement growth among 6th-grade students and little evidence of greater achievement growth among 3rd-grade students two years after the retention decision (Nagaoka and Roderick, 2004; Roderick and Nagaoka, 2005). Lorence and Dworkin (2006) addressed the regression artifacts problem by conducting time-reverse analysis, in which the preretention test scores (i.e., reading test scores for 3rd-grade students in spring 1994) were used as the dependent variable, and postretention scores were entered as independent variables. Since the coefficients in the time-reverse analysis were approximately similar in magnitude, the authors concluded that the positive effect of grade retention on reading achievement among 3rd-grade students is not due to “a statistical artifact of the lower performing retained 3rd graders regressing to the population mean” (pp. 1025–1026).

In the following chapters, we discuss findings on characteristics of retained students (Chapter Three) and six student outcomes: academic achievement, socioemotional outcomes, behavioral outcomes, propensity to drop out of school, postsecondary education, and employment outcomes (Chapter Four).

3. CHARACTERISTICS OF RETAINED STUDENTS

The literature is fairly consistent regarding the characteristics of retained students. In general, grade retention is associated with gender, race, SES, age for grade, student mobility, family and parental characteristics, cognitive abilities, prior academic achievement, prior behavioral and socioemotional development, disabilities, and student health. We summarize findings by five types of student characteristics: demographics, family and parental characteristics, cognitive and academic functioning, socioemotional and behavioral development, and health.¹

With respect to student demographics, studies showed that retained students were more likely to be male, minority, of lower SES, and younger than their peers in the same grade. Specifically, boys were found to be much more likely to be retained than girls (Alexander, Entwisle, and Dauber, 2003; Byrd and Weitzman, 1994; Corman, 2003; Dauber, Alexander, and Entwisle, 1993; El-Hassan, 1998; Fine and Davis, 2003; Frymier, 1997; Gottfredson, Fink, and Graham, 1994; Guevremont, Roos, and Brownell, 2007; Hong and Raudenbush, 2005; Hong and Yu, 2007; Karweit, 1999; Lorence and Dworkin, 2006; Lorence et al., 2002; Mantzicopoulos et al., 1989; Meisels and Liaw, 1993). Most studies reported African-American students as being at an increased risk for retention in comparison with their white peers (Blair, 2001; Dauber, Alexander, and Entwisle, 1993; Frymier, 1997; Hauser, Pager, and Simmons, 2000; Hong and Yu, 2007; Lorence et al., 2002; Roderick, Bryk, et al., 1999), while some found that Hispanics were also more likely to repeat a grade than whites (Frymier, 1997; Hauser, Pager, and Simmons, 2000). Students in the lowest-income quartile were over 40 percent more likely to be retained than those in the highest quartile (Hauser, Frederick, and Andrew, 2007), and among high school graduates, those in the lowest quartile of SES were twice as likely to be have been retained than high-SES graduates (Fine and Davis, 2003). Retained students also tended to have more school transfers (El-Hassan, 1998; Guevremont, Roos, and Brownell, 2007; McCoy and Reynolds, 1999; Reynolds, 1992).

The studies reported a significant association between grade retention and family characteristics. Retained students were more likely to come from poor households (Byrd and Weitzman, 1994;

¹ While some studies of student characteristics assess the same aspects of student outcomes as summarized in the next chapter on effects of grade retention (e.g., cognitive and academic functioning, and socioemotional and behavioral development), they have fundamental differences in terms of the research questions being addressed. Studies on characteristics of retained students examine factors that precede retention, and typically measure student characteristics before students are retained. In contrast, studies on the relationship between retention and student outcomes address the research question of whether retention has a causal effect on student outcomes. As a result, the emphasis is on student outcomes measured after the retention year, which are typically treated as dependent variables.

Corman, 2003; Dauber, Alexander, and Entwisle, 1993; Frederick and Hauser, 2006; Guevremont, Roos, and Brownell, 2007; Lorence and Dworkin, 2006; Lorence et al., 2002) and single-parent families (Corman, 2003; El-Hassan, 1998; Hong and Raudenbush, 2005). Parents of retained students, on average, had lower IQ scores and lower levels of cognitive functioning (Jimerson, 1999; Jimerson, Carlson, et al., 1997), lower educational levels (Byrd and Weitzman, 1994; Corman, 2003; Dauber, Alexander, and Entwisle, 1993; El-Hassan, 1998; Frederick and Hauser, 2006, 2008; Liddell and Rae, 2001), lower occupational levels (El-Hassan, 1998; Frederick and Hauser, 2006, 2008), lower parental value of education and less commitment to parenting responsibilities for their children's education (Ferguson, Jimerson, and Dalton, 2001; Hong and Raudenbush, 2005; Willson and Hughes, 2006), lower expectations of their children's educational attainment (Hong and Raudenbush, 2005), and less involvement in school (Jimerson, Carlson, et al., 1997; Marcon, 1993; McCoy and Reynolds, 1999; Reynolds, 1992) than parents of promoted students.

In comparison with their promoted peers, retained students were found to fare poorly on cognitive and academic measures, including early academic standing (Alexander, Entwisle, and Dauber, 2003; Dauber, Alexander, and Entwisle, 1993; McCoy and Reynolds, 1999), IQ scores or cognitive test scores (Blair, 2001; Liddell and Rae, 2001; Mantzicopoulos et al., 1989; Safer, 1986), and academic achievement prior to retention (Fine and Davis, 2003; Gottfredson, Fink, and Graham, 1994; Hong and Raudenbush, 2005; Hong and Yu, 2007; Liddell and Rae, 2001; Mantzicopoulos et al., 1989; Marcon, 1993; Reynolds, 1992; Robles-Pina, Defrance and Cox, 2008; Safer, 1986; Willson and Hughes, 2006).

Retained students often received lower ratings on socioemotional and behavioral indicators than their promoted peers prior to retention. On average, retained students had lower social skills, poorer emotional adjustment, and more problem behaviors before retention. They tended to have a lower self-concept, to display lower confidence, and to be less self-assured and socially competent (Ferguson, Jimerson, and Dalton, 2001; Jimerson, Carlson, et al., 1997; Robles-Pina, Defrance, and Cox, 2008). They were usually rated less favorably by teachers on classroom conduct, peer relations, and school adjustment and were often reported to exhibit higher levels of inattention, absenteeism, and behavior problems (Alexander, Entwisle, and Dauber, 2003; Blair, 2001; Byrd and Weitzman, 1994; Dauber, Alexander, and Entwisle, 1993; Hong and Raudenbush, 2005; Jimerson, 1999; Jimerson, Carlson, et al., 1997; Mantzicopoulos et al., 1989; Reynolds, 1992; Safer, 1986).

While only three studies analyzed the health conditions of retained students, they all identified disability status and poor health as factors associated with an increased risk of grade retention.

These health conditions included deafness, speech defects, low birth weight, enuresis, and depression (Byrd and Weitzman, 1994; Karweit, 1999; Robles-Pina, DeFrance, and Cox, 2008).

4. RELATIONSHIP BETWEEN GRADE RETENTION AND STUDENT OUTCOMES

This chapter reviews studies that examined the relationship between grade retention and six student outcomes: academic achievement, socioemotional outcomes, behavioral outcomes, propensity to drop out of school, postsecondary education, and employment outcomes.

ACADEMIC ACHIEVEMENT

Overall, the research shows that retention alone is ineffective in raising student achievement. Studies that reported positive or mixed findings focused on short-term¹ effects, used same-grade comparisons, or evaluated retention policies that included additional, supportive components.

While retained students may appear to make significant gains during the retention year, improvements are often not big enough to bring them to the same performance level as the promoted students (Alexander, Entwisle, and Dauber, 2003; Karweit, 1999). Moreover, those gains are typically short-lived and tend to fade in subsequent years (Alexander, Entwisle, and Dauber, 2003; Baenen, 1988; Jacob and Legfren, 2002; Jimerson, Carlson, et al., 1997; Jimerson, 2001; Karweit, 1999; Lorence and Dworkin, 2006; Lorence et al., 2002; Mantzicopoulos and Morrison, 1992; Nagaoka and Roderick, 2004; Peterson, DeGracie, and Ayabe, 1987; Roderick and Nagaoka, 2005). Several studies reported that academic gains found in the short term among retained students disappeared several years later and retained students eventually fell behind again (Baenen, 1988; Mantzicopoulos and Morrison, 1992; Nagaoka and Roderick, 2004; Peterson, DeGracie, and Ayabe, 1987; Roderick and Nagaoka, 2005).

Findings on the academic outcomes of retention vary depending on the basis of comparison. Same-age comparison generally suggests negative consequences of retention on student performance. Same-grade comparison often yields mixed findings, depending on other features of the research design such, as how long students are followed after retention. While research varies in scientific rigor, studies using same-grade comparisons with matched control groups of low-achieving but promoted students tend to find no academic benefit or even a negative impact on retained students (Hagborg et al., 1991; Holmes and Saturday, 2000; Jimerson, 1999; Karweit, 1999; Luppescu et al., 1995; Niklason, 1987; Reynolds, 1992; Roderick, 1994; Shepard and Smith, 1987, 1989; Silbergliitt, Appleton, et al., 2006; Tanner and Galis, 1997; Thomas et al., 1992). Studies using same-grade comparisons without a matched control group often show no harm or benefits to

¹ We define short term as within three years after retention, and long term as four or more years after retention.

retained students (Gleason, Kwok, and Hughes, 2007; Holmes and Saturday, 2000; Jimerson, 1999; Peterson, DeGracie, and Ayabe, 1987).

Although many studies did not report whether retention was accompanied by supportive interventions, in a few studies that found positive academic outcomes at certain grade levels, retained students received targeted interventions designed to help them overcome individual problems (Lorence and Dworkin, 2006; Lorence et al., 2002; Greene and Winters, 2004, 2006, 2007, 2009; Peterson, DeGracie, and Ayabe, 1987). Some researchers commented that it was unclear whether the positive outcomes came from retention or the supportive components (Fager and Richen, 1999; Hauser, 1999).

Studies Using a Regression Discontinuity Design

Roderick and Nagaoka (2005) and Greene and Winters (2006) were able to exploit data from recently implemented test-based promotion policies in Chicago and Florida, respectively. They both used “across-year” designs that compared students from a prior cohort not subject to the policy to students in a cohort subject to the policy, and an RD design in which they compared students with test scores very close to but on either side of the cutoff score. The Chicago study found a small positive impact on the performance of retained 3rd- and 6th-grade students relative to promoted students in the year that the students were retained, but within the next two years, these gains disappeared among the 3rd graders and were reversed among the 6th graders, such that the retained 6th graders had actually fallen behind their promoted counterparts. In contrast, Greene and Winters (2006), using similar analytical models and designs, found small positive but statistically significant gains among retained students in Florida—gains that increased over time. For example, retained students benefited by between 0.01 and 0.05 standard deviations after one year and by 0.15–0.16 standard deviations after two years, depending on how strictly the authors defined the region around the threshold (within 25 points or 50 points of the cutoff score). The authors hypothesized that differences in findings between the Florida and Chicago studies may have been due to differences in the design and implementation of the promotion policies and the fact that the Chicago policy underwent several changes in its implementation.

Two studies (Jacob and Lefgren, 2002; Matsudaira, 2008) used an RD design to measure the effect of a summer remedial program in English language arts and mathematics on student outcomes. Jacob and Lefgren (2002) used data from the Chicago Public School system on 3rd- and 6th-grade cohorts who were subject to the promotion policy from 1997 to 1999. Students were eligible for summer school if they fell below the assignment threshold in either or both subjects. Because not every student below the cutoff was treated, and some students above the cutoff were treated, the cut score provides a source of exogeneity that is strongly associated with the receipt of treatment

but not with the dependent variable of interest, thus satisfying the IV assumptions. Jacob and Lefgren (2002) used different kinds of second- and third-difference estimators to measure the treatment effect: one scaled by the probability of treatment associated with meeting the cutoff and the other controlling for a linear trend of reading ability for students above the cutoff. These IV estimators show that being retained in the 3rd grade increases performance the following year in both reading and mathematics—amounting to 41 and 33 percent of the average annual gain in reading and mathematics, respectively. By the second year, the reading effect was essentially zero, but the mathematics effect, while much smaller, was still significant. Among 6th graders, however, there were no statistically significant differences between performances of retained and promoted students (all of whom were eligible for summer school). The authors hypothesized that the zero net effects mask a small positive summer school effect and a negative retention effect.

Also using an RD framework, Matsudaira (2008)² examined the effects of a policy similar to that of Chicago in a large, urban school district, where students were mandated to attend summer school if their spring score fell below a threshold. While he looked at the effects of summer school on achievement and not specifically at grade retention, we mention the paper here because it used a methodology similar to that of Jacob and Lefgren (2002). The author argued that “if summer school exerts a positive causal impact on subsequent exam performance, students who barely fail the baseline assessment exam—and hence are much more likely to go to summer school—should outperform those students who barely pass the assessment exam” (p. 830). He examined effects of summer school for those mandated to attend for one subject only. He found an average positive effect of summer school of 0.12 standard deviations for both mathematics and reading achievement the following year. However, this average masked considerable heterogeneity in the results. For example, he estimated an effect of 0.24 standard deviations for 5th graders mandated to summer school for mathematics compared to 0.13 standard deviations for 3rd graders. The results were reversed for those mandated to summer school for reading. Here, the effect was larger for 3rd graders than for 5th graders (0.20 versus 0.10 standard deviations).

SOCIOEMOTIONAL OUTCOMES

Conventional wisdom predicts that retention will have negative effects on students’ emotional health and social adjustment by lowering their self-esteem, causing emotional distress, and decreasing their peer acceptance. Yet, empirical findings on socioemotional effects of retention are mixed and inconclusive.

² We do not include this paper in our count of studies examining grade retention because it did not estimate the effects of grade retention directly. Rather, it examined the academic effects of summer school, which is one component of the test-based promotion policy in the school district being examined.

Of the three meta-analyses that included socioemotional outcomes in their synthesis, two (Holmes and Matthews, 1984; Jimerson, 2001) reported that retained students scored significantly lower than promoted peers on measures of social, emotional, and attitudinal outcomes. One meta-analysis (Holmes, 1989) reported negative results on measures of personal adjustment but no statistically significant differences were found on any of the subcategories of personal adjustment (i.e., social, emotional, and behavioral adjustment).

The empirical studies on socioemotional effects of retention investigated eight types of socioemotional outcomes: social adjustment, peer acceptance, perceived academic competence, self-concept, self-esteem/self-worth, emotional health, suicide, and student attitudes. In terms of social adjustment, Beebe-Frankenberger et al. (2004) found that retained students demonstrated significantly lower social skills than regularly promoted students, but no significant differences on social-behavioral measures were found between retained students and their low-achieving but promoted peers. Using teacher ratings, Thomas et al. (1992) concluded that results differed by race—while white students who were retained once were perceived as less socially competent than nonretained white students by their teachers, no significant differences in perceived social competence were found between retained and nonretained black students. Niklason (1987) reported no significant effects on personal and social adjustment.

Two empirical studies examined the effects of retention on peer acceptance, and both concluded that retention had a significantly positive effect on peer acceptance (Bonvin, Bless, and Schuepbach, 2008; Gleason, Kwok, and Hughes, 2007). However, according to one of the two studies, this positive effect was short-lived and diminished over time (Bonvin, Bless, and Schuepbach, 2008).

Findings on perceived academic competence were mixed. Gleason, Kwok, and Hughes (2007) reported that retention had significant positive effects on both teacher-perceived academic competence and peer-perceived academic competence in the year following the retention decision. While Pianta, Tietbohl, and Bennett (1997) found slight increases in teacher ratings on competence for retained students over time, they pointed out that “retention had not improved these competencies to the level of the peer groups” (p. 149). According to Thomas et al. (1992), retained white students received lower teacher ratings on cognitive competence than did nonretained white students, but no significant differences in perceived cognitive competence were found among black students.

With respect to student self-concept, two studies showed positive effects on academic self-concept (Bonvin, Bless, and Schuepbach, 2008; Reynolds, 1992); one found significantly lower perceptions of cognitive competence among the retained students (Pierson and Connell, 1992); and three

reported no significant impacts on self-concept (McCoy and Reynolds, 1999; Pomplun, 1988; Shepard and Smith, 1987, 1989).

Of the eight empirical studies examining student self-esteem and self-worth, four reported that retained students had significantly lower self-esteem than promoted peers (Frymier, 1997; Hagborg et al., 1991; Jimerson, Carlson, et al., 1997; Setencich, 1994), and two studies indicated higher self-esteem (Hong and Yu, 2008; Plummer and Graziano, 1987). Pierson and Connell (1992) reported no significant differences between retained students and the comparison groups on peer relatedness or perception of self-worth. Alexander, Entwisle, and Dauber (2003) found generally positive effects among the 2nd and 3rd graders after adjusting for preretention and demographic factors. However, students retained in 1st grade continued to score lower on self-esteem than did promoted peers, although the gaps in scores after the retention year were considerably smaller than those prior to retention (Alexander, Entwisle, and Dauber, 2003).

All five studies that measured emotional health indicated negative effects, with retained students demonstrating lower emotional health and more emotional problems, such as distress and depression (Byrnes and Yamamoto, 1985; Jimerson, Carlson, et al., 1997; Meisels and Liaw, 1993; Resnick et al., 1997; Robles-Pina, Defrance and Cox, 2008). Two studies found that grade retention was associated with suicidal thoughts and behaviors (Frymier, 1997; Resnick et al., 1997).

While proponents of grade retention policies hypothesize that the threat of retention will motivate students, findings on attitudinal outcomes are largely inconclusive. On one hand, several studies reported positive results (Gottfredson, Fink, and Graham, 1994; Karweit, 1999; Jacob, Stone and Roderick, 2004; Roderick and Engel, 2001). Specifically, retained students were found to be “significantly more attached to school than their promoted peers” after retention (Gottfredson, Fink, and Graham, 1994, p. 775) and showed improvement in teacher ratings of motivation to learn in the two years following retention (Karweit, 1999).³ Studies that investigated Chicago’s test-based promotion policy also found evidence that the threat of retention appeared to have a motivational incentive on students (Jacob, Stone, and Roderick, 2004; Roderick and Engel, 2001).

In contrast, some studies found insignificant, or even negative, effects on student attitudes. Based on a student-rated measure of motivation, Pomplun (1988) reported no significant differences between retained and promoted students one year after retention. Shepard and Smith (1987,

³ The author found that, in general, “retained students were less favorably rated by their teachers than were promoted students prior to retention” on student motivation to learn (Karweit, 1999, p. 58). But “these differences were consistently reduced” (p. 68) in the two years following retention, indicating that retained students showed improvement in teacher ratings of motivation to learn in comparison with their promoted peers.

1989) compared 40 children retained in kindergarten with a matched group of 40 same-grade promoted peers using teacher ratings and found that, "on average, retained children had slightly more negative attitudes toward school" (Shepard and Smith, 1987, p. 346).

Two studies reported mixed findings, depending on the comparison strategies and groups used. Bonvin, Bless, and Schuepbach (2008) used both teacher assessments and student questionnaires to compare students retained in 2nd grade with matched comparison groups. Same-age comparisons found more positive attitudes toward school among retained students at the beginning of the retention year, but these positive attitudes diminished during the course of the retention year. Same-grade comparisons showed no significant difference in student attitudes at the end of 3rd grade; however, retained students had less positive attitudes toward school prior to retention. Pierson and Connell (1992) compared retained students in grades 3 through 6 using three comparison groups: (1) nonretained students randomly selected from the present classrooms of retained students, (2) nonretained students selected from present classrooms and matched on current intellectual ability at the time of comparison, and (3) nonretained students selected from earlier classrooms and matched on classroom achievement at the time of retention. Based on teacher ratings of students' effort, they reported that retained students were not "exerting as much effort as the randomly selected non-retained group" but were "trying as hard as their non-retained classmates matched by current ability" (p. 305).

BEHAVIORAL OUTCOMES

Similar to socioemotional outcomes, conventional belief holds that retained students are more prone to problem behaviors. However, research evidence on the behavioral effects of retention is inconclusive.

The two meta-analyses that synthesized findings on behavioral outcomes both reported that retained students scored lower than promoted students on measures of social, emotional, and behavioral adjustment (Holmes and Matthews, 1984; Jimerson, 2001).

The empirical studies that examined behavioral outcomes investigated six types of behavioral outcomes: problem behaviors, inattention, absenteeism, aggression, substance use, and delinquency. Eight empirical studies examined the effects of retention on problem behaviors such as acting out, anxiety, rebelliousness, and externalizing and internalizing actions. Five studies reported more problem behaviors among retained students than their promoted peers after retention (Byrd, Weitzman, and Auinger, 1997; Beebe-Frankenberger et al., 2004;⁴ Meisels and

⁴ While Beebe-Frankenberger et al. (2004) reported that retained students demonstrated significantly more problem behaviors than regularly promoted students, no significant differences were found between retained students and low-achieving but promoted peers.

Liaw, 1993; Pagani et al., 2001; Thomas et al., 1992), and three found fewer problem behaviors among retained students (Gottfredson, Fink, and Graham, 1994; Hong and Yu, 2008; Pianta, Tietbohl, and Bennett, 1997).

Three studies examined students' inattention behavior. Based on a comparison of 25 retained children with a matched group of 15 promoted peers, Mantzicopoulos (1997) concluded that kindergarten retention did not improve students' inattention problems. Shepard and Smith (1987, 1989) reported no differences between the retained and promoted children on teacher ratings of attention. Mantzicopoulos and Morrison (1992) found evidence of a significant drop in attention problems among retained students. Specifically, while retained students were rated by their teachers as demonstrating significantly more attention problems than their same-age promoted peers during their first year in kindergarten, this initial difference disappeared in subsequent years, indicating improvement among retained students after retention.

In terms of absenteeism, two studies found that retained students displayed more absenteeism and school suspensions (Frymier, 1997; Hagborg et al., 1991), and one reported no significant differences in student attendance between the retained and promoted students based on school records (Grant and McLaughlin, 1992). Using same-age comparisons, Safer (1986) found that results varied depending on the grade in which students were retained. While the behavioral outcome was found to be "significantly improved and was generally satisfactory" (p. 500) one year after the elementary school retention, the majority of students retained during junior high school "continued to receive unsatisfactory deportment and academic grades and exhibit excessive absenteeism" (p. 502) in their retention year.

Only two studies investigated effects on aggression, and both reported that retained students were rated by their teachers to be significantly more aggressive in subsequent years following retention than nonretained students (Jimerson and Ferguson, 2007; Nagin et al., 2003).

With respect to substance use, Frymier (1997) reported that retained students were more likely than nonretained students to have used drugs and/or alcohol in subsequent years following retention based on information collected from teachers and counselors. Using student interview data, Resnick et al. (1997) found that repeating a grade in school was associated with higher levels of tobacco use after retention.

For delinquency outcomes, Frymier (1997) found that retained students were more likely than nonretained students to have been arrested in subsequent years following retention. McCoy and Reynolds (1999) reported no statistically significant association between grade retention by age 14 (i.e., in grades 1–8) and delinquency infractions at age 14.

PROPENSITY TO DROP OUT OF SCHOOL

Opponents of grade retention policies often cite the high rate of dropping out of school among retained students as one of the most important arguments against such policies. Our review generally supports this notion and indicates that overall grade retention is associated with an increased risk of dropping out of school.

Specifically, 12 empirical studies reported that students retained for one or more grades were more likely to drop out of school than their promoted peers (Alexander, Entwisle, and Dauber, 2003; Allensworth, 2004, 2005; Eide and Showalter, 2001; Grissom and Shepard, 1989; Guevremont, Roos, and Brownell, 2007; Jacob and Lefgren, 2007; Jimerson, 1999; Jimerson and Ferguson, 2007; Jimerson, Ferguson, et al., 2002; Lorence and Dworkin, 2004; Roderick, 1994). Four studies found grade retention to be one of the strongest predictors of dropping out as compared to other student, family, and school characteristics, such as gender, race, academic achievement, student misbehavior, attendance, school transfers, SES, family income, being from a single-parent family, parental education, school sector (public versus private school), student body composition (for example, percentage of minority students, percentage of low-SES students), and school location (Goldschmidt and Wang, 1999; Ou and Reynolds, 2008; Rumberger and Larson, 1998; Rush and Vitale, 1994). One review of past research also suggested that the likelihood of dropping out was “considerably greater for students who have been retained more than once” (Jimerson, Anderson, and Whipple, 2002, p. 452).

The risk of dropping out among retained students was estimated to be 14 to 50 percent higher than among students who were not retained (Allensworth, 2004; Jacob and Lefgren, 2007; Jimerson, 1999; Jimerson, Anderson, and Whipple, 2002; Roderick, 1994), while the risk was 90 percent higher for students who had been retained twice (Jimerson, Anderson, and Whipple, 2002; Roderick 1994). Other studies reported that retained students were two to 11 times more likely to drop out than their promoted peers (Alexander, Entwisle, and Dauber, 2003; Guevremont, Roos, and Brownell, 2007; Jimerson, 2001; Roderick, 1994; Rumberger and Larson, 1998).

PROPENSITY TO ENROLL IN POSTSECONDARY EDUCATION

While researchers have long been interested in longer-term outcomes, including postsecondary education and employment outcomes in adulthood, such research is sparse, partly due to the high cost and difficulty of following up with students for a long period of time. We found two empirical studies that examined the relationship between retention and postsecondary education, and both suggested that retained students have a lower probability of enrolling in postsecondary education.

Based on a nationally representative dataset, Fine and Davis (2003) used logistic regression models that controlled for such factors as gender; race, and ethnicity; SES; and achievement. They found significantly lower odds of enrollment in postsecondary education for retained high school graduates than for their promoted peers. Specifically, retained students were “less than half as likely to enroll in a four-year college than were their low-achieving but promoted peers” (p. 408). Moreover, retention in middle school (i.e., grades 6 to 8) was associated with the lowest odds of postsecondary enrollment. Jimerson (1999) conducted a longitudinal study that tracked 190 children for 21 years and compared retained children with promoted ones. Results of chi-square tests indicate that retained students were less likely to enroll in a postsecondary education program than their low-achieving but promoted peers.

