# Longitudinal Literature Review on Grade Retention*

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**Abstract**

This review of the literature on the effectiveness of student retention focuses on longitudinal studies. The paper is organized into four major sections that cover a brief introduction to the retention literature, studies showing a negative impact on children, studies showing a positive impact, and research that has come out of two hotbeds of retention research: Texas and Chicago. The literature tends to show that the negative effects of retention on children outweigh the positive and that the benefits of retention are often short-lived.

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## 1 Introduction

Literature on retention focuses on both short term and long term outcomes for retained students. Short term outcomes typically include academic achievement, self-esteem issues, and occurrence of behavior problems. Long term outcomes include academic growth and persistence to graduation. Regardless of the focus and intent of the study, research on retention is characterized by conflicting conclusions.

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Overall, "the preponderance of evidence argues that students who repeat a grade are no better off, and are sometimes worse off, than if they had been promoted with their classmates" (David, 2008). Smith (2004) argued that "the evidence is remarkably one-sided: no short-term benefits, substantial long-term risks, substantial costs to taxpayers, and, because students of poverty and color are disproportionately represented among retainees, a failure of social justice" (p. 7). Burkam, LoGerfo, Ready, and Lee (2007) had similar conclusions in that most empirical research showed that retained student show short-term gains in achievement followed by a long-term fade in progress as well as poor emotional adjust and negative attitudes toward school.

Longitudinal research is a particularly important methodology for studying retention because it allows the researcher to understand how the effects of retention change or persist over time (Tanner and Galis, 1997). Longitudinal literature on retention focuses on a cohort of retained students and their long-term outcomes such as academic achievement, self-esteem, and dropping out of school. A cohort of retained students is typically matched by same grade or same age with promoted students. This analysis of longitudinal literature is organized to discuss those studies that show negative outcomes for students and studies showing positive student outcomes. This paper also highlights the interesting longitudinal work on retention that has come out of Chicago and Texas.

## 2 Longitudinal Literature that Show Negative Student Outcomes

### 2.1 ECLS-K Studies

Several longitudinal studies have used the Early Childhood Longitudinal Study- Kindergarten Class (ECLS-K) to study the effects of retention on primary grade students. First, Hong and Raudenbush's (2005) sample from the ECLS-K consisted of 471 retained kindergarten students and 10,255 promoted students. After controlling for demographic variables and using causal inference analysis the authors found evidence that retained students would have achieved higher results in math and reading had they been promoted. Concluding their findings, the authors stated that "kindergarten retention treatment leaves most retainees further behind and, therefore, impedes these children's cognitive development over the repetition year" (p. 220).

Hong and Yu (2007) used the ECLS-K and compared math and reading scores for both retained students and promoted students for one year, and also in the third and fifth years after the baseline retention year. The total sample consisted of 21,409 kindergarten and first grade students. Within this sample, 471 students were retained in kindergarten and 201 students were retained in first grade. The authors used propensity scores to describe reading and math scores during the third and fifth years after the retention year. After the comparisons were drawn between the baseline retention year and data from the third and fifth year, the researchers concluded that there were no positive long term benefits of early grade retention on reading and math scores. The authors stated that, "throughout the elementary years, the kindergarten retainees and the first grade retainees never achieved more on the average than they would have if they had been promoted instead" (p. 259).

Burkam, LoGerfo, Ready, and Lee (2007) used the ECLS-K data to determine the effects of retention on later cognitive development. The final sample consisted of 12,780 students in 915 schools. Comparisons were drawn between three groups, making the study both same age and same grade. The authors reported that after controlling for demographic variables, communication arts and math achievement was measured during the kindergarten year and during the first grade year. Results indicated that "ECLS-K children who repeated kindergarten lagged increasingly behind their grade-level peers who did not repeat kindergarten (p. 128). The conclusion of the authors was that retention in kindergarten or first grade does not lead to increases in academic achievement longitudinally.

### 2.2 