EMPLOYMENT OUTCOMES

Similar to research on postsecondary outcomes, there is not much literature on the relationship between retention and students’ later employment outcomes in adulthood. Only two studies were found, and both reported negative findings.

Eide and Showalter (2001) analyzed the 1980 sophomore cohort of the nationally representative High School and Beyond dataset and reported a statistically significant negative association between retention and post-high school labor market earnings. Jimerson’s (1999) 21-year longitudinal study provided evidence indicating poorer employment outcomes through age 20 among retained students. Specifically, retained students were paid less per hour and received poorer employment competence ratings at age 20 than their low-achieving but promoted peers, while the low-achieving but promoted group was comparable to the control group of regularly promoted students in all employment outcomes at age 20.

5. CONCLUSIONS

As part of the larger evaluation of the NYCDOE 5th-grade promotion policy, we conducted a comprehensive but rigorous literature review of studies examining the effects of grade retention on students' academic and socioemotional outcomes, as well as their longer-term educational and employment outcomes. To be included in the review, studies had to meet three selection criteria: relevance (focusing on grade retention and its effects), methodological rigor (empirical in nature and using well-established statistical methods or a systematic and rigorous review of past research), and published between 1980 and 2008. Ninety-one studies met these criteria.

Our review of these 91 studies indicates that grade retention is associated with gender, race, SES, age for grade, student mobility, family and parental characteristics, prior academic achievement, prior behavioral and socioemotional development, and student health. Converging evidence suggests that grade retention *alone* is not an effective intervention strategy for improving academic and longer-term life outcomes. In general, retention does not appear to benefit students academically. Although some studies have found academic improvement in the immediate years after retention, these gains are usually short-lived and tend to fade over time. Past research has consistently shown that retained students are at significantly increased risk of dropping out of school. Although only a few studies have examined the effects of retention on postsecondary outcomes, the available evidence suggests negative effects on enrollment in postsecondary education and on employment outcomes in adulthood. Overall, the literature indicates mixed findings on attitudinal, socioemotional, and behavioral outcomes among the retained students.

This review did not look at a host of other life outcomes, including teen pregnancy, receipt of public assistance, and probability of going to prison. Because the larger study focused on NYCDOE 5th-grade promotion policy and its effects on students' academic and socioemotional outcomes, we focused largely on those two types of outcomes and some longer-term outcomes, such as high school graduation and postsecondary education and employment, that might be of interest to NYCDOE as it follows its students into high school and beyond. Our review found fruitful avenues of research, most notably the impact of supportive interventions (such as early identification of at-risk students, academic instructional services provided in and out of school, and different types of intervention strategies) on proximal and future student outcomes. Other avenues that have not been explored in depth include the impact of school contexts on protecting at-risk students from academic failure and whether there are differential effects of programs like Saturday school and summer school on

students close to the passing threshold or far below it. Our final report (McCombs, Kirby, and Mariano, 2009) addresses some of these questions, but, clearly, much more remains to be done.

APPENDIX. SUMMARIES OF REVIEWED STUDIES

This appendix contains summaries of the 91 studies that passed our criteria of relevance, methodological rigor, and recency (published between 1980 and 2008). For each study, the summary presents the research questions, methods used, dependent and independent variables and other covariates (where relevant), and findings. The findings are grouped into two broad categories: characteristics of retained students and effects of retention on a variety of student outcomes (academic achievement, socioemotional outcomes, behavioral outcomes, propensity to drop out of school, postsecondary education, and employment).

Alexander, Karl L., Doris R. Entwisle, and Susan L. Dauber. (2003). *On the Success of Failure: A Reassessment of the Effects of Retention in the Primary School Grades*. Cambridge: Cambridge University Press, 2nd edition.

Research Questions: What are the effects of retention on academic performance, dropout rate, and socioemotional adjustment in both the short and long term?

Dependent Variables: Academic achievement measured by standardized test scores in reading and mathematics, teacher assessment of school performance measured by report card marks, attitudinal measures (including academic self-esteem, reading and math mark expectations, school satisfaction, and locus of control), and dropout rate.

Independent Variables: Whether retained in grade or not.

Other Covariates: Demographic background, family characteristics, and test scores prior to retention.

Methods: This is an eight-year longitudinal study with matched control groups for same-grade comparison. Two never-retained comparison groups were used: the group of all never-retained students and a subset of nonretainees with low 1st-grade spring California Achievement Test (CAT) scores (N = 106). The latter group of students had early verbal and quantitative CAT scores within one standard deviation of the averages of all retainees. Apart from using comparison groups, the authors also used multiple regressions to statistically adjust for differences in demographic factors, academic competence prior to retention, and other risk factors (such as double retention and special education).

Data: Beginning School Study data were used to monitor the academic progress and personal development of a representative random sample of school children in the Baltimore City Public Schools (BCPS).

Sample Size: N = 790 1st

Findings: This study evaluated consequences of grade retention prior to high school for retainees' school performance and socioemotional adjustment as well as its long-term consequences for dropping out of high school.

Student Characteristics: The authors reported that minority youth, children from lower SES backgrounds, and boys were held back more often. Retained students fared poorly on all measures of early academic standing as compared to never-retained students. In addition, retained students were rated less favorably by teachers than their promoted peers on classroom conduct and peer relations. Retained students were found to be "more often absent from school and were rated as being at high risk of failure" (p. 73).

Academic Achievement: The authors found that students retained in grade 2 or 3 caught up with promoted students in terms of achievement test scores during their repeated year, and at least part of these gains were sustained through grade 7. However, in no instance did these students actually reach the performance level of promoted ones, but the retainees often were close in comparisons with low-achieving but promoted students. Students retained in grade 1 did not improve their academic performance in the long run. When adjustments were made for testing levels prior to retention and for other risk factors, retainees' scores often were not significantly below those of promoted students — "sometimes they were ahead" (p. 163). Almost always, the retainees were closer to the promoted students in terms of

	<p>graders in BCPS in 1982.</p>	<p>academic performance than they had been before retention. Analyses using teachers' assessment of school performance measured by report card marks indicated that, after retention, retainees were ahead of their low-achieving but promoted peers and equal to their regularly promoted peers in terms of adjusted marks, although their actual marks were comparatively low.</p> <p>Socioemotional Outcomes: The authors concluded that there was "little reason to think retention imposes an emotional burden on 2nd- and 3rd-grade repeaters" (p. 185). Retention seemed to have negative socioemotional effects only on 1st-grade retainees, and these negative effects did not appear until year 8. Before retention, 1st-grade retainees had lower academic self-esteem and locus of control than promoted children, reflecting difficulties that preceded retention. Their academic self-esteem and locus of control increased to roughly the same level as other children's, and the 1st-grade retainees sustained this gain throughout the remaining elementary years. However, it dropped off in year 8, the first middle school assessment of retainees' self-attitudes. For 2nd- and 3rd-grade retainees, the authors reported mixed findings on various socioemotional adjustment measures, but generally positive results were found for 2nd- and 3rd-grade retainees when statistical adjustments were made for preretention and demographic factors.</p> <p>Dropout: The authors found grade retention to be "a distinctive risk factor for dropout" (p. 238). Retained students drop out at a rate approximately 2.8 times that of never-retained children (p. 235). Students held back in the upper grades and multiple retainees are especially prone to leave school without degrees, and students retained one</p>
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		<p>grade were also found to be at elevated risk. The authors concluded that grade retention seemingly altered students' school trajectories across the board.</p>
<p>Allensworth, Elaine. (2004). <i>Ending Social Promotion: Dropout Rates in Chicago After Implementation of the Eighth-Grade Promotion Gate</i>. Chicago, IL: Consortium for Chicago School Research.</p>		
<p>Research Questions: What happened to dropout rates after implementation of the 8th-grade test-based promotion policy? Did retention affect students' likelihood of dropping out? Did retention lead students to drop out at an earlier age than they would have without the policy? Did simultaneous improvements in student achievement lead more students to stay in school? Were dropout trends different for subgroups of students—by race, gender, exclusion from testing, or age?</p> <p>Dependent Variables: Dropout rates at age 17.</p> <p>Independent Variables: Whether retained in grade 8 or not.</p> <p>Other Covariates: Gender, age, race/ethnicity, SES, poverty level, academic achievement, and special education.</p>	<p>Methods: Hierarchical linear model to control for demographics and school enrollment patterns.</p> <p>Data: Data were collected from Chicago Public Schools (CPS) student administrative data, student test scores on the Iowa Tests of Basic Skills (ITBS), and 1990 census STF3 files on census block groups. The sample included seven cohorts of CPS students who were 13 years old on September 1 of each year from 1992 to 1998.</p> <p>Sample Size: N = 171,471 students, but only 113,937 were included in assessing the relationship between retention and dropping out.</p>	<p>Findings: This study found that overall dropout rates decreased after the implementation of the test-based promotion policy, but retention was found to increase the likelihood of dropping out by 8 to 13 percentage points for the retained students.</p> <p>Dropout: Prior to implementation of the 8th-grade promotion policy, 29 to 30 percent of students dropped out of school by age 17. This dropout rate remained the same for the first two cohorts subject to the 8th-grade promotion policy, but the rate decreased to 25 percent for the third and fourth cohorts after the implementation of promotion policy. Retention increased the likelihood of dropping out by age 17 from 31 to 39 percent for a typical retained student and increased the likelihood of dropping out by age 19 from 44 to 57 percent. Retention had differential effects on dropout rates for different subgroups of students. Specifically, students who were already old-for-grade at age 13 were the most adversely affected by retention in 8th grade, and racial disparities in dropout rates also grew after the implementation of the promotion policy.</p>
<p>Allensworth, Elaine M. (2005). "Dropout Rates After High-Stakes Testing in Elementary School: A Study of the Contradictory Effects of Chicago's Efforts to End Social Promotion." <i>Educational Evaluation and Policy Analysis</i>, 27(4), 341–364.</p>		

<p>Research Questions: To what extent did high-stakes testing lead students who were retained to drop out at higher rates than they would have without the gate? To what extent did improvements in student achievement lead more students to stay in school? What were the combined effects of changes in achievement and retention on dropout rates after implementation of high-stakes testing? Did high-stakes testing lead retained students to drop out at earlier ages than they would have without the gate?</p> <p>Dependent Variables: Log-odds of dropping out by age 17.</p> <p>Independent Variables: Whether retained in grade 8 or not.</p> <p>Other Covariates: Gender, race, poverty, social status, latent academic achievement, and cohort.</p>	<p>Methods: Hierarchical generalized linear models were used to control for demographics and school enrollment patterns. Specifically, two-level hierarchical generalized linear models were used to estimate changes in dropout rates, retention effects on dropout rates, and achievement effects on dropout rates. Two-stage IV models were used to verify whether the estimate of the retention effect was inflated by selection effects.</p> <p>Data: Data were collected from CPS student administrative files for each fall semester from 1992 to 2002, student test scores on the ITBS from May 1990 to May 1999, and 1990 census STF3 files on census block groups. The sample included seven cohorts of CPS students who were 13 years old and in the 8th grade on September 1 of each year, 1992 to 1998. The first three cohorts were classified as “pre-policy” cohorts and the last four as “post-policy” cohorts. Each cohort was followed for four years until its members were 17 years old.</p> <p>Sample Size: N = 113,937</p>	<p>Findings: The author reported rises in both achievement and retention rates after the implementation of the high-stakes testing promotion policy. Retention by the high-stakes testing promotion policy was found to increase the likelihood of dropping out among the retained students.</p> <p>Academic Achievement: The author found that average student performance on the ITBS began to rise after the implementation of the high-stakes testing promotion policy, even after adjusting for selection bias.</p> <p>Dropout: The author found that “post-policy retained students were more likely to drop out of school than similar students who were not retained” (p. 353). However, slight decreases in dropout rates among the nonretained students counterbalanced the higher dropout rates among the retained. The author concluded that retention did lead to higher dropout rates among the retained students, “but the relationship was smaller than seen with traditional teacher-initiated retention and was unrelated to the timing of dropping out” (p. 341).</p>
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	students who were 13 years old and in 8th grade on September 1 of each year, 1992 to 1998.	
<p>Baenen, Nancy R. (1988). <i>Perspectives After Five Years—Has Grade Retention Passed or Failed?</i> Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA, April 1988.</p>		
<p>Research Questions: Do 1st graders who were retained progress as well in terms of achievement as low-achievers who were promoted? How do these two groups compare in terms of special education placement rates and subsequent retention rates? Does timing of retention matter?</p> <p>Dependent Variables: Promotion status, special education and subsequent retention, and academic achievement.</p> <p>Independent Variables: Whether retained in grade or not, whether retained in 1st grade or later grades.</p> <p>Other Covariates: Students retained in 1st grade were matched with a comparison group of low-achieving but promoted students on special education status, free lunch status, age, sex ethnicity, and reading and mathematics achievement.</p>	<p>Methods: Descriptive statistics and regression analysis. Retained students were matched with low-achieving students based on special education status, free lunch status, age, sex ethnicity, and reading and mathematics achievement.</p> <p>Data: 243 students repeating 1st grade in 1981–1982 in the Austin Independent School District, and matched low achievers were followed from spring 1981 to spring 1986.</p> <p>Sample Size: N = 186 1st-grade retainees and 189 promoted low achievers in the Austin Independent School District.</p>	<p>Findings: The author found that “students retained in 1st grade appeared more likely to be subsequently placed in special education programs” (p. 5), while low-achieving but promoted students were more likely to be subsequently retained. Moreover, students who were never retained were found to show better progress than retainees. However, no significant differences in the growth trends were found between those retained in 1st grade versus later grades.</p> <p>Academic Achievement: Four years after retention, low-achieving but promoted students were found to have significantly higher scores in both reading and math than those retained in 1st grade. Moreover, the difference between the two groups broadened across the years. However, retainees were reported to have made academic gains during the repeated year in both subjects. In addition, no significant differences in the growth trends were found between those retained in 1st grade versus later grades.</p>
<p>Balitewicz, Thomas F. (1998). <i>The Long-Term Effects of Grade Retention</i>. ERIC Document No. 424 616.</p>		
<p>Research Questions: How do students retained in kindergarten</p>	<p>Methods: Two-tailed independent t-test to compare the academic</p>	<p>Findings: The author found significantly lower academic achievement in 6th grade among students retained in</p>

<p>compare with their nonretained peers in terms of academic achievement in 6th grade?</p> <p>Dependent Variables: Achievement test scores in 6th grade.</p> <p>Independent Variables: Whether retained in kindergarten or not.</p> <p>Other Covariates: N/A.</p>	<p>results of the retained and nonretained students.</p> <p>Data: Student cumulative cards and their 6th-grade Indiana Statewide Testing for Education Progress scores in reading, language, math, and total. The sample of 56 students included students who were retained in kindergarten or were placed in the Transition Program as well as promoted students who had been assigned to the Transition Program but were never placed in the program.</p> <p>Sample Size: N = 56 7th graders from Sarah Scott Middle School in Terre Haute, Indiana.</p>	<p>kindergarten than their promoted peers.</p> <p>Academic Achievement: Retained students had significantly lower grade-equivalent scores than did nonretained peers in 6th grade.</p>
<p>Beebe-Frankenberger, Margaret, Kathleen M. Bocian, Donald L. MacMillan, and Frank M. Gresham. (2004). "Sorting Second-Grade Students: Differentiating Those Retained from Those Promoted." <i>Journal of Educational Psychology</i>, 96(2), 204-215.</p>		
<p>Research Questions: Do retained students differ on academic and social-behavioral factors from peers who are in special education, placed at risk for retention, or promoted to the next grade? How do retained students differ from low-achieving students in the comparison groups?</p> <p>Dependent Variables: Student IQ</p>	<p>Methods: ANOVA (analysis of variance) and MANOVA (multivariate analysis of variance) to investigate the characteristics that differentiate retained students from the three comparison groups.</p> <p>Data: Data were collected for a sample of 224 2nd graders enrolled in 22 elementary schools</p>	<p>Findings: The authors found significantly lower academic achievement among retained students than their promoted peers but no significant difference between retained and special education students. Retained students demonstrated significantly fewer social skills and more problem behaviors than normally promoted students, but no significant differences were found among low-achieving students on social-behavioral measures, regardless of whether they were retained, placed in special education,</p>

<p>test scores; student academic achievement scores; teachers' assessment of student social behaviors (measured by the Social Skills Rating System–Teacher with measures in three domains: social skills, problem behaviors, and academic competence); school records on attendance; standardized test scores; number of grade retentions; disciplinary contacts, within-school referrals for academic, behavioral, or speech problems; out-of-school referrals; negative narrative comments; demographics; certification for special education; placement out of regular classroom; and free/reduced-price lunch services provided.</p> <p>Independent Variables: Whether retained or in one of the three comparison groups.</p> <p>Other Covariates: N/A.</p>	<p>in southern California in the 1999–2000 school year. Students participated in IQ and achievement tests, and scores on statewide testing were collected. Teacher surveys were administered to assess student academic behavior, social skills, and problem behaviors.</p> <p>Sample Size: N = 224 2nd graders, including 64 retained students, 41 students at risk for retention but promoted to 3rd grade, 46 students eligible for and receiving special education services and promoted to 3rd grade, and 73 students normally promoted to 3rd grade.</p>	<p>or promoted.</p> <p>Academic Achievement: Retained students scored lower than normally promoted students on measures of IQ, overall academic competence, and reading skills. Even when low-achieving students were examined, retained students still demonstrated significantly lower IQ scores than socially promoted, low-achieving counterparts. But retained students and special education students had no significant difference on academic achievement.</p> <p>Socioemotional Outcomes: Based on teacher surveys, retained students demonstrated significantly fewer social skills than normally promoted students. However, retained students did not differ significantly from their low-achieving counterparts on teachers' assessment of social skills. No significant differences were found among low-achieving students on social-behavioral measures, regardless of whether they were retained, placed in special education, or promoted.</p> <p>Behavioral Outcomes: Based on teacher surveys, retained students demonstrated significantly more problem behaviors than normally promoted students. However, retained students did not differ significantly from their low-achieving counterparts on teachers' assessment of problem behaviors. No significant differences were found among low-achieving students on social-behavioral measures, regardless of whether they were retained, placed in special education, or promoted.</p>
<p>Blair, Clancy. (2001). "The Early Identification of Risk for Grade Retention Among African American Children at Risk for School Difficulty." <i>Applied Developmental Science</i>, 5(1), 37–50.</p>		
<p>Research Questions: Do students</p>	<p>Methods: Logistic regressions to</p>	<p>Findings: The author found that small size at birth,</p>

<p>who are old-for-grade have higher rates of reported behavior problems? If so, is this association independent of having been retained a grade or more in school?</p> <p>Dependent Variables: Whether retained in one of the first three elementary grades or not.</p> <p>Independent Variables: Risk factors including maternal smoking and alcohol use during pregnancy, small size for gestational age at birth, preterm birth, IQ at age 5, and externalizing behavior at age 5.</p> <p>Other Covariates: Home environment, and type of day care enrollment prior to kindergarten.</p>	<p>predict grade retention.</p> <p>Data: Information regarding children’s school experience were collected from children’s school records using the School Archival Records Search. Questionnaires were used to collect information on birth status, such as maternal smoking and alcohol use during pregnancy. Interviews were conducted to collect information on home and child characteristics.</p> <p>Sample Size: N = 220 African American children from low-income families.</p>	<p>inadequate developmental stimulation in the home, low IQ, high externalizing behavior, and enrollment in private or church-based day care were independently associated with increased risk for grade retention.</p> <p>Student Characteristics: The author found that the likelihood of grade retention appeared to increase with the combination of risk factors. Specifically, “African American children who are [small size for gestational age], living in homes that provide limited developmental support, enrolled in private or church center-based day care, or who had lower IQ or higher levels of externalizing behavior problems at age 5 were found to be at increased risk for retention in one of the first three elementary grades” (p. 46).</p>
<p>Bonvin, Patrick, Gerard Bless, and Marianne Schuepbach. (2008). “Grade Retention: Decision-Making and Effects on Learning as Well as Social and Emotional Development.” <i>School Effectiveness and School Improvement</i>, 19(1), 1–19.</p>		
<p>Research Questions: What are the determinants of grade retention? How effective is grade retention at the primary school level with respect to learning progress in math and language of instruction? What are the social, motivational, and emotional consequences of grade retention?</p> <p>Dependent Variables: Academic achievement in math and language of</p>	<p>Methods: Logistic regressions and ANOVA were conducted in both same-grade and same-age comparisons.</p> <p>Data: A teacher questionnaire was administered to collect information on teachers’ personal and professional characteristics, their attitudes toward retention, their assessment of criteria for</p>	<p>Findings: The authors found that the “decision for grade retention does not rest only on the pupil’s actual academic performance but also on the teacher’s attitudes and evaluations” (p. 1). With regard to effects of academic achievement, the authors found contrasting results: positive outcomes in the case of same-grade comparisons and negative effects based on same-age comparisons. The authors concluded that “globally the effectiveness of grade retention is rather unsatisfactory ... although there is no evidence of negative social or emotional consequences”</p>

<p>instruction, social acceptance of poor performers by classmates, self-concepts, attitude toward school.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: Retained students were matched with nonretained students based on age, gender, nationality, level of mastery of the language of instruction, IQ, and academic achievement in math and language of instruction.</p>	<p>retention, and their evaluations of students. Student characteristics, including IQ, achievement, social acceptance, and self-concept and attitude toward school, were measured using a student questionnaire. The sample included two groups of retained students (i.e., retainees in the German- and French-speaking parts of Switzerland) and two groups of promoted students matched to retainees on age, gender, nationality, level of mastery of the language of instruction, IQ, and academic achievement in math and language of instruction. Students were followed from 2nd to 3rd grade.</p> <p>Sample Size: N = 83 children retained in grade 2 (42 in the German-speaking part and 41 in the French-speaking part of Switzerland) and 83 low-achieving but promoted peers in Switzerland.</p>	<p>(p. 1).</p> <p>Academic Achievement: In same-age comparisons, retainees were found to have poorer academic performance in both math and language of instruction. In same-grade comparisons, retainees ranked significantly higher in math and language of instruction than low-achieving but promoted students by the end of grade 3.</p> <p>Socioemotional Outcomes: In terms of student attitudes, retainees were found to have a more positive attitude toward school at the beginning of the repeated year based on same-age comparisons. However, this positive outcome diminished during the course of the repeated year. Same-grade comparisons show no difference between the retained and low-achieving but promoted students at the end of grade 3, while retainees were rated less favorably in terms of their attitudes toward school than promoted low-achievers prior to grade retention. In terms of socioemotional outcomes, same-age comparisons indicate short-term improvements among the retainees in terms of social and emotional outcomes at the beginning of the repeated grade. Specifically, retainees were found to have a higher level of social acceptance and an improved academic self-concept. However, this positive effect diminished during the course of the repeated year. Same-grade comparisons show no difference between the retained and low-achieving but promoted students, while retainees received less favorable values in terms of their social acceptance and academic self-concept than promoted low-achievers prior to grade retention.</p>
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<p>Byrd, Robert S., and Michael L. Weitzman. (1994). "Predictors of Early Grade Retention Among Children in the United States." <i>Pediatrics</i>, 93(3), 481-487.</p>		
<p>Research Questions: What health and social factors are associated with early grade retention?</p> <p>Dependent Variables: Whether retained in grades K-1 or not.</p> <p>Independent Variables: Health and social risk factors, including gender, race, poverty status, maternal education level, maternal age, deafness, speech defects, birth weight, enuresis, exposure to household smoking, recurrent otitis media, and behavior problems.</p> <p>Other Covariates: Age.</p>	<p>Methods: Chi-square tests and logistic regressions.</p> <p>Data: 1988 Child Health Supplement to the National Health Interview Survey, a nationally representative sample of 17,110 children and youth from birth to 17 years old. Parents, predominately mothers, responded for their children. Only children who were old enough to have successfully completed or repeated the early grade in school were included in the study.</p> <p>Sample Size: N = 9,996 children ages seven to 17 years old.</p>	<p>Findings: The authors found several health and social factors that are associated with increased risk of grade retention in kindergarten or grade 1.</p> <p>Student Characteristics: The authors found the following factors to be independently associated with increased risk of early grade retention: poverty, being male, low maternal education, deafness, speech defects, low birth weight, enuresis, exposure to household smoking, and behavior problems.</p>
<p>Byrd, Robert S., Michael Weitzman, and Peggy Auinger. (1997). "Increased Behavior Problems Associated with Delayed School Entry and Delayed School Progress." <i>Pediatrics</i>, 100(4), 654-661.</p>		
<p>Research Questions: Do students who are old-for-grade have higher rates of reported behavior problems? If so, is this association independent of having been retained a grade or more in school?</p> <p>Dependent Variables: Parent-reported behavior problems, measured by a standardized 32-item, parent-</p>	<p>Methods: Logistic regressions to estimate the associations that old-for-grade status and/or grade retention have with extreme BPI scores while controlling for other covariates.</p> <p>Data: 1988 Child Health Supplement to the National Health Interview Survey, a nationally</p>	<p>Findings: The authors found significant association between grade retention and increased rates of reported behavior problems. However, simply being older than others in one's class, without having experienced grade retention, was also found to be associated with increased rates of behavior problems, most noticeably among adolescents. The authors concluded that "there may be latent adverse behavioral outcomes that result from delaying children's school entry" (p. 654).</p>

<p>reported Behavior Problem Index (BPI) developed by Zill (1985, 1990) for children age four years and older. These behaviors include sudden change in mood or feelings, cheating or telling lies, strong temper, feeling or complaining that no one loves him/her, and crying too much.</p> <p>Independent Variables: Whether being old for grade or not, whether retained for at least one grade or not.</p> <p>Other Covariates: Age, gender, race, Hispanic ethnicity, poverty status, maternal age and education, family structure, urban status, region of country, mobility since birth, low birth weight status, and household exposure to cigarette smoke.</p>	<p>representative sample of 17,110 children and youth from birth to 17 years old. Parents, predominately mothers, responded for their children. Only children who were old enough to have attended school for at least one year were included in the study.</p> <p>Sample Size: N = 9,079 children ages seven to 17 years old.</p>	<p>Behavioral Outcomes: Both old-for-grade status and grade retention were found to be independently associated with increased rates of behavior problems. Specifically, old-for-grade students who had been retained one grade or more had the highest rate of reported extreme BPI scores (19%), comparing to a 12% rate of reported extreme BPI scores among old-for-grade students without retention experience. Among those who were not old for grade, students who had been retained one grade or more had a 17% rate of extreme BPI scores, whereas children without grade retention experience had a much lower rate of 7%.</p>
<p>Byrnes, Deborah A., and Kaoru Yamamoto. (1985). "Academic Retention of Elementary Pupils: An Inside Look." <i>Education, 106(2), 208-214.</i></p>		
<p>Research Questions: What are the perceptions of retention among retained students and their teachers? How do retained children learn of their grade retention status? What do teachers communicate to these children and their peers about this experience?</p> <p>Dependent Variables: Students' and teachers' views on grade retention.</p> <p>Independent Variables: N/A.</p>	<p>Methods: Personal interviews with 71 retained elementary students and their teachers about their views on grade retention. Promoted students, including students performing well academically, were also interviewed to ensure that the students would not infer the intention of the study. For the same purpose, all the questions asked of</p>	<p>Findings: The authors concluded that "many of our concerns about grade retention are well justified" and that "grade retention was often internalized by the children as a negative and confusing experience" (p. 208).</p> <p>Socioemotional Outcomes: The messages that students internalized about the retention experience tended to be negative and reflect confusion. Grade retention was generally considered to be a punishment, and students felt anxious about the reactions of their peers</p>

<p>Other Covariates: N/A.</p>	<p>the students pertaining to retention were nested within a longer discussion of school in general.</p> <p>Data: Results from personal interviews with 71 elementary students retained in grades 1, 3, and 6, and 34 of their teachers in a school district of 26,000 elementary students.</p> <p>Sample Size: N = 71 retained children and 34 teachers.</p>	<p>and others to their status as “school failures” (p. 213). Many of these students did not feel comfortable sharing the information that they were retained. Eighty-four percent shared feelings centering around “sad,” “bad,” and “upset”; 3% used the word “embarrassed.” Most students found it difficult to think of something good about not being promoted (p. 210–211, 214).</p>
<p>Corman, Hope. (2003). “The Effects of State Policies, Individual Characteristics, Family Characteristics, and Neighbourhood Characteristics on Grade Repetition in the United States.” <i>Economics of Education Review</i>, 22(4), 409–420.</p>		
<p>Research Questions: Do statewide education policies affect grade retention rates? How do individual, family, and neighborhood characteristics relate to the probability of grade retention?</p> <p>Dependent Variables: Whether retained in grade or not.</p> <p>Independent Variables: Statewide education policies, including overall school expenditures, special education enrollments of 6–15 years olds, handicapped preschool enrollments, and Head Start allocations, gender, relative age of child, race, mother’s education level, mother’s age, whether mother works, family income, single-parent</p>	<p>Methods: Multivariate probit analysis.</p> <p>Data: Four cross-sectional samples of the National Household Education Survey (NHES): 1991, 1993, 1995, and 1996.</p> <p>Sample Size: N = 37,706 children from four cross-sectional samples of NHES: 1991, 1993, 1995 and 1996.</p>	<p>Findings: After holding constant state fixed effects, statewide educational policies were not found to have a significant impact on grade retention. However, relative age of the child, family income, mother’s education level, single-parent household or not, and having at least one sibling in the household were found to be statistically significantly associated with grade retention.</p> <p>Student Characteristics: The authors reported that “individual, family and neighborhood characteristics are all found to have large and significant effects on the probability that a child will repeat a grade” (p. 409). Specifically, boys were found to be “four percentage points more likely to repeat a grade than girls” (p. 417). Moreover, children from poorer households, with mothers having lower levels of education, from single-parent households, and with at least one sibling in the household</p>

<p>household or not, and having at least one sibling in the household.</p> <p>Other Covariates: N/A.</p>		<p>were found to be at greater risk of being retained in school.</p>
<p>Dauber, Susan L., Karl L. Alexander, and Doris R. Entwisle. (1993). "Characteristics of Retainees and Early Precursors of Retention in Grade: Who Is Held Back?" <i>Merrill-Palmer Quarterly</i>, 39(3), 326-343.</p>		
<p>Research Questions: What are the characteristics of students retained in grades 1-4?</p> <p>Dependent Variables: Whether retained in grade or not, whether retained in 1st grade or in grades 2-4.</p> <p>Independent Variables: Race, gender, parents' education level, family income, early academic competence, student mobility, parental assessment of student ability, teacher assessment of school adjustment measured using Maryland Systematic Teacher Observation Inventory.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Descriptive statistics, t-tests for the independent variables between retained and nonretained students, and logistic regressions.</p> <p>Data: Beginning School Study, a longitudinal study of inner-city students in BCPS.</p> <p>Sample Size: N = 728 students, with 226 students being retained at least once and 502 nonretained students.</p>	<p>Findings: The authors found a significant association between student characteristics and grade retention.</p> <p>Student Characteristics: The authors found that retained children were more likely to be male, African-American, have parents with lower education levels, and come from a family with a poverty-level income. They had lower scores on early academic competence measures and lower ratings on the teacher assessment of school adjustment than promoted children. When all variables were considered together in the logistic regression, reading and math scores, quantitative test score, and gender remained significant.</p>
<p>Eide, Eric R., and Mark H. Showalter. (2001). "The Effect of Grade Retention on Education and Labor Market Outcomes." <i>Economics of Education Review</i>, 20(6), 563-76.</p>		
<p>Research Questions: What is the effect of retention on the probability of dropping out of high school? What is the effect of retention on labor market earnings several years after students have entered the workforce?</p> <p>Dependent Variables: A dummy</p>	<p>Methods: Ordinary least squares (OLS) by gender and race (white vs. black) and IV estimation, with the exogenous variation across states in kindergarten entry dates as the instrument. Specifically, the key instrument was the number of days</p>	<p>Findings: This study found a statistically significant positive correlation between retention and dropping out of high school and a statistically significant negative correlation between retention and post-high school labor market earnings by using the OLS model. However, the IV estimates indicated that, for whites, grade retention may have some benefit to students by both lowering dropout</p>

<p>variable for dropping out of high school (equal to one if the student dropped out of high school between the sophomore and senior years and equal to zero otherwise), and earnings variable equal to the average of log earnings in 1990, 1991 and 1992.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: Gender, race, community residence (urban/rural), parental education, family income, and region of the country.</p>	<p>between a child’s birthday in the first year that the child was eligible to enter kindergarten and the statutorily determined kindergarten entry date that varies across states.</p> <p>Data: 1980 sophomore cohort of the nationally representative High School and Beyond dataset, including the 1980 base-year survey and four follow-ups in 1982, 1984, 1986, and 1992.</p> <p>Sample Size: N = 7,809, including 3,046 white males, 3,291 white females, 708 black males, and 764 black females.</p>	<p>rates and raising labor market earnings, although none of the coefficients were statistically significant.</p> <p>Dropout: Using OLS, grade retention was found to have a statistically significant positive correlation with dropping out of high school (0.051). However, for whites, the estimated IV coefficients were opposite in sign from the OLS coefficients. Specifically, the IV estimates ranged from -0.139 to -0.212, depending on the instrument for white males, and -0.001 to -0.395 for white females. However, none of these IV estimates were statistically significant. For blacks, the IV approach gave very poor first-stage results, possibly due to the smaller sample size, and the resulting IV estimates were not informative.</p> <p>Employment: This study examined the effects on labor market earnings for males only. Using OLS, grade retention was found to have a statistically significant negative correlation with post-high school labor market earnings for males (-0.152). However, for white males, the estimated IV coefficients were opposite in sign from the OLS coefficients. Specifically, the IV estimates ranged from 0.178 to 0.316, depending on the instrument for white males. However, none of these IV estimates were statistically significant. For blacks, the IV approach gave very poor first-stage results, possibly due to smaller sample size, so the resulting IV estimates were not informative.</p>
<p>El-Hassan, Karma. (1998). “Relation of Academic History and Demographic Variables to Grade Retention in Lebanon.” <i>Journal of Educational Research</i>, 91(5), 279–288.</p>		
<p>Research Questions: What are the characteristics of retained students in Lebanon? What is the relationship between frequency of grade retention</p>	<p>Methods: Descriptive statistics were used to find the demographic characteristics of the students. Chi-square tests were used to examine</p>	<p>Findings: The author reported that retained students had well-defined characteristics in terms of demographics, academic history, and familial background and that “frequency of retention was not independent of these</p>

<p>and the students' academic and family background?</p> <p>Dependent Variables: Student characteristics.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: N/A.</p>	<p>the relationship between frequency of retention and the students' academic and family background.</p> <p>Data: A sample of 1,633 retained students was randomly selected from each grade level of a representative sample of 260 schools in Lebanon, stratified by type, geographic location, and size. Information was collected using a student questionnaire and school files.</p> <p>Sample Size: N = 1,633 retainees randomly selected from a representative sample 260 schools in Lebanon.</p>	<p>variables" (p. 279).</p> <p>Student Characteristics: The author found that most of the retainees were male, overage for their classrooms, from public schools and rural areas, and had low parental education and occupation levels. Moreover, "retainees were usually middle children in large families, with one third of the families headed by a single parent" (p. 279). A large percentage of retained students entered school early, experienced frequent retentions, and changed schools.</p>
<p>Ferguson, Phillip, Shane R. Jimerson, and Michael J. Dalton. (2001). "Sorting Out Successful Failures: Exploratory Analyses of Factors Associated with Academic and Behavioral Outcomes of Retained Students." <i>Psychology in the Schools</i>, 38(4), 327-341.</p>		
<p>Research Questions: Are there differences between the retained and promoted groups in terms of family characteristics, socialization, student demographics, and the provision of school-based support services? What are the student and family characteristics that are associated with better academic and behavioral outcomes after retention?</p> <p>Dependent Variables: Academic</p>	<p>Methods: Descriptive statistics, multiple regression, ANOVA, and Chi-square test. Comparisons of student and family characteristics were made between four groups: students retained in grades K-2, retained students who were placed in a transition classroom before retention, promoted students who were recommended to be placed in a transition classroom, and</p>	<p>Findings: The authors reported that retained students' subsequent academic achievement was significantly associated with their initial school readiness, SES, mother's level of education, parental value of education, kindergarten personal-social functioning, and chronological age. Specifically, retained students with better postretention achievement were more likely to have higher scores on early readiness measures, to be younger, to be more socially adept in kindergarten, to have a higher level of maternal education, and to come from families that valued education more.</p>

<p>achievement measured by standardized test scores.</p> <p>Independent Variables: Demographics, preretention achievement, and family characteristics.</p> <p>Other Covariates: N/A.</p>	<p>regularly promoted students.</p> <p>Data: 106 students were followed from kindergarten through grade 11. Measures included the Gesell School Readiness Test, teacher ratings of academic skills, parent survey, school records, Kindergarten Deficit Personal-Social Functioning, and others.</p> <p>Sample Size: N = 106 students, including 18 retained students, 40 recommended for transition classroom and retained, 15 recommended for transition classroom but promoted, and 33 regularly promoted.</p>	<p>Student Characteristics: The authors found that low-achieving but promoted students tended to have lower student kindergarten personal-social deficit scores. They also reported significant association with parental value of education, as well as significant differences in 2nd grade special education referrals and placements between retained and promoted students.</p>
<p>Fine, Jodene Goldenring, and John M. Davis. (2003). "Grade Retention and Enrollment in Post-Secondary Education." <i>Journal of School Psychology, 41(6), 401-411.</i></p>		
<p>Research Questions: What is the effect of grade retention on enrollment in postsecondary education? Does timing of retention matter?</p> <p>Dependent Variables: Whether enrolled in postsecondary education or not.</p> <p>Independent Variables: Whether retained in grade or not, and the grade in which students were retained.</p> <p>Other Covariates: Gender, socioeconomic status, race/ethnicity,</p>	<p>Methods: Logistic regression.</p> <p>Data: National Education Longitudinal Study (NELS) 1988 (base year), and 1992 and 1994 (follow-up surveys).</p> <p>Sample Size: N = 11,637 high school graduates.</p>	<p>Findings: Retained graduates were less likely to enroll in postsecondary education than their promoted peers.</p> <p>Student Characteristics: The authors reported that "boys were nearly twice as likely to be retained as were girls, and high school graduates in the lowest quartile of SES were also twice as likely to be retained compared to high SES graduates" (p. 405). Academic achievement was also found to be associated with grade retention.</p> <p>Postsecondary Education: The authors found significantly lower odds of enrollment in postsecondary education among retained graduates than their promoted counterparts. Moreover, retained students were less than</p>

and achievement.		half as likely to enroll in a four-year college as were their low-achieving but promoted peers. The odds of enrolling in any postsecondary education institution were significantly lower for graduates with more than one retention, even after controlling for the initial retention. Timing of retention appeared to matter: Postsecondary education enrollment likelihood tended to drop as the grade of retention increased. Specifically, retention in middle school (i.e., grades 6–8) was associated with the lowest odds of enrollment.
Frederick, Carl B., and Robert M. Hauser. (2006). <i>Have We Put an End to Social Promotion? Changes in Grade Retention Rates Among Children Aged 6 to 17 from 1972 to 2003</i>. Madison, WI: Center for Demography of Health and Aging, University of Wisconsin-Madison.¹		
<p>Research Questions: What are the trends over time in prevalence of children below the modal grade for their age (BMG)? Are the changes in the prevalence of BMG driven by changes at certain ages? What are the effects of social background characteristics on BMG status? How do these effects differ over time and age?</p> <p>Dependent Variables: Whether or not BMG is a proxy for grade retention.</p> <p>Independent Variables: Demographics, including gender, race,</p>	<p>Methods: Logistic regression model with partial constraints predicting BMG.</p> <p>Data: The annual October school enrollment supplements of the Current Population Survey from 1972 to 2003. Data included 864,878 children aged six to 17, clustered in 256,608 households over 32 years. Due to limits of computational power, the analyses used a one-half subsample stratified by age, period, gender, and race. The subsample contained 432,626</p>	<p>Findings: The authors used BMG as a proxy for having been retained in the past. They found that “while the effects of socioeconomic background variables on progress through school become increasingly powerful as children grow older, that typical pattern has been attenuated across the past three decades by a steady, secular decline in the influence of those variables across all ages” (p. i).</p> <p>Student Characteristics: The authors reported that, consistent with previous research, BMG was found to be associated with demographic and social background characteristics. Specifically, “boys are more likely than girls to be BMG” (p. 18). “Each additional child in the household increases the chances of being BMG” (p. 18). “Children in families who own their home, who have</p>

¹ This paper has been updated (see Frederick and Hauser, 2008, which is also summarized in this appendix). While the updated version examined the trends of grade retention over a longer period (1972 to 2005) than did this version (1972 to 2003), the two papers largely examined the same sets of research questions, used similar data, and employed the same methodology. Therefore, we consider the two papers as one study in our count of studies examining grade retention.

<p>age, year of participation in the survey, region, metropolitan status, and number of siblings, and socioeconomic characteristics, including education and occupational status of the household head and his/her spouse, family income, home ownership, and whether or not single-parent household.</p> <p>Other Covariates: Year of survey.</p>	<p>children clustered in 199,278 households.</p> <p>Sample Size: N = 432,626 children aged six to 17, clustered in 199,278 households.</p>	<p>higher income, in which the household head has higher education, and in which both the head and the spouse have higher occupational status are all less likely to be BMG" (p. 18).</p>
<p>Frederick, Carl B., and Robert M. Hauser. (2008). "Have We Put an End to Social Promotion? Changes in School Progress Among Children Aged 6 to 17 from 1972 to 2005." <i>Demography</i>, 45(3), 719-740.</p>		
<p>Research Questions: What are the trends over time in prevalence of children who are BMG? Are the changes in the prevalence of BMG driven by changes at certain ages? What are the effects of social background characteristics on being BMG? How do these effects differ over time and age?</p> <p>Dependent Variables: Whether or not BMG is a proxy for grade retention.</p> <p>Independent Variables: Age, gender, race, birth cohort, number of children in the household, region, metropolitan status, family income, whether or not single-parent household, education level of the household head and his/her spouse, occupation status of the household head and his/her spouse,</p>	<p>Methods: Logistic regression model with partial constraints predicting BMG.</p> <p>Data: The annual October school enrollment supplements of the Current Population Survey from 1972 to 2005. Data included 912,526 children aged six to 17, clustered in 276,124 households over 34 years. Due to limits of computational power, the analyses used a one-half subsample stratified by age, period, gender, and race. The subsample contained 457,038 children clustered in 214,206 households.</p> <p>Sample Size: N = 457,038 children aged six to 17, clustered in 214,206 households.</p>	<p>Findings: The authors used BMG as a proxy for having been retained in the past. They found that "while the effects of socioeconomic background variables on progress through school have become increasingly powerful as children grow older, that typical pattern has been attenuated across the past three decades by a steady secular decline in the influence of those variables across all ages" (p. 719).</p> <p>Student Characteristics: The authors reported that, consistent with previous research, BMG was found to be associated with demographic and social background characteristics. Specifically, "boys are more likely than girls to be BMG" (p. 732). "Each additional child in the household increases the chances of being BMG" (p. 732). "Children in families who own their home, who have higher income, in which the household head has higher education, and in which both the head and the spouse have higher occupational status are all less likely to be BMG" (p. 732).</p>

<p>and home-ownership.</p> <p>Other Covariates: Year of survey.</p>		
<p>Frymier, Jack. (1997). "Characteristics of Students Retained in Grade." <i>The High School Journal</i>, 80(3), 184-192.</p>		
<p>Research Questions: What are the characteristics of retained students in comparison with promoted peers?</p> <p>Dependent Variables: Attempted suicide, involved in pregnancy, used drugs, used alcohol, alcoholic parent, arrest, school suspension, history of abuse, excessive absences, low self-esteem, special education referrals, low reading scores, low grades, retained in grade, parent sick last year, sibling died last year, parent lost job, student ill last year, parent with low-level job, parent not finishing high school, parents divorced, moved frequently.</p> <p>Independent Variables: Whether retained in/overage for grade or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Chi-square tests to assess the difference on 24 risk factors between students who had been retained in grade or were overage in grade and students who had not been retained in grade and were the same age or younger than other students in their respective classes.</p> <p>Data: Data were collected on 5,997 students in 4th grade, 7,621 students in 7th grade, and 7,341 students in 10th grade in 276 schools in 41 states. All information was provided by teachers or counselors who knew each student well. No information was provided by students.</p> <p>Sample Size: N = 20,959 students, including 5,997 4th graders, 7,621 7th graders, and 7,341 10th graders.</p>	<p>Findings: This study compared retained and/or overage students with nonretained students on 24 risk factors. The author concluded that, in general, retained students were twice as likely to be at risk as nonretained students.</p> <p>Student Characteristics: Boys were more likely to be retained than girls. The retained students were also more likely to be black and Hispanic and less likely to be white.</p> <p>Academic Achievement: Retained students were more likely to have lower scores on reading and school grades and to be referred to special education than nonretained students.</p> <p>Socioemotional Outcomes: Retained students were more likely to have low self-esteem and to have attempted suicide.</p> <p>Behavioral Outcomes: Retained students were more likely to have excessive absences, arrests, and school suspensions. They were also more likely to have used drugs and/or alcohol than the nonretained students.</p>
<p>Gleason, Katie A., Oi-man Kwok, and Jan N. Hughes. (2007). "The Short-Term Effect of Grade Retention on Peer Relations and Academic Performance of At-Risk First Graders." <i>The Elementary School Journal</i>, 107(4), 327-340.</p>		
<p>Research Questions: How does grade retention affect children's teacher-</p>	<p>Methods: Descriptive statistics and F-tests.</p>	<p>Findings: The authors concluded that "children's academic competencies, as perceived by peers and</p>

<p>and peer-rated academic competencies as well as peer acceptance? Can children’s teacher- and peer-perceived academic competencies mediate the effect of retention on peer acceptance? How does grade retention affect children’s subsequent academic achievement?</p> <p>Dependent Variables: Peer acceptance, teacher- and peer-perceived academic competence, and academic achievement.</p> <p>Independent Variables: Whether retained in 1st grade or not.</p> <p>Other Covariates: Peer acceptance before retention.</p>	<p>Data: 350 children enrolled in 1st grade during fall 2001 and 2002 in one of three school districts in central and southeast Texas were followed for one year. Data were collected using an individually administered test of academic achievement, teacher-report and peer-report measures of academic competence, and peer-report measures of peer acceptance.</p> <p>Sample Size: N = 350 1st graders in Texas, including 63 students retained in grade 1 and 287 promoted to grade 2 one year later.</p>	<p>teachers, fully mediated the effect of retention on subsequent peer acceptance” (p. 327).</p> <p>Academic Achievement: The authors reported positive effects of grade retention using same-grade comparisons and negative effects using same-age comparisons. Specifically, retained children were found to “fare better than promoted children on grade standard scores and worse than promoted children on age standard scores” (p. 337).</p> <p>Socioemotional Outcomes: The authors found that “retention had a significant positive effect on peer acceptance” (p. 334) one year following the retention decision after controlling for the peer-acceptance score in the previous year. In addition, retention was found to have significant positive effects on “both teacher-perceived academic competence and peer-perceived academic competence” (pp. 334–335) in the year following the retention decision after controlling for peer-acceptance scores.</p>
<p>Goldschmidt, Pete, and Jia Wang. (1999). “When Can Schools Affect Dropout Behavior? A Longitudinal Multilevel Analysis.” <i>American Educational Research Journal</i>, 36(4), 715–738.</p>		
<p>Research Questions: Are early (middle school) and late (high school) dropouts equally affected by traditionally defined risk factors? Do school-level factors account for between-school differences in school dropout rates after controlling for differences in enrollment? Can these school factors mediate individual student risk factors? What impact does early predicted risk have on</p>	<p>Methods: Hierarchical logistic model.</p> <p>Data: The first three waves of the NELS were used: 25,000 8th graders from 1,000 schools were surveyed in 1988 (base year) and in 1990 and 1992 (follow-ups).</p> <p>Sample Size: N = 25,000 8th graders from 1,000 schools in</p>	<p>Findings: This study examined the student and school factors associated with students dropping out in different grades. While grade retention was not the focus of the study, the authors found being held back to be the “single strongest predictor of dropping out” (p. 715). Moreover, the effect of grade retention on dropout was found to be consistent for both early and late dropouts. In addition, school factors were found to account for approximately two-thirds of the differences in mean school dropout rates, and family characteristics appeared to be more important</p>

<p>the likelihood of dropping out late?</p> <p>Dependent Variables: Dropout status of individual students and dropout rates of schools.</p> <p>Independent Variables: Demographics, including gender and race; family characteristics, including single-parent household, SES, parental education level, and whether or not parent checks student’s homework; student characteristics, including misbehaving, being held back, working more than 20 hours per week, receiving remedial services for English proficiency, reading achievement, and math achievement; and school-level factors, including school sector and student body composition.</p> <p>Other Covariates: N/A.</p>	<p>1988.</p>	<p>for late dropouts.</p> <p>Dropout: The authors found that “being held back is the single strongest predictor of dropping out and that its effect is consistent for both early and late dropouts” (p. 715).</p>
<p>Gottfredson, Denise C., Carolyn Molden Fink, and Nanette Graham. (1994). “Grade Retention and Problem Behavior.” <i>American Educational Research Journal</i>, 31(4), 761–784.</p>		
<p>Research Questions: What are the effects of grade retention on problem behaviors?</p> <p>Dependent Variables: Educational expectations, positive peer associations, social integration, attachment to school, involvement, positive self-concept, rebellious behavior, adjustment factor score, involvement factor score, and</p>	<p>Methods: Multiple regressions to assess the effects of grade retention on predictors of problem behaviors. Student surveys using the Effective School Battery were administered to assess misbehavior in school.</p> <p>Data: Data were collected from school system records, teacher ratings, and a student survey for a</p>	<p>Findings: This study examined retention effects on theoretical variables that might link retention to problem behavior by comparing the retained students to the promoted students 11 months after retention. The authors found small but statistically significant effects of retention on school attachment and rebellious behaviors. Specifically, retention appeared to reduce rebellious behavior in school and increased attachment to school.</p> <p>Student Characteristics: The authors reported that</p>

<p>disruptive behavior in class.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: Standardized reading test score, whether or not the student was already behind grade level, and gender.</p>	<p>sample of 401 mostly African-American 6th and 7th graders in two urban public middle schools in the spring of 1988.</p> <p>Sample Size: N = 401 students, including 197 retained students and 204 promoted students.</p>	<p>“retained students were more likely to be male, behind grade, and in remedial programs” (p. 771). “They also scored lower than their promoted peers on standardized achievement tests” (p. 771).</p> <p>Socioemotional Outcomes: Retained students were significantly more attached to school than their promoted peers 11 months after retention.</p> <p>Behavioral Outcomes: Retained students had significantly less self-reported rebellious behavior than the promoted students.</p>
<p>Grant, Lenarduzzi, and T. F. McLaughlin. (1992). <i>Longitudinal Effects of Nonpromotion in Junior High School</i>. Paper presented at the Annual Meeting of the International Congress for School Effectiveness and Improvement, Victoria, British Columbia, Canada, January 1992.</p>		
<p>Research Questions: What are the academic effects of grade retention among junior and senior high school students?</p> <p>Dependent Variables: Academic achievement measured by grade point average (GPA), and attendance.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Wilcoxon matched-pairs signed ranks test.</p> <p>Data: Data were collected for 18 7th and 8th graders from a school district in rural interior British Columbia, Canada. The students were followed for four years and tracked through district records to the end of their school careers.</p> <p>Sample Size: N = 18 students, with 11 being retained and 7 being promoted.</p>	<p>Findings: The authors followed a group of 18 junior and senior high school students for four years and found no significant differences in GPA or attendance between the promoted and nonpromoted students.</p> <p>Academic Achievement: No significant differences were found in GPA between the promoted and nonpromoted students.</p> <p>Behavioral Outcomes: No significant differences were found in attendance between the promoted and nonpromoted students.</p>
<p>Greene, Jay P., and Marcus A. Winters. (2004). <i>An Evaluation of Florida’s Program to End Social Promotion</i>. New York: Center for Civic Innovation, Manhattan Institute for Policy Research. Education Working Paper No. 7.</p>		
<p>Research Questions: What is the</p>	<p>Methods: Linear regression</p>	<p>Findings: The authors evaluated Florida’s test-based</p>

<p>academic effect of Florida’s test-based promotion policy one year after its implementation? What is the effect of retention on academic achievement?</p> <p>Dependent Variables: Academic achievement measured by standardized test scores in reading.</p> <p>Independent Variables: Whether subject to statewide test-based promotion policy or not and whether retained in 3rd grade or not.</p> <p>Other Covariates: Demographics.</p>	<p>comparing the developmental-scale score gains made by the treatment group (i.e., low-achieving 3rd graders in 2002–2003, the year after the implementation of the retention policy) with the control group (i.e., low-achieving 3rd graders in 2001–2002, the year before the implementation of the retention policy), two-stage least squares using whether or not students were subject to the retention policy as the IV. Analyses for racial subgroups were also conducted.</p> <p>Data: Data included information on demographics and test scores of Florida low-achieving students in two school years: students in the 3rd grade for the first time in 2002–2003 and 2001–2002 who scored below the threshold on the Florida Comprehensive Assessment Test (FCAT) reading test. Sixty percent of the first (2002–2003) cohort were actually retained, while only 8.7% of the second (2001–2002) cohort were retained.</p> <p>Sample Size: More than 80,000 students.</p>	<p>promotion policy one year after its implementation and found positive effects of retaining students based on standardized test scores.</p> <p>Academic Achievement: The authors found “consistently positive results for the use of such retention policies” (p. 9), indicating the “effectiveness of policies that retain students based on standardized test scores” (p. 7). Specifically, 3rd graders subject to retention policy (2002–2003 cohort) made significantly greater gains in achievement test scores in reading and math than students not subject to retention policy (2001–2002 cohort). Statistically significant differences in achievement were also found between the retained students and their low-achieving but promoted peers. Specifically, low-performing students who were retained made greater gains in both reading and math than did similar students who were promoted.</p>
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Greene, Jay P., and Marcus A. Winters. (2006). *Getting Farther Ahead by Staying Behind: A Second-Year Evaluation of Florida's Policy to End Social Promotion*. New York: Center for Civic Innovation, Manhattan Institute for Policy Research. Civic Report No. 49.

Research Questions: What is the effect of grade retention on student achievement two years after initial retention? Are discrepancies between this evaluation of Florida's test-based promotion policy and the evaluation of a similar policy in Chicago caused by differences in methodology or by differences in the nature of the programs?

Dependent Variables: Academic achievement measured by standardized test scores in reading.

Independent Variables: Whether subject to statewide test-based promotion policy or not and whether retained in 3rd grade or not.

Other Covariates: Demographics.

Methods: In the across-year comparisons, one-way ANOVA was used to compare low-achieving 3rd graders who were subject to the promotion policy with an earlier cohort of 3rd graders who were not subject to the policy. RD design was used to compare test-score gains of 3rd graders whose reading scores in 2002–2003 were just below the threshold for promotion with their peers whose scores were just above the threshold.

Data: Data included information on demographics and test scores of Florida low-achieving students from two school years: students in the 3rd grade for the first time in 2002–2003 and 2001–2002 who scored below the threshold on the FCAT reading test. Developmental scale scores were used to compare student gains on the FCAT reading test.

Sample Size: N = 88,565 3rd graders, with 47,684 students from the 2001–2002 cohort and

Findings: The authors evaluated Florida's test-based promotion policy two years after its initial implementation and found positive effects of retaining students based on standardized test scores. Moreover, the authors reported to have found positive results both by using the research design they had employed previously and by using a design similar to the evaluation of the promotion policy in Chicago. They concluded that "the differences between the Chicago and Florida evaluations appear to be caused by differences in the details of the programs, and not by differences in how the programs were evaluated" (p. i).

Academic Achievement: The authors reported significant reading gains among retained 3rd-grade students relative to the control group of socially promoted students after two years of the policy. Moreover, these academic benefits were found to grow substantially from the first to the second year after retention. The authors concluded that "students lacking in basic skills who are socially promoted appear to fall farther behind over time, whereas retained students appear to be able to catch up on the skills they are lacking" (p. i).

	<p>40,881 from the 2002–2003 cohort, in the across-year comparisons; N = 15,233 3rd graders within 50 points above or below the threshold, and N = 8,093 3rd graders students within 25 points above or below the threshold, in the RD design.</p>	
<p>Greene, Jay P., and Marcus A. Winters. (2007). "Revisiting Grade Retention: An Evaluation of Florida's Test-Based Promotion Policy." <i>Education Finance and Policy</i>, 2(4), 319–340.</p>		
<p>Research Questions: What is the effect of grade retention on student achievement one and two years after initial retention?</p> <p>Dependent Variables: Academic achievement measured by standardized test scores in reading.</p> <p>Independent Variables: Whether subject to statewide test-based promotion policy or not and whether retained in 3rd grade or not.</p> <p>Other Covariates: Demographics.</p>	<p>Methods: IV approach, with whether or not the student was subject to test-based promotion policy as the instrument, was used under two kinds of comparisons: across-year comparison and RD design. The across-year comparisons compared low-achieving 3rd graders who were subject to the promotion policy with an earlier cohort of 3rd graders who were not subject to the policy. The RD design compared test-score gains of 3rd graders whose reading scores in 2002–2003 were just below the threshold for promotion with their peers whose scores were just above the threshold.</p> <p>Data: Data, provided by the Florida Department of Education,</p>	<p>Findings: The authors evaluated Florida's test-based promotion policy one and two years after its initial implementation and found positive effects of retaining students based on standardized test scores. They pointed out that Florida's promotion policy included treatments other than retention and that the results should be interpreted as an average treatment effect across all of the interventions under the policy.</p> <p>Academic Achievement: The authors found that "retained students slightly outperformed socially promoted students in reading in the first year after retention, and these gains increased substantially in the second year" (p. 319).</p>

	<p>included information on demographics and test scores of students enrolled in grades 3–10 in a Florida public school from 2001–2002 to 2004–2005. Analysis used test scores on the FCAT reading assessment, which were reported as development scale scores.</p> <p>Sample Size: N = 73,695 students for the first-year analysis of across-year comparisons; N = 71,950 for the second-year analysis of across-year comparisons; N = 7,087 for the RD design.</p>	
<p>Greene, Jay P., and Marcus A. Winters. (2009). “The Effects of Exemptions to Florida’s Test-Based Promotion Policy: Who Is Retained? Who Benefits Academically?” <i>Economics of Education Review</i>, 28(1), 135–142.</p>		
<p>Research Questions: Has Florida’s test-based promotion policy led to disproportionate retentions by observable characteristics? Did students who received an exemption benefit from their promotion?</p> <p>Dependent Variables: Whether retained in 3rd grade or not and academic achievement measured by standardized test scores in reading.</p> <p>Independent Variables: Demographics and whether exempted from the policy.</p>	<p>Methods: Logistic regression was used to examine whether certain demographic groups were disproportionately affected by Florida’s test-based promotion policy. OLS analysis was used to examine whether students benefited from being exempted from the policy.</p> <p>Data: Data, provided by the Florida Department of Education, included information on demographics and test scores of all students in Florida during the years</p>	<p>Findings: The authors found that “African-American and Hispanic students with scores under the retention threshold are significantly more likely to be retained under the policy than white students with similarly low scores” (p. 4).</p> <p>Academic Achievement: Two years after the initial retention, retained students were found to have significantly higher test score gains in reading compared to the students who were exempted from the policy and thus promoted. The authors concluded that “on average exemptions have not been granted to those individuals who would benefit from promotion” (p. 1).</p>

<p>Other Covariates: Demographics.</p>	<p>2000–2001 to 2003–2004.</p> <p>Sample Size: N = 123,347 students for the analysis of disproportionate retentions; N = 30,109 students in 3rd grade for the first time in 2002–2003 for the analysis of the effects of exemption.</p>	
<p>Grissom, James B., and Lorrie A. Shepard. (1989). "Repeating and Dropping Out of School." In Lorrie A. Shepard and Mary Lee Smith (Eds.), <i>Flunking Grades: Research and Policies on Retention</i> (pp. 34-63). London: The Falmer Press.</p>		
<p>Research Questions: What are the effects of grade retention on dropping out of school?</p> <p>Dependent Variables: Whether dropped out of school.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: Gender, race/ethnicity, SES, and achievement prior to retention.</p>	<p>Methods: Structural equations.</p> <p>Data: Data were collected from three large city school systems: Austin Independent School District (AISD), CPS, and a large suburban school system in the Northeast (District 3) with a high average socioeconomic level.</p> <p>Sample Size: N = 29,399 students enrolled in grades 7–12 during the 1984–1985 school year in AISD; N = 63,872 students entering the freshman class during 1979–1981 in CPS; N = 38,364 students in grades 7–12 during the 1985–1986 school year in District 3.</p>	<p>Findings: The authors concluded that grade retention significantly increased the risk of dropping out.</p> <p>Dropout: The authors reported a significant negative effect of grade retention on dropping out after controlling for student background, gender, and prior achievement, although "the magnitude of the effect varies from one school system to the next" (p. 60).</p>

Guevremont, Anne, Noralou P. Roos, and Marni Brownell. (2007). "Predictors and Consequences of Grade Retention: Examining Data from Manitoba, Canada." *Canadian Journal of School Psychology, 22(1), 50-67.*

Research Questions: What are the characteristics of retained students? How do students retained in grade 3 perform on a standards test in two consecutive years? How does retention influence high school withdrawal?

Dependent Variables: Academic achievement and high school withdrawal.

Independent Variables: Whether retained in grade or not.

Other Covariates: Age for grade, school changes, SES, income assistance status, school type, school stability, school-level SES, and average grade 9 mark.

Methods: Hierarchical linear modeling.

Data: Data came from Population Health Research Data Repository, which contains linkable de-identified administrative data files, including school enrollment records, standards test results, social service records, and demographics.

Sample Size: N = 128,557 students enrolled in kindergarten to grade 8 in 2001–2002 in Manitoba, Canada for the analysis of characteristics of retained students; N = 267 3rd graders retained from 1997–1998 to 1998–1999 for the analysis of academic performance of students retained in grade 3; and N = 13,615 students starting grade 9 in 1997–1998 who remained in Manitoba over the next four to six years for the analysis of effects of retention on high school withdrawal.

Findings: The authors concluded that retention is potentially harmful based on withdrawal rates and academic performance of retained students.

Student Characteristics: Based on data from a population-based repository in Manitoba, Canada, "students who were male, young for grade, and in grades 1, 2, 7, and 8 were the mostly likely to be retained" (p. 50). Moreover, children who lived in lower-SES areas, who had more school changes per year, whose mothers first gave birth at a younger age, and whose family had received income assistance were also found to be most likely to be retained.

Academic Achievement: Results from grade 3 standards tests taken in consecutive years by retained students indicated that "only one in four retained students improve their score" (p. 50).

Dropout: Retention was found to be a strong predictor of high school withdrawal even after controlling for key student factors and school characteristics. Specifically, "the odds of student withdrawal were 3 times higher for students who have been retained once and almost 8 times higher for students who had been retained more than once" (p. 50).

Hagborg, Winston J., Gaetano Masella, Phillip Palladino, and Jerry Shepardson. (1991). "A Follow-up Study of High School Students with a History of Grade Retention." *Psychology in the Schools, 28(4), 310-317.*

<p>Research Questions: How do retained students compare with their nonretained peers in terms of scholastic performance, behaviors, and socioemotional outcomes? Does the timing of retention matter?</p> <p>Dependent Variables: Scholastic outcomes, attendance, and self-esteem.</p> <p>Independent Variables: Whether retained prior to 8th grade or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: T-tests and Pearson correlations.</p> <p>Data: Information was collected from 76 high school students from a school district located in a semirural community in New York. Student questionnaires were administered to collect student-reported data and to measure student self-esteem and locus of control.</p> <p>Sample Size: N = 76 high school students, with 38 students having a history of grade retention prior to 8th grade and 38 students matched with same-gender and same-track English class status.</p>	<p>Findings: The authors found negative effects of grade retention on achievement, behavioral, and socioemotional outcomes. Moreover, timing of retention appeared to matter. Specifically, “the later a student was retained was associated with lower grades, less-positive school attitudes, less time on homework, lower educational expectations, more discipline problems, lower self-control, and a more external locus of control” (p. 310).</p> <p>Academic Achievement: Retained students were found to have significantly lower test scores, lower measures of intelligence, and worse grades than the nonretained students. Moreover, later retention was found to have more negative effects.</p> <p>Socioemotional Outcomes: Retained students reported significantly lower self-esteem than nonretained peers. Moreover, later retention was found to have more negative effects.</p> <p>Behavioral Outcomes: Retained students were found to be absent from school more often. Moreover, later retention was found to have more negative effects.</p>
<p>Hauser, Robert M., Carl B. Frederick, and Megan Andrew. (2007). “Grade Retention in the Age of Standards-Based Reform.” In Adam Gamoran (Ed.) <i>Standards-Based Reform and the Poverty Gap: Lessons for No Child Left Behind</i> (pp. 120–153). Washington, DC: Brookings Institution Press.</p>		
<p>Research Questions: What are the trends over time in grade retention since 1996? Are there different trends in grade retention in subpopulation groups defined by race, gender, and SES? Are there regional and state variations in grade retention trends across time?</p>	<p>Methods: Descriptive statistics and multivariate logistic models.</p> <p>Data: Data were collected from Census Bureau’s October School Enrollment Supplements to the Current Population Survey and from state education agencies. The</p>	<p>Findings: Based on the national data, the authors found “a steady increase in grade retention, continuing an upward trend in grade retention rates since the 1970s” (p. 121). Moreover, “state and census data suggest that national increases in retention have generally been concentrated in the early grades” (p. 121).</p> <p>Student Characteristics: The authors found that</p>

<p>Dependent Variables: Percentage of students being retained and whether retained in grade or not.</p> <p>Independent Variables: Demographics, including gender, race, region, metropolitan status, and number of children in the household; and social background, including education and occupation of household head and his/her spouse, family income, and home ownership.</p> <p>Other Covariates: Year of survey and grade.</p>	<p>national sample, used in the descriptive statistics, included people aged five to 20 in each Current Population Survey from 1996 to 2004 who were enrolled in K-12 grades. For the logistic regressions, the sample was further limited to children aged 5 to 17. State grade retention data included descriptive data on grade retention rates since the 1990s for 14 states.</p> <p>Sample Size: N = 228,519 children aged five to 20 in each Current Population Survey from 1996 to 2004 for analysis using descriptive statistics; N = 154,112 children aged five to 17 in Current Population Survey for analysis using logistic regressions.</p>	<p>“students in the lowest-income quarter are 41 percent more likely to be retained than are student in the highest quarter” (p. 121) and that “students in the second quarter are 14 percent more likely to be retained” (p. 121).</p>
<p>Hauser, Robert M., Devah Pager, and Solon J. Simmons. (2000). <i>Race-Ethnicity, Social Background, and Grade Retention</i>. Madison, WI: Center for Demography and Ecology, University of Wisconsin-Madison. CDE Working Paper No. 2000-08.</p>		
<p>Research Questions: What are the relationships between grade retention and race/ethnicity and SES?</p> <p>Dependent Variables: Whether enrolled below modal grade level or not.</p> <p>Independent Variables: Race/ethnicity and socioeconomic background.</p>	<p>Methods: Descriptive statistics and logistic regression.</p> <p>Data: October Current Population Survey of 1972–1998.</p> <p>Sample Size: 57,500–63,500 cases for each of the five age groups (i.e., age six, nine, 12, 15, and 17).</p>	<p>Findings: The authors found a statistically significant correlation between retention and race/ethnicity and socioeconomic background.</p> <p>Student Characteristics: The authors found a statistically significant correlation between retention and race/ethnicity and socioeconomic background. Specifically, “by age 9 the odds of grade-retardation (defined as enrollment below model grade level) among African-American and Hispanic youth are 50 percent</p>

<p>Other Covariates: Gender, geographic location, and year on age-grade retardation at age six.</p>		<p>larger than among White youth" (p. i). However, the authors found these differentials "entirely explained by social economic deprivation among minority youth along with unfavorable geographic locations" (p. i).</p>
<p>Holmes, C. Thomas. (1989). "Grade Level Retention Effects: Meta-Analysis of Research Studies." In Lorrie A. Shepard and Mary Lee Smith (Eds.), <i>Flunking Grades: Research and Policies on Retention</i> (pp. 16–33). London: The Falmer Press.</p>		
<p>Research Questions: What is the effect of grade retention on academic achievement and personal adjustment?</p> <p>Dependent Variables: Academic achievement and personal adjustment.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Meta-analysis of 63 studies.</p> <p>Data: N/A.</p> <p>Sample Size: N = 63 studies, including 20 published studies, 22 dissertations, 18 master's theses, and three unpublished papers.</p>	<p>Findings: The authors conducted a meta-analysis of 63 studies and concluded largely negative effects from retention. The authors also commented that studies with positive findings were often affected by retention policies with program characteristics, such as early identification of and special help to at-risk students: Students were supported through an individualized education plan, continuous evaluation of student performance, and low student-teacher ratios.</p> <p>Academic Achievement: Retained students were found to have lower achievement on all four areas (language arts, reading, math, and social studies) than the promoted comparison groups. When only well-matched studies were included, results suggested an even greater negative effect for retention.</p> <p>Socioemotional Outcomes: Retained students were found to have a lower score on measures of personal adjustment than the comparison groups. However, no statistically significant differences were found for any of the subcategories of personal adjustment (i.e., social adjustment, emotional adjustment, and behavior).</p>
<p>Holmes, C. Thomas, and Kenneth M. Matthews. (1984). "The Effects of Nonpromotion on Elementary and Junior High School Pupils: A Meta-Analysis." <i>Review of Educational Research</i>, 54(2), 225–236.</p>		

<p>Research Questions: What is the effect of grade retention on academic achievement, student attitudes toward school, and personal adjustment in the elementary and junior high school grades?</p> <p>Dependent Variables: Academic achievement, personal adjustment, self-concept, attitude toward school, and attendance.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Meta-analysis of 44 studies.</p> <p>Data: N/A.</p> <p>Sample Size: N = 44 studies, including 18 published studies, 14 dissertations, and 12 master's theses.</p>	<p>Findings: The authors conducted meta-analyses of 44 studies and concluded largely negative effects from retention.</p> <p>Academic Achievement: Thirty-one of the 44 studies measured the effect of retention on academic achievement. The meta-analyses showed that promoted students had higher achievement than retained ones on subareas including language arts, reading, mathematics, work study skills, social studies, and grade point average.</p> <p>Socioemotional Outcomes: Eight of the 44 studies measured student attitudes toward school. The meta-analysis indicated that retained students had less favorable attitudes toward school than the promoted students. In addition, 21 of the 44 studies measured personal adjustment. Retained students scored lower than promoted students on measures of personal adjustment as well as the three subareas (social adjustment, emotional adjustment, and behavior), indicating a negative effect of retention on personal adjustment.</p> <p>Behavioral Outcomes: Twenty-one of the 44 studies measured personal adjustment. Retained students scored lower than promoted students on measures of personal adjustment as well as the three subareas (social adjustment, emotional adjustment, and behavior), indicating a negative effect of retention on personal adjustment.</p>
<p>Hong, Guanglei, and Stephen W. Raudenbush. (2005). "Effects of Kindergarten Retention Policy on Children's Cognitive Growth in Reading and Mathematics." <i>Educational Evaluation and Policy Analysis</i>, 27(3), 205-224.</p>		
<p>Research Questions: What is the</p>	<p>Methods: Multilevel propensity</p>	<p>Findings: This study used multilevel propensity score</p>

<p>average effect of the kindergarten retention policy on students' average learning outcomes? What is the average impact of a school's retention policy on students who would be promoted if the policy were adopted? What is the effect of kindergarten retention on those who were retained?</p> <p>Dependent Variables: Achievement in reading measured by reading ECLS-K scale scores calibrated via item response theory; achievement in math measured by reading ECLS-K scale scores calibrated via item response theory.</p> <p>Independent Variables: Whether retained in kindergarten or not.</p> <p>Other Covariates: 238 school-level pretreatment (preretention) covariates, and 107 student-level pretreatment (preretention) covariates.</p>	<p>score stratification.</p> <p>Data: Early Childhood Longitudinal Study Kindergarten cohort (ECLS-K) over the kindergarten and 1st-grade years from fall 1998 to spring 2000.</p> <p>Sample Size: N = 11,843 children, including 471 kindergarten retainees and 10,255 promoted students in 1,080 retention schools, and 1,117 promoted students in 141 nonretention schools.</p>	<p>stratification to examine the effects of retention on students' academic growth in reading and math.</p> <p>Student Characteristics: The authors found that a student was more likely to be retained in kindergarten if the student was non-Hispanic, male, from a family with low SES, and from a single-parent family. Moreover, retained students consistently showed lower achievement in literacy, math, and general knowledge; they tended to receive a lower rating from their teachers and parents on approaches to learning, self-control, and interpersonal skills and a higher rating on emotional or behavioral problems. Parents of retained children tended to show less commitment to parenting responsibilities and to have lower educational expectations of their children.</p> <p>Academic Achievement: The authors found no significant effect of the kindergarten retention policy as compared to a policy that banned retention. They did not find evidence that retention would benefit those students who would be promoted if the retention policy were in place. However, evidence does suggest that retained students would have learned more in both reading and math if they had been promoted, and the negative effect of retention on the retainees was quite large. Specifically, "after being retained for one year, the average loss in academic growth experienced by the retainees was about two-thirds of a standard deviation of the outcome in each subject area, equivalent to almost half a year's expected growth" (p. 220). The authors concluded that, in general, kindergarten retention seemed to have constrained the learning potential of the retained students.</p>
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<p>Hong, Guanglei, and Bing Yu. (2007). "Early-Grade Retention and Children's Reading and Math Learning in Elementary Years." <i>Educational Evaluation and Policy Analysis</i>, 29(4), 239–261.</p>		
<p>Research Questions: Does the negative effect of kindergarten retention on students' cognitive learning fade or even disappear in the mid- and late elementary years? What is the effect of 1st-grade retention on students' reading and math learning in the rest of the elementary years?</p> <p>Dependent Variables: Academic achievement in reading and math measured by T-score and Item Response Theory score.</p> <p>Independent Variables: Whether retained in kindergarten or not and whether retained in 1st grade or not.</p> <p>Other Covariates: 39 pretreatment (preretention) covariates were included in the final propensity model for kindergarten retention, and 27 pretreatment covariates were included in the final propensity model for 1st-grade retention.</p>	<p>Methods: Multilevel propensity score stratification.</p> <p>Data: Six waves of ECLS-K from fall 1998 to spring 2004.</p> <p>Sample Size: N = 9,750 ~ 16,733, depending on wave, measurement (whether T-score or Item Response Theory score) and subject being measured (whether reading or math).</p>	<p>Findings: The authors concluded that, in general, there was no evidence to indicate benefits of early grade retention on retainees' reading and math learning toward the end of the elementary years.</p> <p>Student Characteristics: Bivariate analysis found that children who were male, young in age, and from families with low socioeconomic status were more likely to be retained. Moreover, "low academic performance and behavioral problems both predicted kindergarten retention" (p. 245). The authors reported that "the 1st-grade retainees shared many of the same characteristics as the kindergarten retainees in general" (p. 248). In addition, black children were more likely to be retained only in 1st grade.</p> <p>Academic Achievement: The authors found that "the negative effects of kindergarten retention on retainee's reading and math outcomes at the end of the treatment year substantially fade by 5th grade" (p. 239). Moreover, 1st-grade retention was found to have negative effects that stayed almost constant from one year to three years after retention. The authors concluded that early grade retention did not appear to bring academic benefits to the retainees toward the end of the elementary years.</p>
<p>Hong, Guanglei, and Bing Yu. (2008). "Effects of Kindergarten Retention on Children's Social-Emotional Development: An Application of Propensity Score Method to Multivariate, Multilevel Data." <i>Developmental Psychology</i>, 44(2), 407–421.</p>		
<p>Research Questions: What are the effects of kindergarten retention on</p>	<p>Methods: Multilevel propensity score stratification.</p>	<p>Findings: The authors found no evidence suggesting a negative effect of kindergarten retention on children's</p>

<p>children’s social-emotional development in the early, middle, and late elementary years?</p> <p>Dependent Variables: Self-perceived interest and competence in academic learning, self-perceived interest and competence in peer relationships, and teacher-rated internalizing problem behaviors.</p> <p>Independent Variables: Whether retained in kindergarten or not.</p> <p>Other Covariates: 39 pretreatment (preretention) covariates included in the final propensity score model.</p>	<p>Data: ECLS-K.</p> <p>Sample Size: N = 10,726 first-time kindergartners from 1,080 schools that allowed for kindergarten retention.</p>	<p>social-emotional development.</p> <p>Socioemotional Outcomes: The authors reported “no evidence suggesting that kindergarten retention does harm to children’s social-emotional development” (p. 407). According to the authors, “had the retained kindergartners been promoted to the 1st grade instead, they would possibly have developed a lower level of self-confidence and interest in reading and all school subjects 2 years later” (p. 407).</p> <p>Behavioral Outcomes: The authors reported that, if the retained kindergartners had been promoted to the 1st grade, they “would have displayed a higher level of internalizing problem behaviors at the end of the treatment year and 2 years later” (p. 407).</p>
<p>Jacob, Brian A., and Lars Lefgren. (2002). Remedial Education and Student Achievement: A Regression-Discontinuity Analysis. Cambridge, MA: National Bureau of Economic Research. NBER Working Paper 8918.</p>		
<p>Research Questions: What are the effects of remedial education, such as summer school and grade retention, on student achievement under Chicago’s test-based promotion policy? What are the net effects of summer school on academic achievement among 3rd and 6th graders? What are the net effects of grade retention on academic achievement among 3rd and 6th graders?</p> <p>Dependent Variables: Academic achievement measured by standardized</p>	<p>Methods: RD design with IV estimates.</p> <p>Data: Administrative data from CPS for a cohort of 3rd- and 6th-grade students during school years from 1993–1994 to 1998–1999.</p> <p>Sample Size: N = 293,295 3rd- and 6th-grade students from 1993–1994 to 1998–1999 in the CPS, with 147,894 who experienced the promotion policy (cohort of 1996–1997 to 1998–</p>	<p>Findings: The authors concluded that “retention increases achievement for 3rd-grade students and has little effect on math achievement for 6th-grade students” (p. i) and that “summer school increased academic achievement in reading and mathematics and that these positive effects remain substantial at least two years following the completion of the program” (p. 3).</p> <p>Academic Achievement: The authors found that “retention has no negative consequences on the academic achievement of students retained in the 3rd grade—indeed it appears that retention may actually increase performance in the short run” (p. 3). Moreover, the impact of retention on 6th graders was mixed, with no impact on</p>

<p>test scores.</p> <p>Independent Variables: Probability of being retained in 3rd grade and 6th grade as the instruments.</p> <p>Other Covariates: Demographics and prior achievement.</p>	<p>1999); and the remainder were not subject to the policy (cohort of 1993–1994 to 1995–1996).</p>	<p>math and a negative effect on reading two years after the retention decision. However, the authors argued that “the negative effects for 6th-grade students may be due to differential test incentives faced by retained and promoted students” (p. 4).² They concluded that “retention increases achievement for 3rd-grade students and has little effect on math achievement for 6th-grade students” (p. i). When the effects of summer school and retention were combined, the authors reported academic benefits to 3rd graders and zero effects to the 6th graders.</p>
<p>Jacob, Brian A., and Lars Lefgren. (2007). <i>The Effect of Grade Retention on High School Completion</i>. Cambridge, MA: National Bureau of Economic Research. NBER Working Paper 13514.</p>		
<p>Research Questions: What is the impact of grade retention on high school completion?</p> <p>Dependent Variables: Whether completed high school by fall 2005.</p> <p>Independent Variables: Probability of being retained in 6th grade and 8th grade as the instruments.</p> <p>Other Covariates: Demographics and prior achievement.</p>	<p>Methods: RD design.</p> <p>Data: Administrative data from CPS for 6th and 8th graders who attended summer school during 1997–1999 and were subject to Chicago’s promotion policy. The sample for analysis was restricted to students who failed the promotional cutoffs in the spring (and were therefore at risk of retention) and who scored within a 1.5 grade equivalent range surrounding the cutoff in August.</p> <p>Sample Size: N = 8,573</p>	<p>Findings: The authors concluded that “grade retention leads to a modest increase in the probability of dropping out for older students, but has no significant effect on younger students” (p. 1).</p> <p>Dropout: The authors found that “6th-grade retention does not have a significant impact on the likelihood that a student will drop out, or the age at which a student will drop out” (p. 3). In other words, “students at risk of retention drop out soon after they are legally able, regardless of whether they are held back in 6th grade” (p. 3). Moreover, retention in 8th grade was found to increase the likelihood of dropping out by roughly 8 percentage points, or 14 percent. They concluded that “grade retention leads to a modest increase in the</p>

² Chicago’s test-based promotion policy requires students in 3rd, 6th, and 8th grades to meet a minimum score on reading and mathematics achievement tests in order to be promoted to the next grade. One year after the retention decision for 6th grade students, retained students who were still in the 6th grade faced high-stakes testing and promoted students who were in 7th grade did not. Two years after the retention decision, promoted students who were most likely to be in the 8th grade faced testing requirements, and retained students did not. The authors argued that the estimated effects of retention were confounded by the differential test incentives faced by retained and promoted students.

	6th-grade students and 5,042 8th-grade students.	probability of dropping out for older students, but has no significant effect on younger students" (p. 1).
Jacob, Robin Tepper, Susan Stone, and Melissa Roderick. (2004). <i>Ending Social Promotion: The Response of Teachers and Students</i>. Chicago, IL: Consortium for Chicago School Research.		
<p>Research Questions: How do teachers and principals view the initiative of ending social promotion in the CPS? How do teachers react to the high-stakes testing in terms of changes in instruction?</p> <p>Dependent Variables: Teachers' response to the test-based promotion policy, principals' response to the policy, and student attitudes and response to the policy.</p> <p>Independent Variables: Whether above or below the cutoff score and whether subject to the policy or not (comparison of pre- and post-policy cohorts).</p> <p>Other Covariates: N/A.</p>	<p>Methods: Descriptive statistics and hierarchical linear model.</p> <p>Data: Data used to analyze teacher's perspectives on the retention policy were collected from teacher surveys, principal surveys, and personal interviews with a sample of teachers in five low-performing schools in CPS. Data used to analyze student's perspectives on retention policy were based on survey data collected in 1994, 1997, 1999, and 2001 from 6th and 8th graders in CPS.</p> <p>Sample Size: N = approximately 30,000 6th and 8th graders in CPS in each of the four survey years (i.e., 1994, 1997, 1999, and 2001). Student surveys were administered to all 6th and 8th graders in CPS. Responses were received from about 30,000 students (i.e., about 50 percent of the total number of 6th and 8th graders) in each survey year.</p>	<p>Findings: The authors reported that most teachers and principals reacted positively to the effort of ending social promotion. In response to high-stakes testing, teachers increased time spent on test preparation, and the most dramatic change occurred in time spent on grade-appropriate math content and reading alignment in the higher grades. Teachers in the lowest-performing schools changed the most in instruction content and time spent on test preparation. After implementation of the initiative, low-achieving students' perception of the extent to which their teachers gave them personal support for their schoolwork increased dramatically.</p> <p>Socioemotional Outcomes: Eighth graders with above-cutoff test scores were less likely to report working hard and being engaged in class work in 2001 (postimplementation of initiative) than in 1994 (preimplementation of initiative). By 2001, the lowest-achieving 8th graders were more likely to report working hard and finding class work enjoyable than were students with above-cutoff test scores. From 1997 to 2001, both low-achieving and higher-achieving 6th graders reported a decline in their academic engagement. Based on teacher and principal surveys, the majority of teachers and principals agreed that "the threat of retention motivated students to work harder in school" (p. 13).</p>

Jimerson, Shane R. (1999). "On the Failure of Failure: Examining the Association Between Early Grade Retention and Education and Employment Outcomes During Late Adolescence." *Journal of School Psychology, 37(3), 243-272.*

Research Questions: What is the association between grade retention and academic adjustment in high school? What is the association between grade retention and dropping out of high school? What is the association between grade retention and obtaining a certificate of high school completion? What is the association between grade retention and postsecondary education? What is the association between grade retention and employment outcomes in late adolescence?

Dependent Variables: Academic adjustment, whether the student drops out of high school, employment outcomes at age 20. Academic adjustment was measured by a combination of three components: high school achievement (grade point average and the ratio of number of credits obtained to the number of years in high school), behavioral problems at school (number and intensity), and attendance (based on the ratio of the number of days attended to the number of days in the school year).

Independent Variables: Whether

Methods: Descriptive statistics, one-way ANOVA, and Chi-square tests. Retained students who were retained once in either kindergarten or 1st, 2nd, or 3rd grade were compared with two comparison groups: low-achieving but promoted students; and a randomly selected control group of regularly promoted students matched by grade.

Data: Collected from the Minnesota Mother-Child Interaction Project, with 190 children participating. The project is a 21-year, prospective, longitudinal study of children at risk for maladaptive outcomes.

Sample Size: N = 190 students.

Findings: The author concluded that retained students had a greater probability of poorer educational and employment outcomes during late adolescence than promoted students. Furthermore, the low-achieving but promoted group had comparable employment outcomes to the promoted control group at age 20.

Student Characteristics: The author reported that, compared to the low-achieving but promoted group, retained students displayed significantly more problem behaviors in the classroom, were ranked significantly lower in terms of emotional health and peer acceptance/popularity, "missed a significantly greater percentage of school days" (p. 256), and had significantly lower SES in 1st grade. Moreover, mothers of the retained students had lower levels of cognitive functioning than mothers of the low-achieving but promoted children.

Academic Achievement: Retained students had poorer educational outcomes through age 20 than their low-achieving but promoted peers. Specifically, "retained students had lower levels of academic adjustment at the end of 11th grade" in comparison with the low-achieving but promoted students (p. 243).

Dropout: Retained students had a greater probability of dropping out of high school by age 19 than the low-achieving but promoted students. Specifically, retained students "were less likely to receive a diploma or GED (General Education Development) credential at age 20" in comparison with low-achieving but promoted students (p.

<p>retained in grade or not.</p> <p>Other Covariates: Comparison groups were matched by grade levels.</p>		<p>263).</p> <p>Postsecondary Education: Retained students were found to be “less likely to be enrolled in a post-secondary education program” in comparison with the low-achieving but promoted students (p. 243).</p> <p>Employment: Retained students had poorer employment outcomes through age 20 than their low-achieving but promoted peers. Specifically, retained students “received lower education/employment status ratings, were paid less per hour, and received poorer employment competence ratings at age 20” in comparison with low-achieving but promoted students (p. 263). Furthermore, the low-achieving but promoted group was comparable to the control group of regularly promoted students in all employment outcomes at age 20.</p>
<p>Jimerson, Shane R. (2001). “Meta-Analysis of Grade Retention Research: Implications for Practice in the 21st Century.” <i>School Psychology Review</i>, 30(3), 420–438.</p>		
<p>Research Questions: What are the effects of grade retention on academic as well as socioemotional and behavioral outcomes?</p> <p>Dependent Variables: Academic achievement and socioemotional outcomes.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Meta-analysis of 20 studies published between 1990 and 1999.</p> <p>Data: N/A.</p> <p>Sample Size: N = 20 studies published between 1990 and 1999.</p>	<p>Findings: The author conducted meta-analyses of 20 studies and concluded largely negative effects of retention. Specifically, 16 out of 20 studies (80%) concluded that grade retention was ineffective as an intervention for academic achievement and socioemotional adjustment.</p> <p>Academic Achievement: The meta-analysis yielded a mean effect size of -0.39 for academic achievement, indicating that retained students scored 0.39 standard deviations lower than the comparison groups (i.e., promoted students). However, “six effect sizes for the year following retention indicated that the retained group scored 0.15 standard deviations higher than the comparison group” (p. 429).</p>

		<p>Socioemotional Outcomes/Behavioral Outcomes: The meta-analysis yielded a mean effect size of -0.22 on measures of social, emotional, and behavioral adjustment, indicating that retained students scored 0.22 standard deviations lower than the comparison groups (i.e., promoted students) (p. 430).</p>
<p>Jimerson, Shane R., Gabrielle E. Anderson, and Angela D. Whipple. (2002). "Winning the Battle and Losing the War: Examining the Relation Between Grade Retention and Dropping Out of High School." <i>Psychology in the Schools</i>, 39(4), 441–457.</p>		
<p>Research Questions: What is the relationship between grade retention and dropping out of high school?</p> <p>Dependent Variables: Dropping out of high school.</p> <p>Independent Variables: Whether retained in grade or not as one of the predictors.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Systematic review of prior research published between 1970 and 2000.</p> <p>Data: N/A.</p> <p>Sample Size: N = 17 studies examining dropping out of high school.</p>	<p>Findings: The authors reviewed 17 studies examining dropping out of high school using grade retention as one of the predictors and reported that "grade retention was one of the most powerful predictors of dropout status" (p. 441).</p> <p>Dropout: The review of 17 studies indicated that grade retention was one of the most powerful predictors of dropping out. The likelihood of dropping out was found to be "considerably greater for students who have been retained more than once" (p. 452).</p>
<p>Jimerson, Shane R., Elizabeth Carlson, Monique Rotert, Byron Egeland, and L. Alan Sroufe. (1997). "A Prospective, Longitudinal Study of the Correlates and Consequences of Early Grade Retention." <i>Journal of School Psychology</i>, 35(1), 3–25.</p>		
<p>Research Questions: What are the characteristics of retained students? How do they compare to regularly promoted students and comparably low-achieving but promoted peers? What are the short-term and long-term effects of retention on achievement? What are the effects of retention on social and</p>	<p>Methods: Thirty-two retained students were compared with two comparison groups: low-achieving but promoted students, and regularly promoted students. Short-term effects were assessed using one-way ANOVA on measures of achievement and adjustment in the</p>	<p>Findings: The authors concluded that elementary grade retention was an ineffective intervention for improving achievement and adjustment.</p> <p>Student Characteristics: The authors reported that the retained students had the following characteristics in comparison with their low-achieving promoted counterparts: They were less confident, less self-assured,</p>

<p>personal adjustment?</p> <p>Dependent Variables: Academic achievement measured by Peabody Individual Achievement Test, emotional health, and social adjustment.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: Prior achievement and adjustment.</p>	<p>grade following retention. Long-term effects were examined using ANCOVA on achievement and adjustment measures in the 6th grade and at age 16, with prior achievement and adjustment serving as covariates.</p> <p>Data: Data were collected from the Minnesota Mother-Child Interaction Project, a 21-year, prospective, longitudinal study of 190 at-risk children. Assessments were completed when the subjects were in kindergarten, 1st, 2nd, 3rd, 6th grades and at age 16.</p> <p>Sample Size: N = 182 students, including 32 students retained once in grades K–3, 50 low-achieving but promoted students, and 100 promoted controls.</p>	<p>less popular, less socially competent, and had more maladaptive behaviors. Their parents had lower IQ scores and were less involved with the school. Moreover, the retained group showed a temporary advantage in math achievement, which disappeared by 6th grade. The retained group also exhibited significantly lower emotional health in the 6th grade.</p> <p>Academic Achievement: The results of the analysis of short-term effects of retention in 1st grade displayed significant gains in math achievement among retained students, although no significant differences were found in reading and spelling achievement between the retained group and the low-achieving but promoted group. No significant differences were found in the achievement of students retained in kindergarten as compared to their low-achieving counterparts. After controlling for initial levels of achievement and adjustment, analyses of long-term effects of retention indicated no significant differences in academic achievement in 6th grade between the retained and low-achieving but promoted groups. The gains in math for the retained group had disappeared by 6th grade.</p> <p>Socioemotional Outcomes: Analyses of short-term effects indicated that “the retained group ranked the lowest on emotional health and peer acceptance and highest on behavior problems” (p. 21). Analyses of long-term effects showed similar results: after controlling for initial adjustment levels, the retained group demonstrated significantly lower rankings on the emotional health/self-esteem ranking as compared to the two comparison groups.</p>
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Jimerson, Shane R., and Phillip Ferguson. (2007). "A Longitudinal Study of Grade Retention: Academic and Behavioral Outcomes of Retained Students through Adolescence." *School Psychology Quarterly*, 22(3), 314-339.

Research Questions: What is the association of grade retention and academic achievement during adolescence? What is the association between grade retention and aggression during adolescence? What is the association between grade retention and dropping out of high school?

Dependent Variables: Academic achievement during adolescence, aggression measured in 8th grade, and dropping out of high school.

Independent Variables: Whether in one of the four groups, i.e., students placed in the transition classroom, students recommended for transition classroom but promoted, retained students, and regularly promoted students.

Other Covariates: N/A.

Methods: ANCOVA and Chi-square tests.

Data: This 12-year longitudinal study collected data from 137 students identified in kindergarten through 2nd grade from a school district in a western region community using achievement test scores, grade point averages, teacher ratings of student behaviors, and school records. Of the 137 students, 47 were placed in a transition 1st-grade classroom; 19 were recommended for a transition classroom but were promoted; 27 were retained in kindergarten, 1st grade, or 2nd grade; and 44 were regularly promoted. Seventy-two out of the 137 students were followed through grade 11, with 26 from the transition classroom group, 12 from the transition-recommended but promoted group, 11 from the retained group, and 23 from the regularly promoted group.

Sample Size: N = 137 students identified in kindergarten through

Findings: The authors found no evidence suggesting benefits of grade retention on academic achievement. Moreover, retained students were found to display more aggression during adolescence and were "five to nine times more likely to dropout, relative to the promoted students" (p. 329).

Academic Achievement: Based on analyses of achievement in grades 4, 5, 8, 9, 10, and 11, promoted students were found to have consistently higher achievement on average than retained students (including students retained in a transition classroom and regularly retained students). Moreover, analyses of 7th-grade achievement revealed that "students recommended for transition room, but promoted, had higher achievement than the students retained in the transition rooms" (p. 328).

Behavioral Outcomes: The authors found that students recommended for a transition classroom but promoted received significantly lower aggression scores in grade 8 than both students retained in a transition classroom and those who were regularly retained. Moreover, regularly retained students received significantly higher aggression scores than the regularly promoted students.

Dropout: At the end of 11th grade, there was a significant difference between retained students (including students retained in a transition classroom and regularly retained students) and promoted students (including

	2nd grade from a school district in a western region community, of which 72 students were followed through grade 11.	students recommended for a transition classroom but promoted and regularly promoted students), indicating that “a greater percentage of the retained students dropped out of high school” (p. 328).
<p>Jimerson, Shane R., Phillip Ferguson, Angela D. Whipple, Gabrielle E. Anderson, and Michael J. Dalton. (2002). “Exploring the Association Between Grade Retention and Dropout: A Longitudinal Study Examining Socio-Emotional, Behavioral, and Achievement Characteristics of Retained Students.” <i>The California School Psychologist</i>, 7, 51–62.</p>		
<p>Research Questions: How do retained students who eventually drop out of school differ from retained students who remain in school in terms of family characteristics, socioemotional and behavioral adjustment, and academic achievement?</p> <p>Dependent Variables: Family characteristics, socioemotional and behavioral characteristics, and academic achievement.</p> <p>Independent Variables: High school status determined in 11th grade by examining the student’s enrollment records.</p> <p>Other Covariates: Scores on standardized tests taken in grade 2.</p>	<p>Methods: T-tests to examine mean differences between the retained students who dropped out and those who remained enrolled in the 11th grade.</p> <p>Data: 102 students retained in kindergarten, 1st, or 2nd grade were followed from kindergarten through 11th grade.</p> <p>Sample Size: N = 102.</p>	<p>Findings: This study examined within-group differences between retained students who stayed in high school and retained students who dropped out of high school. The results suggest that early socioemotional and behavioral characteristics, maternal level of education, and academic achievement in the secondary grades were associated with high school graduation status.</p> <p>Dropout: The authors found significant association between high school status (whether the student remained in school in 11th grade) and mother’s education level, socioemotional and behavioral adjustment (such as low self-esteem and aggression), and academic achievement among retained students. The authors concluded that grade retention did not appear to address the needs of students at risk of academic failure.</p>
<p>Johnson, Eugene R., Kenneth W. Merrell, and Lynn Stover. (1990). “The Effects of Early Grade Retention on the Academic Achievement of Fourth-Grade Students.” <i>Psychology in the Schools</i>, 27(4), 333–338.</p>		
<p>Research Questions: What are the academic effects of grade retention?</p>	<p>Methods: MANOVA and one-way ANOVA.</p>	<p>Findings: The authors concluded that “grade retention as an academic intervention was ineffective” (p. 333).</p>

<p>Dependent Variables: Academic achievement measured by the Metropolitan Achievement Tests administered in the fall of 4th-grade year.</p> <p>Independent Variables: Whether retained in K-1 or in one of the two comparison groups, i.e., recommended for retention but promoted, and regularly promoted.</p> <p>Other Covariates: N/A.</p>	<p>Data: Information on students' promotion status and academic achievement were collected from school records, consultation with administrators and teachers, and students' cumulative files. The sample included 57 4th-grade students, of whom 20 were retained at the K-1 level, 17 were recommended for retention but promoted, and 20 were regularly promoted.</p> <p>Sample Size: N = 57 4th-grade students, with 20 retained at the K-1 level, 17 recommended for retention but promoted, and 20 regularly promoted.</p>	<p>Academic Achievement: The authors reported no significant differences in academic achievement between students who were retained and those who were recommended for retention but promoted in 4th grade. However, both these groups were found to have significantly lower academic achievement than their regularly promoted peers in 4th grade. The authors concluded that grade retention was an ineffective strategy for academic intervention.</p>
<p>Karweit, Nancy L. (1999). <i>Grade Retention: Prevalence, Timing, and Effects</i>. Center for Research on the Education of Students Placed at Risk, Report No. 33.</p>		
<p>Research Questions: What are the correlates of grade retention? What are the effects of grade retention?</p> <p>Dependent Variables: Academic achievement measured by standardized test scores (Comprehensive Test of Basic Skills, or CTBS) in reading and math, social and emotional development, including attention, cooperation, and participation.</p> <p>Independent Variables: Whether</p>	<p>Methods: T-tests to examine mean differences in test scores, social and emotional development, and other covariates, such as demographic variables, family background, and school characteristics. Comparisons between the retained and nonretained students on test scores and socioemotional development were also adjusted for background and demographic factors. Analyses</p>	<p>Findings: This study investigated the correlates and consequences of grade repetition on student academic progress and social and emotional development using the 1st-grade cohort data from the Prospects longitudinal database. Same-age comparisons suggest no benefit to retention, while same-grade comparisons indicate possible benefits to the retained student. While the study found some benefits to students from being retained, overall, such students continue to perform inadequately.</p> <p>Student Characteristics: The author found grade retention to be significantly associated with gender, race/ethnicity, student health, disability, SES background,</p>

<p>retained in grade or not.</p> <p>Other Covariates: Gender, race/ethnicity, family background, and school characteristics.</p>	<p>looked at two types of comparisons, same age and same grade, for three contrasting groups of students: retained students versus all never-retained students; retained students versus all never-retained students, adjusting for factors that influence retention; and retained students versus a low-achieving sample of nonretained children.</p> <p>Data: Prospects, a nationally representative longitudinal database of 1st-, 3rd-, and 7th-grade cohorts. To examine the effects on academic achievement, the study followed students in the 1st-grade cohort of 1991 for their first three years of schooling.</p> <p>Sample Size: N = 7,459, N = 250 for retained group, N = 7,091 for promoted group, N = 118 for low-performing but promoted group.</p>	<p>and school characteristics. Specifically, retained students were more likely to be male, minority, of poor health/with disability, of lower SES background, and from a high-poverty school.</p> <p>Academic Achievement: Whether retention had positive or negative effects depended on the basis of comparison, i.e., whether the same-age comparisons or same-grade comparisons are used. Same-age comparisons suggested no academic benefit to retention, while same-grade comparisons indicated some possible benefits to the retained students. Same-grade comparisons indicated positive academic effects for retention in the year of retention, but the gains decreased in subsequent years. The author concluded that retention did not close the achievement gap and that the retained children were still not performing adequately even after the gains from retention.</p> <p>Socioemotional Outcomes: The author reported that “retained students were less favorably rated by their teachers than were promoted students prior to retention.” These differences in ratings of attention/motivation to learn were consistently reduced after retention (p. 68).</p>
<p>Liddell, Christine, and Gordon Rae. (2001). “Predicting Early Grade Retention: A Longitudinal Investigation of Primary School Progress in a Sample of Rural South African Children.” <i>British Journal of Educational Psychology</i>, 71(3), 413–428.</p>		
<p>Research Questions: Are there factors in the earliest grades that distinguish children who subsequently experience retention from those who</p>	<p>Methods: Logistic regression.</p> <p>Data: A cohort of 2nd graders in South Africa were followed from</p>	<p>Findings: The authors examined the factors in early grades that predict subsequent grade retention among primary school students in South Africa and reported grade 1 academic achievement, caregiver’s education,</p>

<p>progress smoothly through primary school? Can these factors offer guidance for the design of cost-effective early intervention strategies?</p> <p>Dependent Variables: Whether retained at least once during grades 2–6 or not.</p> <p>Independent Variables: Age at school entry, gender, nutritional status, academic achievement in grade 1, cognitive test status at grade 2, teacher assessments of behavior, caregiver’s education, household size, and SES.</p> <p>Other Covariates: N/A.</p>	<p>1994 to 1998.</p> <p>Sample Size: N = 150 children who were enrolled in grade 2 in three primary schools in a remote, mountainous region of KwaZulu Natal in South Africa in 1994.</p>	<p>and cognitive test scores as important predictors.</p> <p>Student Characteristics: The authors found that 1st-grade academic achievement, caregiver’s education, and cognitive test scores were important predictors of subsequent grade retention.</p>
<p>Lorence, Jon, and A. Gary Dworkin. (2004). <i>Grade Retention and School Dropout Behavior in Texas</i>. Paper presented at the annual meeting of the American Sociological Association, San Francisco, CA, August 2004.</p>		
<p>Research Questions: What is the impact of 3rd-grade retention on subsequent school dropout behavior?</p> <p>Dependent Variables: Whether remained in the Texas Public School system between 1996 and 2001.</p> <p>Independent Variables: Whether retained in 3rd grade or not.</p> <p>Other Covariates: Gender, race, special education status, limited English status, economic disadvantage, 1994 TAAS reading test score, and interactions between retention in 3rd</p>	<p>Methods: Logistic regression.</p> <p>Data: Archival data of student-level Texas Assessment of Academic Skills (TAAS) records of students enrolled in 3rd grade in the 1993–1994 school year and failed the TAAS reading test at the end of 3rd grade in 1994.</p> <p>Sample Size: N = 33,988 3rd-grade students, with 1,090 students retained in 3rd grade and 33,088 students who failed the test but promoted to 4th grade.</p>	<p>Findings: The authors concluded that “requiring low-performing 3rd-grade students to repeat the grade does not automatically doom them to dropping out of school” (p. 2).</p> <p>Dropout: The authors found that “requiring students to repeat 3rd grade does not consistently increase the probability of dropping out of public school” (p. 2). Specifically, based on students’ dropout status in 1994 through 2001, 3rd-grade retention was found to significantly increase the likelihood of leaving school during one year in middle school. Moreover, minorities were not adversely affected by grade retention except for one year of middle school.</p>

grade and race.		
Lorence, Jon, and Anthony Gary Dworkin. (2006). "Elementary Grade Retention in Texas and Reading Achievement Among Racial Groups: 1994–2002." <i>Review of Policy Research</i>, 23(5), 999–1033.		
<p>Research Questions: What is the impact of 3rd-grade retention on academic achievement?</p> <p>Dependent Variables: Academic achievement measured by TAAS reading test in years 1994–2002.</p> <p>Independent Variables: Whether retained in 3rd grade or not.</p> <p>Other Covariates: Demographics.</p>	<p>Methods: Multivariate logistic regression was first used to predict the probability of being retained in grade 3 using student demographics, social and economic background, prior achievement, and school-level factors. ANCOVA was then used to compare academic achievement after retention using same-grade comparisons.</p> <p>Data: Third-grade students who failed the May 1994 TAAS reading test were followed from 1994 through 2002 in Texas.</p> <p>Sample Size: N = 38,445 low-achieving 3rd-grade students, with 1,244 students retained in 3rd grade and the rest promoted to 4th grade.</p>	<p>Findings: The authors concluded that "making students repeat a grade, when supplemented with additional educational assistance, can benefit academically challenged children" (p. 999).</p> <p>Student Characteristics: Third-grade retention was found to be associated with gender, race, age, and economic status. Specifically, "minority students and males are more likely to be retained" (p. 1012). "Academically challenged 3rd graders who are economically disadvantaged, as well as those and who are younger than their classmates, have a greater probability of being held back" (p. 1012). Moreover, several school-level factors were also found to be significantly associated with grade retention.</p> <p>Academic Achievement: Using same-grade comparisons, the authors found that retained students performed significantly better on 3rd-grade achievement tests in reading than their promoted low-achieving peers after retention. This positive effect was found to persist over time, although the differences "were not as pronounced in 8th and 10th grade" (pp. 1017–1021). Moreover, "retention in 3rd grade benefited low-performing readers regardless of race" (p. 999).</p>
Lorence, Jon, A. Gary Dworkin, Laurence A. Toenjes, and Antwanette N. Hill. (2002). "Grade Retention and Social Promotion in Texas 1994–99: Academic Achievement Among Elementary School Students." In Diane Ravitch (Ed.), <i>Brookings Papers on Education Policy 2002</i> (pp. 13–67). Washington, DC: Brookings Institution Press.		

<p>Research Questions: What are the effects of retention on academic achievement among elementary school students?</p> <p>Dependent Variables: Academic achievement measured by standardized test scores on reading, i.e., TAAS, and Texas Learning Index.</p> <p>Independent Variables: Whether retained in 3rd grade or not.</p> <p>Other Covariates: Gender, parent education, free-lunch eligibility, socioeconomic status at the school level (i.e., the proportion of children in the school attendance area from low-income families), total years of participation in the Chicago study, early-adjustment indicators, and intervening and school-based factors.</p>	<p>Methods: This study used a variation of nonequivalent control-group design: The treatment group was 1994 3rd graders with reading scores below 70 and consequently retained; the control group was 1994 3rd graders with reading scores below 70 but socially promoted; the pretest measure was the reading score obtained in the spring of 1994 at the end of 3rd grade; test scores from 1995 to 1999 provided multiple time points for post-test comparisons between the two groups. The study also looked at two other groups: students with scores above 70 and retained and students with scores above 70 and promoted. Considerations of regression artifacts and adjustment for sociodemographic differences were also discussed.</p> <p>Data: This study was based on archival data supplied by the Texas Education Agency, consisting of anonymous student-level TAAS records of every student in the tested grades between 1994 and 1999. It followed 159,218 3rd graders in 1994 for six years, until 1999.</p>	<p>Findings: This study examined whether children who are retained in grade are harmed by this policy as compared to those who experienced social promotion. The authors reported a positive effect of retention on academic achievement.</p> <p>Student Characteristics: The authors compared the demographic composition of retained students with low-achieving but socially promoted students and found that retained students were more likely to be male, African American, and economically disadvantaged.</p> <p>Academic Achievement: The overall findings suggest that retaining low-performing 3rd-grade students in grade for an additional year was not harmful to their later academic performance. The authors reported positive effects of retention on academic performance. Specifically, after controlling for initial differences, retained students had higher reading scores than socially promoted students in the following six years. Moreover, retention appeared to help low-achieving students pass the state reading examination more quickly than socially promoted students. Although the positive impact of retention appeared to decrease over time, the authors found that “in contrast to some previous studies, the gains in learning achieved during the year of retention did not completely dissipate after several years” (p. 43).</p>
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	<p>Sample Size: N = 159,218 3rd graders in 1994 in Texas, including N = 781 retained students (who failed the TAAS), N = 30,140 low-achieving but promoted students (i.e., those who failed the TAAS but were promoted), N = 329 promoted students who passed the TAAS, and N = 127,968 promoted students who passed the TAAS.</p>	
<p>Luppescu, Stuart, Anthony S. Bryk, Paul Deabster, John Q. Easton, and Yeow M. Thum. (1995). <i>School Reform, Retention Policy, and Student Achievement Gains</i>. Chicago, IL: Consortium on Chicago School Research.</p>		
<p>Research Questions: What are the effects of grade retention on academic achievement?</p> <p>Dependent Variables: Academic achievement measured by gains on standardized tests in reading and math.</p> <p>Independent Variables: Whether in one of the four groups.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Propensity for each student in years 1988–1992 was predicted based on logistic regression using 1987–1988 data with retention as the outcome and academic and demographic factors as the predictors. Students were then categorized into two groups: top retention category and not top retention category. Within each group, students were further classified based on whether they were actually retained or not. Comparisons of gains on achievement test scores were compared among the four groups.</p> <p>Data: Data on student demographics and achievement</p>	<p>Findings: The authors used a propensity-for-retention measure to match retained students with promoted peers and to compare achievement gains made by students in the two groups. They found that promoted students made larger gains than retained students with the same propensity for retention.</p> <p>Academic Achievement: The authors found that promoted students made larger gains in achievement test scores than retained students.</p>

	<p>test scores measured by the ITBS were collected for students enrolled in grades 1–8 in CPS from 1987 to 1992.</p> <p>Sample Size: Not reported.</p>	
<p>Mantzicopoulos, Panayota Y. (1997). "Do Certain Groups of Children Profit from Early Retention? A Follow-Up Study of Kindergartners with Attention Problems." <i>Psychology in the Schools</i>, 34(2), 115–127.</p>		
<p>Research Questions: What are the long-term effects of early retention on academic and behavioral outcomes for a subgroup of kindergarten children with attention problems?</p> <p>Dependent Variables: Academic achievement measured by standardized tests in reading and math; behavior problems measured by teacher ratings using Revised Behavior Problem Checklist, including attention problem, conduct problems, anxiety withdrawal, motor excess, and psychotic behavior.</p> <p>Independent Variables: Whether retained in kindergarten or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Multivariate ANCOVAs for both same-age and same-grade comparisons.</p> <p>Data: Forty children with high inattention were selected from a sample of 62 kindergarten children of a suburban area in Northern California. The 62 children were matched at kindergarten on cohort, school, sex, age, at-risk status, reading achievement, and math achievement. The 40 selected children were rated by their kindergarten teachers above the 75th percentile on the Attention Problems scale of the Revised Behavior Problem Checklist.</p> <p>Sample Size: N = 40 kindergarten children with attention problems, N = 25 in retained group, N = 15 in promoted group.</p>	<p>Findings: The author concluded that the results "do not support the notion that pre-elementary school retention is a beneficial educational intervention for children" with attention problem (p. 115).</p> <p>Academic Achievement: Both same-grade and same-age comparisons found significantly better performance in math achievement for the retained students at the end of grades 1 and 2. But neither comparison found a significant difference in reading achievement between the retained and promoted students.</p> <p>Behavioral Outcomes: In general, children with high inattention did not improve in terms of their behaviors as a result of repeating the kindergarten curriculum. No significant difference was found between retained and promoted students on attention problems, anxiety withdrawal, and psychotic behavior in the same-grade comparison. A significant difference was found on problem conduct in the same-grade comparison.</p>

<p>Mantzicopoulos, Panayota Y., and Delmont C. Morrison. (1992). "Kindergarten Retention: Academic and Behavioral Outcomes Through the End of Second Grade." <i>American Educational Research Journal</i>, 29(1), 182-198.</p>		
<p>Research Questions: What are the academic and behavioral effects of retention in kindergarten?</p> <p>Dependent Variables: Academic achievement measured by standardized tests in reading and math and behavioral outcomes measured by teacher ratings using the Revised Behavior Problem Checklist.</p> <p>Independent Variables: Whether retained in kindergarten or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: F-test using both same-age and same-grade comparisons.</p> <p>Data: Fifty-three children retained in kindergarten were selected from two school districts in California and followed from kindergarten to grade 2. Retained children were matched at kindergarten to 53 promoted peers on cohort, school, sex, age, at-risk status, reading achievement, and math achievement.</p> <p>Sample Size: N = 106 children, with 53 retained and 53 promoted.</p>	<p>Findings: Using a three-year longitudinal study of kindergarten children, the authors found an academic advantage for the retained students during the year of retention, but this advantage was not maintained past kindergarten.</p> <p>Academic Achievement: Both same-age and same-grade comparisons found that retained students performed significantly better than promoted children after the year of retention. However, the gains disappeared in the following years.</p> <p>Behavioral Outcomes: Retained students were "rated by their teachers as demonstrating significantly more immature behaviors and attention problems than their same-age promoted peers during their first year in kindergarten" (p. 192). However, this initial difference faded and no significant difference was found between the two groups in subsequent years. The authors concluded that "the significant drop in attention problems manifested by the retained group later on was difficult to interpret" (p. 192) and that more research is needed.</p>
<p>Mantzicopoulos, Panayota Y., Delmont C. Morrison, Stephen P. Hinshaw, and Estol T. Carte. (1989). "Nonpromotion in Kindergarten: The Role of Cognitive, Perceptual, Visual-Motor, Behavioral, Achievement, Socioeconomic, and Demographic Characteristics." <i>American Educational Research Journal</i>, 26(1), 107-21.</p>		
<p>Research Questions: What are the characteristics of children retained in kindergarten? What are the predicting factors?</p>	<p>Methods: Discriminant analysis and forward stepwise selection.</p> <p>Data: 68 children were selected from the 1986 cohort of</p>	<p>Findings: The authors reported that perceptual problems, inattention, age, pre-academic reading achievement, and sex were factors that provided the most differentiation between retained and promoted students at the end of</p>

<p>Dependent Variables: Whether retained in kindergarten or not.</p> <p>Independent Variables: Demographics, pre-academic achievement, and behavior problems.</p> <p>Other Covariates: N/A.</p>	<p>kindergarten children in four school districts in Northern California.</p> <p>Sample Size: N = 68 kindergarten children, N = 34 in retained group, N = 34 in promoted group.</p>	<p>kindergarten.</p> <p>Student Characteristics: The authors found that retained students were more likely to be male, of younger age, and of lower SES. They had lower IQs, scored lower on pre-academic achievement tests, and demonstrated increased problems in the areas of visual-motor integration, perceptual organization, and behavior.</p>
<p>Marcon, Rebecca A. (1993). <i>At-Risk Preschoolers: Early Predictors of Future Grade Retention</i>. Paper presented at the Annual Meeting of the Southeastern Psychological Association, Atlanta, GA, March 1993.</p>		
<p>Research Questions: What are the early predictors of grade retention?</p> <p>Dependent Variables: Whether retained in grades K–3 and 5 or not.</p> <p>Independent Variables: Demographics, behavioral outcomes, and academic factors.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Stepwise regression analysis.</p> <p>Data: Information on children’s academic progress, behavioral development, social indicators, parental involvement during children’s first three years of school, type of pre-kindergarten and kindergarten experience, and demographics were collected.</p> <p>Sample Size: N = 138 children enrolled in 63 public schools in Washington, DC.</p>	<p>Findings: The author found that grade retention was associated with reading and language skills, verbal performance, and parental involvement.</p> <p>Student Characteristics: The author found a significant association between reading and language skills in grade 1 and grade retention prior to grade 3, between parental involvement during kindergarten and grade retention prior to grade 3, and between verbal performance during the 5th year in school and grade retention at the end of the 5th year.</p>
<p>Matsudaira, Jordan D. (2008). “Mandatory Summer School and Student Achievement.” <i>Journal of Econometrics</i>, 142(2), 829–850.³</p>		
<p>Research Questions: What are the effects of summer school attendance on</p>	<p>Methods: RD design using test scores in reading and math as an</p>	<p>Findings: The author examined the academic effects of mandatory summer school, a component of grade retention</p>

³ We do not include this paper in our count of studies examining grade retention because it did not estimate the effects of grade retention directly. Rather, it examined the academic effects of summer school, which is one component of the test-based promotion policy in the school district being examined.

<p>math and reading achievement outcomes?</p> <p>Dependent Variables: Reading and math achievement measured by standardized test scores.</p> <p>Independent Variables: Whether just below or above the cutoff test score for summer school attendance.</p> <p>Other Covariates: Demographic and SES variables.</p>	<p>instrument for the probability of attending summer school.</p> <p>Data: Individual-level data for all students in grades 3–7 whose achievement outcomes were measured on both math and reading exams in the springs of 2001 (baseline year) and 2002 (outcomes year) in a large urban school district in the Northeast.</p> <p>Sample Size: N = 338,608 students in grades 3–7.</p>	<p>policy in a large urban school district in the Northeast. He found that summer school attendance has, on average, a positive effect on both reading and math achievement. Specifically, the author reported “an average effect of about .12 standard deviations for both math and reading achievement” (p. 829). This average masks considerable heterogeneity, with measured impacts of summer school ranging from “a low of –.03 standard deviation for 3rd graders in math summer school, to .24 standard deviations for 5th graders for math” (p. 848).</p>
<p>McCoy, Ann R., and Arthur J. Reynolds. (1999). “Grade Retention and School Performance: An Extended Investigation.” <i>Journal of School Psychology, 37(3), 273–298.</i></p>		
<p>Research Questions: What are the predictors of grade retention? What are the effects of retention on school achievement, perceived school competence, and delinquency?</p> <p>Dependent Variables: Academic achievement measured by standardized test scores (ITBS) in reading and math, perceived school competence measured at age 12 (or in 1992) using a 12-item scale of school self-concept, and school-reported delinquency equal to 1 if having problem, illicit, or illegal behavior during ages 13–14 and equal to 0 otherwise.</p> <p>Independent Variables: Whether</p>	<p>Methods: Same-age comparison (retained children in grade 7 vs. promoted children in grade 8) and same-grade comparison (retained children in grade 7 vs. promoted children in grade 7) were used. Hierarchical multiple regressions were used to estimate the effects of grade retention on academic achievement and perceived school competence with the following order of entry: grade retention, sociodemographic factors, early adjustment indicators, and intervening, school-based factors. Logistic regression was used to estimate the effects of retention on</p>	<p>Findings: This study examined the predictors of grade retention, as well as the effects of retention on school achievement, perceived school competence, and delinquency among a sample of 1,164 low-income, minority children up to age 14.</p> <p>Student Characteristics: The authors reported early school performance, gender, parental participation in school, and the number of school moves to be the strongest predictors of grade retention.</p> <p>Academic Achievement: The authors concluded that “grade retention was significantly associated with lower reading and mathematics achievement at age 14, above and beyond an extensive set of explanatory variables” (p. 273). Same-age comparison yielded larger negative effects of retention on academic achievement than did same-grade comparison.</p>

<p>ever retained in grades 1–7 or not.</p> <p>Other Covariates: Gender, parent education, free-lunch eligibility, SES at the school level (i.e., the proportion of children in the school attendance area from low-income families), total years of participation in the Chicago study, early adjustment indicators, and intervening and school-based factors.</p>	<p>delinquency.</p> <p>Data: Data were collected for the Chicago Longitudinal Study, which included a sample of 1,164 low-income, mostly black children who were enrolled in CPS at age 14 in the spring of 1994.</p> <p>Sample Size: N = 1,164 low-income children who were enrolled in CPS at age 14 during the spring of 1994.</p>	<p>Socioemotional Outcomes: Grade retention did not appear to be related to perceived school competence at age 12.</p> <p>Behavioral Outcomes: Grade retention did not appear to be related to delinquency infractions at age 14.</p>
<p>Meisels, Samuel J., and Fong-Ruey Liaw. (1993). "Failure in Grade: Do Retained Students Catch Up?" <i>Journal of Educational Research</i>, 87(2), 69–77.</p>		
<p>Research Questions: What are the characteristics of retained students in comparison with promoted students? What are the effects of grade retention on academic and personal-social outcomes? Is timing of retention associated with academic and personal-social outcomes?</p> <p>Dependent Variables: Grades, composite test scores, learning problems, special education placement, and emotional and behavioral problems.</p> <p>Independent Variables: Whether ever retained in grades K–8 or not, whether retained in grades K–3 or in grades 4–8.</p>	<p>Methods: This study examined retention in kindergarten through grade 8 using data from NELS (1988). Multiple regressions were used for numerical outcome measures (i.e., grades and composite test scores) and logistic regressions were used for dichotomous outcome measures (i.e., learning problems, emotional and behavioral problems, and special education placement). Two sub-analyses were conducted: students retained in grades K–3 versus students retained in grades 4–8, and students retained in grades K–8 with the nonretained</p>	<p>Findings: The authors concluded that, in general, retained students showed a disadvantage compared to their nonretained counterparts on 8th-grade outcomes, including school performance and emotional and behavioral outcomes.</p> <p>Student Characteristics: Boys, minorities, and low-SES students were more likely to be retained, and the timing of retention was not "uniformly associated with superior performance" (p. 69).</p> <p>Academic Achievement: The authors found that retained students showed significantly lower grades and test scores than never-retained students after controlling for covariates such as gender, race, SES, and maternal education. Moreover, retention appeared to have "increased the likelihood of having learning problems and special education placement" (p. 74). The comparison between early retention (retained in grades K–3) and later</p>

<p>Other Covariates: Gender, race/ethnicity, SES, and mother's education.</p>	<p>students.</p> <p>Data: NELS base-year (1988) dataset.</p> <p>Sample Size: N = 16,623 students.</p>	<p>retention (retained in grades 4–8) showed no statistical difference on test scores and parent-reported learning problems. However, early retention was found to be associated with higher grades as compared to later retention.</p> <p>Socioemotional Outcomes: The authors reported fewer emotional problems for the nonretained students than the retained students. The comparison between early retention (retained in grades K–3) and later retention (retained in grades 4–8) showed no statistical difference on parent-reported emotional problems.</p> <p>Behavioral Outcomes: The authors reported fewer behavioral problems for the nonretained students than the retained students. Early retention (retained in grades K–3) was found to be associated with fewer behavior problems as compared to later retention (retained in grades 4–8).</p>
<p>Moller, Stephanie, Elizabeth Stearns, Judith R. Blau, and Kenneth C. Land. (2006). "Smooth and Rough Roads to Academic Achievement: Retention and Race/Class Disparities in High School." <i>Social Science Research</i>, 35(1), 157–180.</p>		
<p>Research Questions: What is the relationship between grade retention and achievement trajectories?</p> <p>Dependent Variables: Academic achievement measured by reading and math standardized test scores.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: Gender, race (black or white), SES, dropout status,</p>	<p>Methods: Growth modeling.</p> <p>Data: NELS, 1988–1992.</p> <p>Sample Size: N = 9,045 black and white high school students.</p>	<p>Findings: The authors examined the relationship between grade retention and achievement trajectories, and found that "retention is one of the strongest predictors of both initial scores and rates of growth" (p. 167).</p> <p>Academic Achievement: The authors reported retention as "one of the strongest predictors of both initial scores and rates of growth" (p. 167). Specifically, students retained prior to the 8th grade had "initial achievement scores 5.09 points lower than normally promoted students" (pp. 167–169), and retained students were found to have fewer gains in achievement than normally promoted</p>

<p>prior achievement, school sector, whether or not in two-parent household, and whether living with a step-parent.</p>		<p>students. Moreover, poor white retained students were found to be “particularly disadvantaged by experiences with retention” (p. 158).</p>
<p>Nagaoka, Jenny, and Melissa Roderick. (2004). <i>Ending Social Promotion: The Effects of Retention</i>. Chicago, IL: Consortium on Chicago School Research.</p>		
<p>Research Questions: What happened to retained students during their retained year in terms of academic achievement? Did retention and other related experiences of retained students ultimately benefit or harm their academic achievement?</p> <p>Dependent Variables: Reading achievement measured by ITBS reading scores.</p> <p>Independent Variables: Whether just below or above the test-score cutoff for retention.</p> <p>Other Covariates: Demographics.</p>	<p>Methods: Growth-curve analyses estimated in three-level hierarchical linear models were used for the comparison of students who scored just below and just above the cutoff, regardless of promotion or retention status, and the comparison of students with different post-gate experience (i.e., comparisons were made among five subgroups of retained students: students promoted after the Summer Bridge program, students retained and who remained one year behind their peers, students retained but who rejoined their peers at some point during the next year, students placed in special education, and students retained a second time). Two-stage probit least squares were used to estimate the probability of retention and to use the predicted probability of retention as a base for estimating achievement effects of retention.</p> <p>Data: Data were collected from</p>	<p>Findings: This study evaluated the experiences of 3rd-, 6th- and 8th-grade students who faced the promotional cutoffs in the 1997–1998 to 1999–2000 school years. The effects of retention on achievement growth were examined using 3rd and 6th graders who were retained in 1998 and 1999.</p> <p>Academic Achievement: In 3rd grade, the predominantly retained group (i.e., students who scored just below the cutoff and the majority of whom were retained) showed slightly more gains in reading achievement than their low-achieving counterparts (i.e., students who scored just above the cutoff and the majority of whom were promoted). However, such gains were short-lived and no significant difference was found in the reading achievement between the predominantly retained and promoted students two years after the initial promotion or retention decision. The authors concluded that “there was little evidence that students in the predominantly retained group did better” (p. 36). In the 6th grade, retained students were found to have lower achievement growth than their low-achieving but promoted counterparts, with that effect remaining two years after the initial promotion or retention decision. Moreover, the authors reported that “fewer than 60 percent of retained 3rd and 6th graders in 1998 and 1999 were able to raise their test score to the promotional</p>

	<p>CPS student administrative data and ITBS test scores. All 3rd-, 6th-, and 8th-grade students who faced the promotional cutoffs in the 1997–1998 to 1999–2000 school years were followed for two years. Only 3rd and 6th graders who were just below or above the promotion cutoffs in 1998 and 1999 were included in the examination of retention effects on achievement growth.</p> <p>Sample Size: N = 15,229 students who were just above or below the cutoff scores, including 10,169 3rd graders and 5,060 6th graders.</p>	<p>cutoff” and that nearly “20 percent of retained 3rd and 6th graders were placed in special education within two years of initial retention decision” (p. 4). The authors concluded that the answer to the question of whether retaining low-achieving students helps is definitely no. “In the 3rd grade, there is no evidence that retention led to greater achievement growth two years after the promotional gate, and in the 6th grade, we find significant evidence that retention was associated with lower achievement growth. There is also evidence that retaining students under CPS’s promotional policy significantly increased the likelihood of placement in special education” (p. 52). They pointed out earlier identification of learning problems as an effective alternative to grade retention policy supported by their research.</p>
<p>Nagin, Daniel S., Linda Pagani, Richard E. Tremblay, and Frank Vitaro. (2003). “Life Course Turning Points: The Effect of Grade Retention on Physical Aggression.” <i>Development and Psychopathology</i>, 15, 343–361.</p>		
<p>Research Questions: What is the impact of a life-turning event—grade retention—on the life course of physical aggression? Does this impact vary according to the age at which this turning point occurs?</p> <p>Dependent Variables: Teacher-rated aggression and self-reported aggression.</p> <p>Independent Variables: Whether retained between ages 13 and 15 or</p>	<p>Methods: Difference in difference analysis and likelihood ratio tests were used. Boys were grouped into four trajectory groups based on the probabilities of group membership given their history of physical aggression: a low-trajectory group, moderate-decline-trajectory group, high-decline-trajectory group, and chronic-trajectory group.</p> <p>Data: A sample 1,037 boys from</p>	<p>Findings: The authors found a significant negative impact of grade retention on children’s physical aggression. However, the evidence on whether the timing of retention affects physical aggression is less clear.</p> <p>Behavioral Outcomes: The authors found that “the influence of grade retention depends on the developmental course of physical aggression” (p. 357). Specifically, retention was found to significantly increase the physical aggression of children in the moderate-decline- and high-decline-trajectory groups, while no significant impact was found in the low and chronic groups. The authors concluded that their finding of</p>

<p>not.</p> <p>Other Covariates: Six psychosocial characteristics, including low IQ, high prosociality, high inattention, teenage mother, low maternal education, and household not intact at age 6.</p>	<p>the lowest socioeconomic areas in Montreal, Canada, were followed from kindergarten to age 15. Information on demographics, parental and family characteristics, teacher-rated aggression, self-reported delinquency, and intellectual assessment were collected using interviews, teacher questionnaire, student questionnaire, and school records.</p> <p>Sample Size: N = 1,037 Caucasian, French-speaking boys who were enrolled in kindergarten in 1984 in 53 French-language elementary schools in the lowest socioeconomic areas in Montreal, Canada.</p>	<p>significant negative impact of grade retention on physical aggression of children comprising 80% of the sample questions the effectiveness of this educational intervention. However, the evidence on whether the timing of retention affects physical aggression is less clear.</p>
<p>Niklason, Lucille B. (1987). "Do Certain Groups of Children Profit from a Grade Retention?" <i>Psychology in the Schools</i>, 24(4), 339–345.</p>		
<p>Research Questions: Is grade retention beneficial for children if supplementary academic instruction is provided? Is retention beneficial if the children are average or above in intelligence? Is retention beneficial if it occurs in kindergarten or 1st grade?</p> <p>Dependent Variables: Academic achievement in reading and arithmetic measured by Wide Range Achievement Test, personal and social adjustment</p>	<p>Methods: ANCOVA was used. Children were grouped by four classification variables: retention status (retained vs. promoted), district (with one district providing a special remediation program for retained students), ability (high ability vs. low ability), and grade level (grades K–1 vs. grades 2–6).</p> <p>Data: 102 children recommended for retention in spring 1980 were</p>	<p>Findings: The author did not find significant effects on personal and social adjustment and concluded that "retention was not found to benefit the subgroups of children" (p. 339).</p> <p>Academic Achievement: The author found that promoted students made more progress in reading than retained students the following year and that none of the subgroups showed positive effects. In addition, no significant result was found for the district using a remediation program (i.e., a basic skills academic program held after regular school hours) for its retained students.</p>

<p>measured by California Test of Personality administered twice to students.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: Scores measured at the baseline.</p>	<p>followed for one year. Information on demographics, academic achievement in reading and mathematics, and growth in personal and social adjustment were collected in spring 1980 and spring 1981.</p> <p>Sample Size: N = 102 children, with 40 retained children and 62 promoted children.</p>	<p>The author concluded that “the remediation program used with the retained students in one district was not effective in helping them achieve greater academic progress the following year than did their low-achieving, promoted classmates” (p. 343).</p> <p>Socioemotional Outcomes: The author found no statistically significant results for personal and social adjustment.</p>
<p>Ou, Suh-Ruu, and Arthur J. Reynolds. (2008). “Predictors of Educational Attainment in the Chicago Longitudinal Study.” <i>School Psychology Quarterly</i>, 23(2), 199–229.</p>		
<p>Research Questions: What are the child, family, and school-related predictors of educational attainment by age 20? How well does the explanatory model account for different measures of educational attainment?</p> <p>Dependent Variables: Years of completed education, high school completion (i.e., completed secondary education with an official diploma or awarded a General Education Development (GED) credential), high school graduation (i.e., completed secondary education with an official diploma).</p> <p>Independent Variables: Sociodemographic factors, Child-Parent Center program participation, early</p>	<p>Methods: Multiple linear regression was used for the analysis of years of completed education. Hierarchical logistic regressions were used for the analysis of high school completion and graduation.</p> <p>Data: Data were from the ongoing 20-year Chicago Longitudinal Study. Participant surveys and administrative records were used to collect information on educational and family experiences as well as demographic attributes from birth to high school.</p> <p>Sample Size: N = 1,286 youth from low-income, minority families in high-poverty neighborhoods.</p>	<p>Findings: While grade retention was not the focus of this study, the authors found that retention was one of the strongest factors that predicted years of completed education, high school completion, and high school graduation.</p> <p>Dropout: The authors found that “grade retention between ages 10 and 14 [was] associated with fewer years of completed education” (p. 211). Retention was also found to be significantly associated with a lower rate of high school completion. In addition, “relative to continuously promoted students, those retained between 4th and 8th grades had a 52% lower probability of graduation” (p. 216). The authors concluded that grade retention was one of the strongest predictors of educational attainment.</p>

<p>adjustment indicators, school commitment, intervening school-based factors (including grade retention), and high school experience.</p> <p>Other Covariates: N/A.</p>		
<p>Pagani, Linda, Richard E. Tremblay, Frank Vitaro, Bernard Boulerice, and Pierre McDuff. (2001). "Effects of Grade Retention on Academic Performance and Behavioral Development." <i>Development and Psychopathology</i>, 13(2), 297–315.</p>		
<p>Research Questions: What is the impact of grade retention during primary school on subsequent academic performance and behavioral development until age 12?</p> <p>Dependent Variables: Academic achievement, disruptive behavior, anxious behavior, inattentive behavior, and prosocial behavior.</p> <p>Independent Variables: Whether retained in grades K–6 or not.</p> <p>Other Covariates: Gender, maternal education, age at birth of target child, and kindergarten inattentiveness.</p>	<p>Methods: Autoregressive modeling.</p> <p>Data: Data were from the Quebec Longitudinal Study of Kindergarten Children. Children were followed from the end of kindergarten to the beginning of adolescence. Teachers and parents were asked to complete Social Behavioral Questionnaire to rate children’s behavior at ages 6, 8, 10, and 12.</p> <p>Sample Size: N = 1,830 children attending kindergarten in French-speaking public elementary schools in Quebec, Canada.</p>	<p>Findings: The authors concluded that grade retention had significant negative consequences for academic performance, disruptive behavior, anxiety, and inattentiveness. In some cases, these effects were found to be long-lasting.</p> <p>Academic Achievement: The authors reported a “dramatic and long-lasting” (p. 310) negative impact of grade retention on both learning outcomes and disruptiveness for boys. For girls, retention was found to have a negative impact on academic performance in the short run, and the negative effect of retention in early grades seemed to remain strong in the long run.</p> <p>Behavioral Outcomes: The authors found that “children’s anxious, inattentive, and disruptive behaviors persisted and, in some cases, worsened after grade retention” (p. 297). Moreover, the association between retention and negative behavioral outcomes were long-lasting and more pronounced when grade retention occurred early in primary school. However, children’s prosocial behavior was found to be unaffected by retention.</p>

Peterson, Sarah E., James S. DeGracie, and Carol R. Ayabe. (1987). "A Longitudinal Study of the Effects of Retention/Promotion on Academic Achievement." *American Educational Research Journal*, 24(1), 107-118.

Research Questions: What is the impact of retention on the academic achievement of elementary students three years after retention? How do retainees compare to their same-age nonretained peers academically in the same year (i.e., retainees were a grade behind and took the lower-level test)? How do retainees perform on a given grade level test in comparison with their same-age nonretained peers (i.e., retainees have then had an extra year of school)?

Dependent Variables: Reading, language, and math scores on the CAT.

Independent Variables: Whether retained in grades 1-3.

Other Covariates: Gender, ethnicity, chronological age, and total reading, total language, and total math scores from the spring 1981 CAT.

Methods: MANOVA with group (retained vs. promoted) as a between-subjects variable and year of test (1982, 1983, and 1984) or grade at the time of test as a within-subjects variable. Three analyses were conducted for each grade level with reading, language, and math scores as the dependent variables.

Data: The sample of retained students was identified from 1st, 2nd, and 3rd graders who were retained at the end of the 1980-1981 school year in the Mesa Public Schools in California. Then, the comparison group of promoted students was matched on gender, ethnicity, chronological age, and total reading, total language, and total math scores on the spring 1981 CAT.

Sample Size: N = 210 students in grades 1-3, including 106 retained students (65 retained in grade 1, 26 retained in grade 2, and 15 retained in grade 3) and 104 promoted students (63 from grade 1, 26 from grade 2, and 15

Findings: This study followed students for three years after retention to assess the academic effect of retention on elementary students.

Academic Achievement: Same-year comparison showed significantly higher scores in reading and math for both 1st- and 2nd-grade retainees as compared to their promoted peers, although no statistical significance was found for 3rd-grade retainees. Retained students lost their advantage by the end of their third year after retention. Same-grade comparisons indicated more sustained gains from retention among 2nd- and 3rd-grade retainees.

	from grade 3).	
<p>Pianta, Robert C., Phillip J. Tietohl, and Elizabeth M. Bennett. (1997). "Differences in Social Adjustment and Classroom Behavior Between Children Retained in Kindergarten and Groups of Age and Grade Matched Peers." <i>Early Education and Development</i>, 8(2), 137-152.</p>		
<p>Research Questions: What are the effects of retention in kindergarten on teacher ratings of classroom adjustment?</p> <p>Dependent Variables: Students' classroom adjustment measured by Teacher Child Rating Scale.</p> <p>Independent Variables: Whether retained in kindergarten or not.</p> <p>Other Covariates: Achievement prior to kindergarten entry measured by the Stanford Binet Vocabulary section, and mother's education.</p>	<p>Methods: ANOVA.</p> <p>Data: An initial sample of 426 students was followed from Fall 1987 (i.e., entry of kindergarten) to spring 1990. Both same-age analysis and same-grade analysis were used to compare a group of students selected for retention in kindergarten during the 1987-1988 school year with two matched control groups: the group selected from the 1987-1988 school year that was promoted to 1st grade, and the group that was in kindergarten for the first time when the retained group was repeating kindergarten in the 1988-1989 school year.</p> <p>Sample Size: N = 426 children from a single, small-city school system in the Southeast.</p>	<p>Findings: The authors found that "over time, retained children, initially more poorly adjusted than age or grade mates, came to resemble both of these groups with respect to behavior problems, when matched on key variables" (p. 148).</p> <p>Socioemotional Outcomes: Retained children showed slightly increased competence for task orientation over time. However, "retention had not improved these competencies to the level of the peer groups" (p. 149), and retained children still demonstrated lower tolerance for frustration and poorer work habits than the promoted peers by the end of 1st grade.</p> <p>Behavioral Outcomes: Retained children were found to show a reduction in behavior problems, particularly acting out and shy-anxious behaviors. Specifically, "by the end of 1st grade, retained children were not viewed by teachers as having more behavior problems than their age or grade mate matched comparison groups" (p. 149), indicating one more year in kindergarten "was associated with reductions in behavior problems" (p. 149).</p>
<p>Pierson, Louisa H., and James P. Connell. (1992). "Effect of Grade Retention on Self-System Processes, School Engagement, and Academic Performance." <i>Journal of Educational Psychology</i>, 84(3), 300-307.</p>		
<p>Research Questions: What are the effects of grade retention on student outcomes including academic</p>	<p>Methods: The retained students (N = 74) were compared with three nonretained comparison</p>	<p>Findings: The authors found that retained students did not perform as well academically as the random sample but performed just as well as the matched-ability sample and</p>

<p>achievement, student engagement, and self-system processes?</p> <p>Dependent Variables: Perceived self-worth, perceived relatedness to peers, and perceived cognitive competence measured with the Rochester Assessment Package for Schools, academic performance measured with a composite score computed based on report card grades and standardized test scores, and student engagement measured with teachers' report card ratings of student effort.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: N/A.</p>	<p>groups: a randomly selected comparison group (N = 60, referred to as the random sample), a nonretained control group matched on current intellectual ability (N = 69, referred to as the matched ability group), and a nonretained control group matched on classroom achievement at the time of retention (N = 35, referred to as socially promoted group). Group-administered IQ tests were used to match retained students to nonretained students on a basic ability dimension to select the matched ability group. Report card grades and teacher recommendations for retention were used to match students on the degree of difficulty experienced at the time of retention to select the socially promoted group. MANOVA was used to test the overall difference among the four groups, and univariate ANOVA was used to identify overall group difference on each dependent variable. Then the authors conducted three comparisons between the retained group and the three comparison groups on each of the dependent variables.</p>	<p>better than the socially promoted sample. The retained sample's effort grades were significantly lower than the random sample's but no different from those of the other samples. Retained students did not differ significantly from the comparison groups in perceptions of self-worth or peer relatedness but had significantly lower perceptions of cognitive competence than the random sample.</p> <p>Academic Achievement: Retained students performed better academically than the socially promoted group two or more years after retention. The retained group was found to perform as well as the matched-ability group. However, retained students did not perform as well as students of the randomly selected sample.</p> <p>Socioemotional Outcomes: In terms of student attitudes, retained students were found to exert less effort than the randomly selected nonretained group based on teachers' report card ratings. But no statistically significant difference was found on the student effort level between the retained group and the other two comparison groups. In terms of socioemotional outcomes, the authors reported that retained students did not differ significantly from the comparison groups in perceptions of self-worth or peer relatedness but had significantly lower perceptions of cognitive competence than the random sample (p. 306). Retention in the early years of elementary school appeared not to be harmful to general self-worth or to perceived relatedness to peers.</p>
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	<p>Data: Subjects were chosen from grades 3–6 in two school districts in upstate New York that serve about 12,000 students. The study used the Rochester Assessment Package for Schools to assess students’ self-system processes, a composite score based on report card grades and standardized test scores to measure academic performance, and teachers’ report card ratings to measure student engagement.</p> <p>Sample Size: N = 238 students.</p>	
<p>Plummer, Diane L., and William G. Graziano. (1987). “Impact of Grade Retention on the Social Development of Elementary School Children.” <i>Developmental Psychology</i>, 23(2), 267–275.</p>		
<p>Research Questions: How does peer discrimination contribute to the effects of grade retention on children’s socioemotional development?</p> <p>Dependent Variables: Peer discrimination, self-esteem, and academic achievement.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Interviews and t-tests. Each child was interviewed individually by a same-gender experimenter who was blind to the child’s retention status.</p> <p>Data: The sample consisted of 219 2nd and 5th graders who attended a consolidated countywide elementary school in northeast Georgia.</p> <p>Sample Size: N = 219 children in grades 2 to 5.</p>	<p>Findings: This study explored the hypotheses that peer discrimination may be one factor contributing to the negative effects of grade retention reported in the previous literature. The authors reported the existence of evidence for peer discrimination against retained children, but effects were moderated by age, gender, relative physical size, and retention status of the rater.</p> <p>Academic Achievement: The retained students were found to have significantly lower standardized test scores on both reading and math than the nonretained students.</p> <p>Socioemotional Outcomes: The authors found higher self-esteem among retained students than their nonretained counterparts.</p>

Pomplun, Mark. (1988). "Retention: The Earlier, The Better?" *Journal of Educational Research*, 81(5), 281-287.

Research Questions: Does the effectiveness of grade retention decrease as grade level increases?

Dependent Variables: Academic achievement measured by the CTBS in reading, language, and mathematics; self-concept and motivation measured by the Self-Concept and Motivation Inventory, and attitudes about the effects of retention.

Independent Variables: Whether retained in grade or not.

Other Covariates: Gender, grade, age, self-concept, and motivation.

Methods: ANOVA was used to analyze data on three groups (retained, borderline, and regular students) at three levels (primary, intermediate, and secondary). Students were grouped into three levels by grade: primary (grades 1-2), intermediate (grades 3-4), and secondary (grades 7-8). At each level, three groups of students were used for comparison: retained students, borderline students who were on retention lists in the spring of the first year but eventually passed on to the next grade, and regular students who were neither retained nor on the retention lists. Retained students were matched with borderline and regular students by gender, grade, age, self-concept, and motivation after the first year.

Data: Students in grades 1, 2, 3, 4, 7 and 8 from a school district in a semirural area of west central Florida were followed for two years.

Sample Size: N = 141 students, with 22 students in each of the three groups (retained, borderline, and regular) at the primary level

Findings: This study examined the association between the effectiveness of grade retention and grade levels by investigating three hypotheses: (1) academic benefits of retention will decrease as the grade level at which students are retained increases, (2) self-concept and motivation of retainees will decrease in comparison with regular and borderline students as grade level increases; and (3) teacher, student, and parent perceptions of retention as a beneficial intervention will decrease as grade level increases. The author found that all results "supported the effectiveness of retention at the primary level especially in comparison to the secondary level" (p. 281).

Academic Achievement: The author reported "significant academic improvements for primary and intermediate retainees but not for secondary retainees" (p. 281). At the primary level, the retained group demonstrated noteworthy increases in every achievement subject, whereas "the borderline group showed a marked decrease in the reading area and slight decreases in the mathematics and language areas" (p. 284). The same pattern was found at the intermediate level but with smaller magnitude. In contrast, the changes in achievement scores for the retained group were indistinguishable from those of the borderline group at the secondary level.

Socioemotional Outcomes: The author reported that students in different groups were not significantly different in student-reported motivation at the end of the second year. At the primary and intermediate levels, retained

	(grades 1–2), 15 students in each group at the intermediate level (grades 3–4), and 10 students in each group at the secondary level (grades 7–8).	students were found to have motivation increases in comparison to the borderline group at the beginning of the retention year, but the two groups were not significantly different at the end of the second year. In addition, the author reported that “groups were not significantly different” (p. 287) in student-reported self-concept at the end of the second year.
<p>Resnick, Michael D., Peter S. Bearman, Robert Willam Blum, Karl E. Bauman, Kathleen M. Harris, Jo Jones, Joyce Tabor, Trish Beuhring, Renee E. Sieving, Marcia Shew, Marjorie Ireland, Linda H. Bearinger, and J. Richard Udry. (1997). “Protecting Adolescents from Harm: Findings from the National Longitudinal Study of Adolescent Health.” <i>Journal of the American Medical Association</i>, 278(10), 823–832.</p>		
<p>Research Questions: What are the risk and protective factors that are associated with adolescent health and morbidity?</p> <p>Dependent Variables: Emotional distress; suicidal thoughts and behaviors; violence; use of cigarettes, alcohol, and marijuana; and sexual behaviors.</p> <p>Independent Variables: Demographics, family background, school characteristics, and whether retained in grade or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Multiple linear regression, logistic regression, and Cox regression.</p> <p>Data: National Longitudinal Study of Adolescent Health, a national school survey of 90,118 adolescents from 80 high schools and their feeder middle schools.</p> <p>Sample Size: N = 12,118 students in grades 7–12.</p>	<p>Findings: While grade retention was not the focus of this study, the authors found retention as a significant risk factor associated with emotional distress and substance use.</p> <p>Socioemotional Outcomes: The authors found that “repeating a grade in school was associated with emotional distress among students in junior high and high school” (p. 283). Being old-for-grade was associated with emotional distress and suicidal thoughts among high school students.</p> <p>Behavioral Outcomes: Repeating a grade in school was associated with tobacco use among junior high students. Being old-for-grade was associated with substance use and an earlier age of sexual debut among both junior and senior high students.</p>
<p>Reynolds, Arthur J. (1992). “Grade Retention and School Adjustment: An Explanatory Analysis.” <i>Educational Evaluation and Policy Analysis</i>, 14(2), 101-121.</p>		
<p>Research Questions: What are the effects of early retention (i.e., retention</p>	<p>Methods: Two-step hierarchical analysis. The first step is a logistic</p>	<p>Findings: Grade retention was found to be significantly associated with prior achievement, prior teacher ratings of</p>

<p>in grades K–3) on academic achievement, socioemotional adjustment, and perceived competence?</p> <p>Dependent Variables: Reading and math achievement measured by ITBS reading and math scores, teacher ratings of school adjustment, and self-perception of school competence.</p> <p>Independent Variable: Whether retained at least once in grades K–3 or not.</p> <p>Other Covariates: Gender, age, race/ethnicity, parental education, free-lunch eligibility, school SES, school readiness, reading achievement in grade 1, math achievement in grade 1, teacher ratings in grade 1, parental involvement in school, and school mobility.</p>	<p>regression to determine the extent to which the sociodemographic factors, school readiness attributes, early adjustment factors, and intervening school-based factors predicted the retention decision. The second step is to add the binary variable for grade retention to the first model and to estimate the effects of retention on achievement, socioemotional adjustment, and perceived competence. A matched control group of 200 low-achieving but promoted students was also used as a second comparison group.</p> <p>Data: Longitudinal Study of Children at Risk tracking an initial panel of 1,539 children in CPS at multiple risk of school failure from kindergarten to grade 4. Data were collected from school records on student demographics and standardized test scores, teacher questionnaires on teacher ratings of school adjustment, and student questionnaires on perceived competence.</p> <p>Sample Size: N = 1,255 low-income, mostly black children.</p>	<p>school adjustment, parental involvement in school, and student mobility. And retention had negative effects on academic achievement but positive impacts on socioemotional adjustment.</p> <p>Student Characteristics: The logistic regression showed that grade retention was significantly associated with prior achievement, prior teacher ratings of school adjustment, parental involvement in school, and student mobility. Specifically, higher prior academic achievement and higher teacher ratings of adjustment were associated with lower retention rates. Students whose parents were rated as more involved in school were 18% less likely to be retained. Changing schools once between kindergarten and grade 2 increased the probability of retention by 7%.</p> <p>Academic Achievement: Both total-group analysis and comparison with the matched control group of low-achieving but promoted children indicated negative effects of retention on reading and math achievement.</p> <p>Socioemotional Outcomes: Based on teacher ratings of socioemotional adjustment, retention had a positive but insignificant effect. Moreover, retained students perceived themselves to be significantly more competent than promoted students.</p>
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<p>Robles-Pina, Rebecca A., Emily Defrance, and Deborah L. Cox. (2008). "Self-Concept, Early Childhood Depression and School Retention as Predictors of Adolescent Depression in Urban Hispanic Adolescents." <i>School Psychology International</i>, 29(4), 426-441.</p>		
<p>Research Questions: What are the gender differences for rates of depression, self-concept, retention, past feelings of depression, last grade completed and GPA in urban Hispanic adolescents? What are the differences between retained versus nonretained urban Hispanic adolescents on depression, self-concept, past feelings of depression, last grade completed and GPA? What are the predictors (self-concept, retention, past feelings of sadness, gender, last grade completed and GPA) for depression in urban Hispanic adolescents?</p> <p>Dependent Variables: Depression during adolescences.</p> <p>Independent Variable: Grade retention, early childhood depression, self-concept, last grade completed, GPA, and gender.</p> <p>Other Covariates: N/A.</p>	<p>Methods: T-tests and hierarchical multiple regression.</p> <p>Data: Data were collected from a sample of school districts in a large metropolitan area in Texas using student surveys. Among retained students, the majority had been retained in kindergarten and 1st grade with the next peak in retention rates in the 8th and 9th grades.</p> <p>Sample Size: N = 191 Hispanic adolescents, ages 12-18, from a large urban area in the Southeastern Texas.</p>	<p>Findings: While grade retention was not the focus of the study, the authors found retention to be one of the most important predictors of depression among urban Hispanic adolescents. In addition, retained students were found to have statistically significant lower self-concept, past feelings of depression, lower GPAs, and higher rates of depression.</p> <p>Student Characteristics: The authors reported that retained students, in comparison with nonretained students, had statistically lower self-concept, more past feelings of depression, lower GPAs, and higher rates of depression.</p> <p>Socioemotional Outcomes: The authors reported grade retention as one of the most important predictors of depression among urban Hispanic adolescents.</p>
<p>Roderick, Melissa. (1994). "Grade Retention and School Dropout: Investigating the Association." <i>American Educational Research Journal</i>, 31(4), 729-759.</p>		
<p>Research Questions: Is grade retention associated with the probability of dropping out? Does the timing of</p>	<p>Methods: This study used a discrete-time event history analysis to estimate the logit-hazard of</p>	<p>Findings: This study explored the association between grade retention and subsequent dropping out of school.</p>

<p>grade retention affect graduation outcomes? Are students who are overage for grade more likely to become disengaged from school?</p> <p>Dependent Variables: Odds of dropping out of school.</p> <p>Independent Variables: Whether retained in grade or not and whether retained in early grades (i.e., grades K–3) or in later grades (i.e., grades 4–6).</p> <p>Other Covariates: School performance measured by mean academic grades and attendance in each year, gender, number of siblings, father’s occupation, whether a student immigrated into the school system before or after the 4th grade, number of school changes, a qualitative measure of 4th-grade school quality, and two census tract characteristics associated with the school the youth attended in the 4th grade (i.e., the percentage of families in the census tract receiving public assistance and the percentage of workers employed as operators, fabricators, or laborers).</p>	<p>dropping out at ages 16–19 after controlling for school performance, background characteristics, and age.</p> <p>Data: Data were collected from school transcript information on the Fall River, Massachusetts, public school’s 7th-grade class of 1980–1981. Data included detailed transcripts of 1,052 students from 4th grade to drop out, transfer, or graduation.</p> <p>Sample Size: N = 1,052 students.</p>	<p>Dropout: The author found that repeating a grade from kindergarten to 6th grade was associated with a substantial increase in the odds of dropping out, even after controlling for differences in demographic background and postretention school performance. At age 16, repeating one grade was associated with a doubling of the odds of dropping out of school. The effect of early grade retention (i.e., retention in grades K–3) on the odds of dropping out did not differ significantly from the effect of late grade retention (i.e., retention in grades 4–6). The author reported substantial disengagement and significant declines in attendance during middle school among students who were overage for grade. The author hypothesized that being overage for grade during adolescence negatively affects whether students stay in school due to disengagement.</p>
<p>Roderick, Melissa, Anthony S. Bryk, Brian A. Jacob, John Q. Easton, and Elaine Allensworth. (1999). <i>Ending Social Promotion: Results from the First Two Years</i>. Chicago, IL: Consortium on Chicago School Research.</p>		
<p>Research Questions: What are the results of Chicago’s test-based promotion</p>	<p>Methods: Descriptive statistics with pre- and post-policy</p>	<p>Findings: This study examined the progress of 3rd-, 6th-, and 8th-grade students who were subject to Chicago’s test-</p>

<p>policy in terms of academic achievement?</p> <p>Dependent Variables: Academic achievement measured by ITBS.</p> <p>Independent Variables: Whether subject to the policy or not (comparison of pre- and post-policy cohorts).</p> <p>Other Covariates: N/A.</p>	<p>comparison. Specifically, test-score trends for 1997 3rd and 6th graders who were subject to the test-based promotion policy were compared to those of 1995 3rd and 6th graders who were not subject to the policy and were socially promoted.</p> <p>Data: Data were collected from CPS and included demographics, standardized test scores, and retention status.</p> <p>Sample Size: N = 24,143 3rd graders enrolled in 1997, 25,325 6th graders enrolled in 1997, and 22,832 8th graders enrolled in 1997.</p>	<p>based promotion policy in 1997 and 1998. The authors concluded that “in short, Chicago has not solved the problem of poor performance among those who do not meet the minimum test cutoffs and are retained” (p. 56).</p> <p>Student Characteristics: The authors found that African-American 3rd and 6th graders were more likely to be retained than their Latino counterparts. However, retention rates were quite similar in the 8th grade between Latino and African-American students. Moreover, the authors found only small differences in the performance of boys and girls under the promotional policy.</p> <p>Academic Achievement: During the first two years, the proportion of students who met the test-score cutoff for promotions increased. While an increased number of students had two-year test-score gains under the policy, “large test score increases in Summer Bridge were not followed by improved performance the next year” (p. 55). Moreover, “retained students did not do better than previously socially promoted students” (p. 55). The authors reported that retained students continued to struggle and that the overall results were much more positive for 6th and 8th graders than for 3rd graders.</p>
<p>Roderick, Melissa, and Mimi Engel. (2001). “The Grasshopper and the Ant: Motivational Responses of Low-Achieving Students to High-Stakes Testing.” <i>Educational Evaluation and Policy Analysis</i>, 23(3), 197–227.</p>		
<p>Research Questions: What are the motivational responses to high-stakes testing and grade retention policy among low-achieving students? To what</p>	<p>Methods: Qualitative analysis.</p> <p>Data: Data were drawn from the qualitative study that followed 102 low-achieving African-American</p>	<p>Findings: This study focused on student work effort during the school year before testing and examined the responses of 102 low-achieving 6th- and 8th-grade students to Chicago’s test-based promotion policy. The authors found increased work effort among the majority of</p>

<p>extent does hard work pay off?</p> <p>Dependent Variables: Student attitudes and motivation.</p> <p>Independent Variables: N/A.</p> <p>Other Covariates: N/A.</p>	<p>and Latino 6th and 8th graders from five Chicago elementary schools. Student responses to the baseline interview and teachers' assessments of student performance were summarized.</p> <p>Sample Size: N = 102 low-achieving students.</p>	<p>these students, and such work effort was associated with greater-than-average learning gains and positive promotional outcomes. However, one-third of interviewed students showed little work effort despite their desire not to be retained.</p> <p>Socioemotional Outcomes: The authors categorized students into four groups based on their patterns of behavior: students who were working hard in school in response to the policy of ending social promotion, students who were working on skills largely through efforts outside of class time, students who were worried about the policy but not doing substantive work, and students who were not worried and had not increased their work effort. The majority of these students fell into the first two groups and reported greater attention to class work, increased academic press and support from teachers, and more time spent studying outside school. The authors found greater-than-average learning gains and positive promotional outcomes for students with high levels of work effort. About one-third of the students fell into the third group and showed little work effort. Four of the students were not worried about the policy. These students faced significantly larger gaps in learning both within and outside school. The authors suggested that "how teachers manage high-stakes testing policies—whether they create environments that make low-achieving students feel supported and efficacious in responding to new demands and whether they direct students' efforts in productive ways—has an important impact on student motivation and passing rates" (p. 197).</p>
<p>Roderick, Melissa, and Jenny Nagaoka. (2005). "Retention Under Chicago's High-Stakes Testing Program: Helpful, Harmful, or Harmless?" <i>Educational Evaluation and Policy Analysis</i>, 27(4), 309–340.</p>		

<p>Research Questions: What is the academic effect of grade retention on low-achieving students?</p> <p>Dependent Variables: Reading achievement measured by ITBS reading test scores.</p> <p>Independent Variables: Whether retained in the promotion gate grade (i.e., 3rd and 6th grade) or not.</p> <p>Other Covariates: Gender, race/ethnicity, student mobility, prior retention, and neighborhood poverty.</p>	<p>Methods: Growth-curve analyses estimated in hierarchical linear models were used with three comparisons: a cross-cohort comparison of 3rd graders using the change in the policy in 2000 (i.e., the 1998 and 1999 predominantly retained below-cutoff group vs. the predominantly promoted 2000 below- and above-cutoff groups); a within-cohort comparison of the 1998 and 1999 predominantly retained below-cutoff group with the predominantly promoted above-cutoff group for 3rd and 6th graders; and a within-cohort comparison of 1998 and 1999 3rd and 6th graders in the below- and above-cutoff groups by five subgroups (i.e., promoted students, retained students, double-retained students, special education students, and students who were initially retained but later rejoined their age-appropriate groups).</p> <p>Data: Data came from CPS administrative student records, including test scores, grade levels, school attended, demographics, and special education status. The sample consisted of 3rd and 6th</p>	<p>Findings: This study used changes in retention policy across time and discontinuity design to compare achievement growth of retained students and low-achieving comparison groups. Results showed no or negative academic effects of grade retention. The authors concluded that “one approach that is supported by the evidence presented in our report on this research is to focus on earlier identification and intervention” (p. 333).</p> <p>Academic Achievement: The authors found slightly larger learning gains among retained 3rd graders in comparison with their promoted peers one year after the gate grade. However, these gains were small and short-lived. No statistically significant differences were found between retained and promoted students two years after the gate grade for 3rd graders. Results for 6th graders showed negative effects on achievement growth.</p>
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	<p>graders in 1998, 1999, and 2000 who failed to make the promotional cutoff in reading in spring and who attended Summer Bridge.</p> <p>Sample Size: N = 14,723 students, including 9,740 3rd graders and 4,983 6th graders.</p>	
<p>Roderick, Melissa, Jenny Nagaoka, Jen Bacon, and John Q. Easton. (2000). <i>Update: Ending Social Promotion—Passing, Retention, and Achievement Trends Among Promoted and Retained Students 1995–1999</i>. Chicago, IL: Consortium on Chicago School Research.</p>		
<p>Research Questions: What are the results of Chicago’s test-based promotion policy in terms of academic achievement?</p> <p>Dependent Variables: Academic achievement measured by ITBS.</p> <p>Independent Variables: Whether subject to the policy or not (comparison of pre- and post-policy cohorts).</p> <p>Other Covariates: N/A.</p>	<p>Methods: Descriptive statistics with pre- and post-policy comparison. Specifically, test-score trends for 1997 3rd and 6th graders who were subject to the test-based promotion policy were compared to those of 1995 3rd and 6th graders who were not subject to the policy and were socially promoted.</p> <p>Data: Data were collected from CPS and included demographics, standardized test scores, and retention status.</p> <p>Sample Size: N = 24,143 3rd graders enrolled in 1997, 25,325 6th graders enrolled in 1997, and 22,832 8th graders enrolled in 1997.</p>	<p>Findings: This study updated the 1999 report on the progress of 3rd-, 6th-, and 8th-grade students who were subject to Chicago’s test-based promotion policy in 1997 and 1998.</p> <p>Academic Achievement: Retained students had shown fewer learning gains measured by ITBS grade equivalents than socially promoted students three years after the promotion decision. Even after accounting for grade-level effects of the test by using Rasch analysis, retained students were still not doing better than promoted ones in terms of learning gains. Specifically, three years after retention, 6th graders who were retained showed smaller learning gains than previously socially promoted students, and 3rd-grade retainees had learning gains about equal to previously socially promoted students. The authors could not conclude that retention had significant negative effects on achievement because of measurement errors among the lowest-performing young students, but analysis did not show retained students did any better than socially promoted counterparts three years after retention.</p>

<p>Rodney, Laxley W., Betty Crafter, H. Elaine Rodney, and Robert M. Mupier. (1999). "Variables Contributing to Grade Retention Among African American Adolescent Males." <i>Journal of Educational Research</i>, 92(3), 185-190.</p>		
<p>Research Questions: What are the factors that contribute to grade retention among African-American adolescent males?</p> <p>Dependent Variables: Grade retention measured in terms of the number of times the student was held back in school, ranging from one to three times.</p> <p>Independent Variables: Twenty-two school-related variables, including alcohol abuse, number of suspensions received, conduct disorder, lack of discipline in home, etc.</p> <p>Other Covariates: Demographic background and home environment.</p>	<p>Methods: Multiple regression analysis to investigate the relationship between alcohol abuse and grade retention.</p> <p>Data: Data were collected from 243 African-American 13- to 17-year-old boys living in a Midwestern city. Subjects were recruited through youth-serving organizations and were interviewed for about one hour using an instrument consisting of certain sections of the Children's Structured Assessment for the Genetics of Alcoholism.</p> <p>Sample Size: N = 243 African American 13- to 17-year-old boys.</p>	<p>Findings: Number of suspensions from school, conduct disorder (measured by violence against others), and lack of discipline in the home were found to be positively associated with grade retention.</p> <p>Student Characteristics: The authors found three variables that were positively associated with grade retention: number of suspensions from school, conduct disorder (measured by violence against others), and lack of discipline in the home.</p>
<p>Rumberger, Russell W., and Katherine A. Larson. (1998). "Student Mobility and the Increased Risk of High School Dropout." <i>American Journal of Education</i>, 107(1), 1-35.</p>		
<p>Research Questions: What is the effect of student mobility between the 8th and 12th grades on high school completion?</p> <p>Dependent Variables: High school completion status.</p> <p>Independent Variables: Student</p>	<p>Methods: Multinomial logistic regression.</p> <p>Data: NELS base-year (1988), second follow-up (1992), and third follow-up (1994) data.</p> <p>Sample Size: N = 11,671 8th-grade students attending public,</p>	<p>Findings: While grade retention was not the focus of this study, the authors found retention to be a powerful predictor of failure to complete high school.</p> <p>Dropout: Students who were retained prior to the 8th grade were more than four times as likely as nonretained students to not complete high school or to receive a GED two years after they normally would have received a regular high school diploma. Retention appeared to be a</p>

<p>mobility.</p> <p>Other Covariates: Student characteristics, family background, school characteristics, student engagement, and academic achievement.</p>	<p>private, and Catholic schools.</p>	<p>powerful predictor of failure to complete high school.</p>
<p>Rush, Sheila, and Patrick A. Vitale. (1994). "Analysis for Determining Factors That Place Elementary Students at Risk." <i>The Journal of Educational Research</i>, 87, 325-333.</p>		
<p>Research Questions: What are the factors that place elementary students at risk of school failure and dropping out?</p> <p>Dependent Variables: Whether student is at risk of school failure and dropping out.</p> <p>Independent Variables: Race, age, retention, academic achievement, standardized test scores, learning style, attendance, truancy, asocial behavior, substance abuse, English as a second language, school mobility, family structure, family income, parental support, mother's education, family trauma, whether retained in grade or not.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Factor analysis, logistic regression.</p> <p>Data: Data were collected from a survey of elementary school teachers in an urban school district in Iowa on 5,270 students in grades 1-5.</p> <p>Sample Size: N = 5,270 elementary school students.</p>	<p>Findings: While grade retention is not the sole focus of this study, the authors found retention to be a risk factor for elementary students.</p> <p>Academic Achievement: Results from factor analysis and logistic regression suggest that "retention is an extension of academic failure and is a critical link that leads elementary school students to be at risk of school failure and dropping out" (p. 331). The authors concluded that "retention is not a positive alternative to increasing academic achievement" (p. 331).</p> <p>Dropout: Results from factor analysis and logistic regression suggest that retention is "a critical link that leads elementary school students to be at risk of school failure and dropping out" (p. 331).</p>
<p>Rust, James O., and Kahryn A. Wallace. (1993). "Effects of Grade Level Retention for Four Years." <i>Journal of Instructional Psychology</i>, 20(2), 162-166.</p>		
<p>Research Questions: What are the</p>	<p>Methods: ANCOVA.</p>	<p>Findings: The authors concluded that "there was no clear</p>

<p>academic effects of grade retention?</p> <p>Dependent Variables: Academic achievement measured by standardized test scores and teacher-assigned grades.</p> <p>Independent Variables: Whether retained in grade/transitional classes or not.</p> <p>Other Covariates: Gender, free-lunch status, and race.</p>	<p>Data: Data were collected from students' permanent records as well as standardized test scores and grades in math, spelling, reading, and language. The sample, followed for four years, included 120 students (60 students retained in grade or placed in transitional classes and 60 low-achievement but promoted students) from a large Southern metropolitan school district. At the time of the study, retained students had completed grade 5 and the promoted students had completed grade 6.</p> <p>Sample Size: N = 120 students, including 60 retained in grade or placed in transitional classes and 60 low-achieving but promoted students.</p>	<p>evidence that retention helped children" (p. 162).</p> <p>Academic Achievement: The authors found that "retention led to higher achievement during the repeated year but leveled out for the third and fourth years of the study" (p. 4). However, promoted students also showed a similar pattern: Their scores improved during the year after retention and then leveled out. The authors concluded that "there was no clear evidence that retention helped children" (p. 162).</p>
<p>Safer, Daniel J. (1986). "Nonpromotion Correlates and Outcomes at Different Grade Levels." <i>Journal of Learning Disabilities</i>, 19(8), 500-503.</p>		
<p>Research Questions: What are the factors associated with grade retention? What are the effects of retention? How do the factors and outcomes differ between elementary school nonpromotion and junior high school nonpromotion?</p> <p>Dependent Variables: Subsequent</p>	<p>Methods: The author conducted a comprehensive survey of 200 student folders to assess the differences between elementary school and junior high school nonpromotions with respect to their correlates and their outcomes. To assess the outcome one year after nonpromotion, the comparison</p>	<p>Findings: This study explored the differences between elementary school and junior high school nonpromotions with respect to their correlates and outcomes.</p> <p>Student Characteristics: The author found that nonpromotion in elementary school was primarily associated with low academic achievement and low IQ and that nonpromotion in junior high school was mainly correlated with behavioral suspensions and excessive</p>

<p>grade retention and school adjustment.</p> <p>Independent Variables: Whether retained in grade or not.</p> <p>Other Covariates: Absenteeism, IQ score, number of siblings, parent education, academic achievement measured by ITBS, hyperactivity, persistent classroom misconduct, unsatisfactory academic grades, and school suspension.</p>	<p>group for the elementary school students was 1st graders promoted into the 2nd grade, and the comparison group for the junior high school students was 7th graders promoted into the 8th grade.</p> <p>Data: An 8–10 year nonconcurrent prospective assessment of school data.</p> <p>Sample Size: N = 200 students, including 93 junior high school students who had been suspended multiple times and 107 controls who had not, matched by age and sex.</p>	<p>absenteeism.</p> <p>Academic Achievement: The author found that academic outcomes were significantly improved and academic grades were generally satisfactory during the year following the elementary school nonpromotion. But the majority of the students retained in junior high school continued to receive unsatisfactory academic grades during the repeated year.</p> <p>Behavioral Outcomes: The author found that behavioral outcomes were significantly improved and generally satisfactory during the year following the elementary school nonpromotion. But the majority of the students retained in junior high school continued to receive unsatisfactory conduct grades and exhibited excessive absenteeism during the repeated year.</p>
<p>Setencich, Jill. (1994). <i>The Impact of Early Grade Retention on the Academic Achievement and Self-Esteem of Seventh and Eighth Grade Students</i>. Paper presented at the Annual Convention of the National Association of School Psychologists, Seattle, WA, March 1994.</p>		
<p>Research Questions: What is the long-term impact of being retained in kindergarten or 1st grade on 7th- and 8th-grade students?</p> <p>Dependent Variables: Academic achievement measured by the CTBS and self-esteem measured by the Self-Esteem Inventory School Form.</p> <p>Independent Variables: Whether retained in kindergarten or not.</p>	<p>Methods: T-tests.</p> <p>Data: Data were collected for 36 7th- and 8th-grade students on academic achievement, self-esteem, gender, grade level, ethnicity, SES, and retention status. Of the 36 students, 18 had been retained in kindergarten or 1st grade and 18 had progressed normally through the grades. The two groups were matched by gender, grade level,</p>	<p>Findings: The author concluded that “retained students had significantly lower academic achievement and self-esteem scores than the promoted pupils” (p. 7).</p> <p>Academic Achievement: The author found that retained students scored significantly lower on achievement tests than the nonretained group.</p> <p>Socioemotional Outcomes: The author found that retained students had significantly lower self-esteem scores than nonretained students.</p>

<p>Other Covariates: Gender, grade level, ethnicity, and SES.</p>	<p>ethnicity, and SES.</p> <p>Sample Size: N = 36 7th- and 8th-grade students, including 18 students who had been retained in kindergarten or 1st grade and had never been in a Special Day Class placement and 18 students who had progressed normally through the grades and had never been recommended for retention.</p>	
<p>Shepard, Lorrie A., and Mary Lee Smith. (1987). "Effects of Kindergarten Retention at the End of First Grade." <i>Psychology in the Schools</i>, 24(4), 346–357.</p> <p>Shepard, Lorrie A., and Mary Lee Smith. (1989). "Academic and Emotional Effects of Kindergarten Retention in One School District." In Lorrie A. Shepard and Mary Lee Smith (Eds.), <i>Flunking Grades: Research and Policies on Retention</i> (pp. 79–107). London: The Falmer Press.⁴</p>		
<p>Research Questions: What are the effects of kindergarten retention on 1st-grade achievement and adjustment?</p> <p>Dependent Variables: Academic achievement measured by CTBS reading and math scores at the end of 1st grade, teacher ratings on reading achievement, math achievement, social maturity, learning self-concept, and appropriateness of attention to school work at the end of 1st grade in spring 1984.</p>	<p>Methods: Same-grade comparison with calculation of effect sizes.</p> <p>Data: Data were collected using teacher ratings of student achievement and adjustment, parental surveys, standardized test scores, and school records. Students retained in kindergarten in the 1982–1983 school year were selected from four schools with high retention rates and were</p>	<p>Findings: The authors concluded "no academic benefit for the extra year" in kindergarten and "a negative impact on social-emotional outcomes" (1987, p. 346).</p> <p>Academic Achievement: The authors found no differences between the retained and nonretained students on teacher ratings of reading and math achievement or standardized test scores in math. However, the retained group was found to be one month ahead on standardized test scores in reading in comparison with the nonretained group. The authors concluded in general "no academic benefit for the extra year" in kindergarten (1987, p. 346).</p>

⁴ The two papers by Shepard and Smith (1987, 1989) used the same data and methodology to examine the same research questions. Therefore, the two papers are considered as one study in this review.

<p>Independent Variables: Whether retained in kindergarten or not.</p> <p>Other Covariates: Gender, birth date, SES, dominant language, beginning kindergarten readiness scores, school SES, and school achievement level.</p>	<p>matched to nonretained students from four schools with low retention rates based on sex, birthday, initial readiness, reduced-price lunch status, and dominant language.</p> <p>Sample Size: N = 40 pairs of retained and nonretained students matched on sex, birthday, initial readiness, reduced-price lunch status, and dominant language.</p>	<p>Socioemotional Outcomes: The authors reported that, “on average, retained children had slightly more negative attitudes toward school” (1987, p. 346). Moreover, they found no differences between the retained and nonretained students on teacher ratings of social maturity and learner self-concept.</p> <p>Behavioral Outcomes: The authors found no differences between the retained and nonretained students on teacher ratings of attention.</p>
<p>Silbergitt, Benjamin, James J. Appleton, Matthew K. Burns, and Shane R. Jimerson. (2006). “Examining the Effects of Grade Retention on Student Reading Performance: A Longitudinal Study.” <i>Journal of School Psychology, 44(4), 255–270.</i></p>		
<p>Research Questions: How does grade retention affect the reading growth trajectories of students from grades 1 through 8?</p> <p>Dependent Variables: Reading achievement measured by the Reading Curriculum-Based Measurement (R-CBM).</p> <p>Independent Variables: Whether retained in grades K–5.</p> <p>Other Covariates: Gender, grade level, district, and reading achievement.</p>	<p>Methods: Hierarchical linear model.</p> <p>Data: 147 students from five districts in rural and suburban Minnesota were followed from grades 1 through 8, and reading achievement scores were collected from the school districts. The sample included three groups matched on district, gender, and grade level: 49 retained students, 49 similarly low-achieving but promoted students, and 49 randomly selected students. In addition, the low-achieving but promoted students were matched to the retained group on R-CBM performance as</p>	<p>Findings: The authors concluded that “retained students did not experience a benefit in their growth rate (relative to either the preceding year, or to similarly performing but promoted students), and made less progress compared to the randomly selected group of students” (p. 255).</p> <p>Academic Achievement: Based on data on reading test scores during the first and second years in the grade retained, the authors found that “the slope of growth was not significantly different between the initial and the retained year” for the retained students (p. 256). In the long run, the retained students did not differ from the matched low-achieving but promoted students in terms of the growth rate. Moreover, retained students were found to have “made less progress compared to the randomly selected group of students” (p. 255). The authors concluded that the results indicated a “lack of long-term advantage without finding short-term benefits to student</p>

	<p>well.</p> <p>Sample Size: N = 147 students from five districts in rural and outer-ring suburban Minnesota, including 49 retained students, 49 similarly low-achieving but promoted students, and 49 randomly selected control group students.</p>	<p>growth” among the retained students (p. 266).</p>
<p>Silberglitt, Benjamin, Shane R. Jimerson, Matthew K. Burns, and James J. Appleton. (2006). “Does the Timing of Grade Retention Make a Difference? Examining the Effects of Early Versus Later Retention.” <i>The School Psychology Review</i>, 35(1), 134–141.</p>		
<p>Research Questions: Does the timing of grade retention have an effect on the academic achievement of the retained students?</p> <p>Dependent Variables: Reading achievement measured by the R-CBM.</p> <p>Independent Variables: Whether retained in grades K–2 or in grades 3–5.</p> <p>Other Covariates: N/A.</p>	<p>Methods: Hierarchical linear model to examine the relative reading growth trajectories among retained students from grades 1 through 8 and to compare early retention (i.e., retention in grades K–2) with later retention (i.e., retention in grades 3–5).</p> <p>Data: Forty-nine retained students from five districts in rural and suburban Minnesota were followed from grades 1 through 8, and reading achievement scores were collected from the school districts.</p> <p>Sample Size: N = 49 retained students, including 27 early retainees and 22 later retainees.</p>	<p>Findings: The authors concluded that “growth trajectories in reading of students retained early were comparable to those retained later” (p. 134).</p> <p>Academic Achievement: The later-retained group had a statistically smaller quadratic term than the early-retained group, indicating that the later-retained students had a larger negative bend in the growth curve and a more rapid deceleration of growth. The linear growth term was larger but statistically insignificant for the later-retained group. The authors concluded that the difference in the linear growth term offset the difference in the quadratic component and the overall difference between the two groups was practically negligible.</p>

<p>Thomas, Amanda McCombs, Lisa Armistead, Tracy Kempton, Sean Lynch, Rex Forehand, Sarah Nousiainen, Bryan Neighbors, and Lynne Tannenbaum. (1992). "Early Retention: Are There Long-Term Beneficial Effects?" <i>Psychology in the Schools, 29</i>(4), 342-347.</p>		
<p>Research Questions: Is retention in kindergarten and 1st grade associated with long-term benefits?</p> <p>Dependent Variables: Academic achievement measured by GPA in grades 2-5 and teacher assessment of sociobehavioral functioning in grades 4 and 5 (including social competence, cognitive competence, externalizing problems, and internalizing problems).</p> <p>Independent Variables: Whether retained in grades K-1 or not.</p> <p>Other Covariates: Race (white vs. black).</p>	<p>Methods: ANOVA.</p> <p>Data: Data were collected from 62 children in the 4th and 5th grades of a rural elementary school, with 31 retained in kindergarten or 1st grade and 31 never retained. The GPA was obtained for each participant from kindergarten through 4th or 5th grade. The Revised Behavior Problem Checklist was administered to collect teacher assessments of externalizing and internalizing problems. Teacher's Rating Scale of Child's Actual Competence was used to measure children's cognitive ability and social skills.</p> <p>Sample Size: N = 62 children from a rural elementary school, with 31 retained in kindergarten or grade 1 and 31 having similar grades but never been retained.</p>	<p>Findings: The authors concluded that "retention was not associated with long-term beneficial effects but rather, especially for White children, appeared to be associated with poorer academic and social functioning" (p. 342).</p> <p>Academic Achievement: GPAs in grades 2, 3, 4, and 5 were compared for the retained and nonretained children. In grade 3, white students who were retained had significantly lower GPAs than their nonretained white peers, whereas retained, and nonretained black students did not differ. No significant effects were found for GPAs in grades 2 and 4.</p> <p>Socioemotional Outcomes: In terms of cognitive competence, white students who were retained were perceived as doing less well than nonretained white students by teachers. But retained black students were not perceived as being significantly different from nonretained black students. Similarly, teachers rated retained white students as less socially adept than nonretained white peers, while no significant differences were found among black students (retained vs. nonretained).</p> <p>Behavioral Outcomes: Retained students were found to receive significantly higher scores on the teacher assessment of internalizing problems, but no significant effects were found for externalizing problems.</p>
<p>Willson, Victor L., and Jan N. Hughes. (2006). "Retention of Hispanic/Latino Students in First Grade: Child, Parent, Teacher, School, and Peer Predictors." <i>Journal of School Psychology, 44</i>, 31-49.</p>		
<p>Research Questions: What are the</p>	<p>Methods: Pearson correlation</p>	<p>Findings: The authors reported that "low literacy skills,</p>

<p>predictors of grade retention in 1st grade among Hispanic students?</p> <p>Dependent Variables: Whether retained in 1st grade or not.</p> <p>Independent Variables: Six categories of variables, including academic competencies; sociodemographic characteristics; social, emotional, and behavioral adjustment; resiliency; school context; and home environment.</p> <p>Other Covariates: N/A.</p>	<p>and hierarchical logistic regression.</p> <p>Data: Data were collected using students' intelligence assessment tests, students' peer assessments, and teacher and parent questionnaires. The sample included 283 Hispanic children who were enrolled in 1st grade in fall 2001 and fall 2002 in three Texas school districts and who had literacy performance at entrance to 1st grade below the median for their school district.</p> <p>Sample Size: N = 283 Hispanic children, including 51 retained in 1st grade.</p>	<p>being young at entrance to 1st grade, low ego resilience, low support in the teacher-student relationship, and parents' low sense of responsibility for their children's educational outcomes predicted retention decisions" (p. 31).</p> <p>Student Characteristics: The authors reported that the retention decision was predicted by "low literacy skills, being young at entrance to 1st grade, low ego resilience, low support in the teacher-student relationship, and parents' low sense of responsibility for their children's educational outcomes" (p. 31). Based on a hierarchical logistic regression investigating the contribution of six categories of variables to retention, the authors found that "only being young for grade and parents' low sense of responsibility for their children's adjustment to school made a direct contribution to retention" after controlling for literacy (p. 31).</p>
<p>Wu, Wei, Stephen G. West, and Jan N. Hughes. (2008). "Short-Term Effects of Grade Retention on the Growth Rate of Woodcock-Johnson III Broad Math and Reading Scores." <i>Journal of School Psychology, 46(1), 85-105.</i></p>		
<p>Research Questions: What are the effects of grade retention in 1st grade on the growth of academic achievement in reading and math over three years? What are the potential moderators of the effects of retention?</p> <p>Dependent Variables: Whether retained in 1st grade or not.</p> <p>Independent Variables: Academic achievement measured by the</p>	<p>Methods: Propensity score matching and linear growth curve modeling.</p> <p>Data: Data were collected from school records, standardized test scores, and teacher, parent, and student surveys. The initial sample included 784 1st graders at risk of retention due to low literacy scores. Based on propensity scores constructed using 72 variables</p>	<p>Findings: The authors found a negative impact of retention on math test scores but no effect on reading skills. In addition, "several potential moderators of the effect of retention on growth of mathematical and reading skills were identified including limited English language proficiency and children's conduct problems" (p. 85).</p> <p>Academic Achievement: Based on achievement test scores over three years, the authors found that "grade retention decreased the growth rate of mathematical skills but had no significant effect on reading skills" (p. 85).</p>

<p>Woodcock-Johnson broad mathematics and reading test scores.</p> <p>Other Covariates: Sociodemographic variables, teacher- and parent-reported conduct problems and hyperactivity, peer-nominated externalizing problems, resiliency, and teacher-student relationship quality.</p>	<p>collected at baseline (i.e., 1st grade), 97 pairs of retained and promoted children were selected for analysis.</p> <p>Sample Size: N = 97 matched pairs of retained and promoted children.</p>	
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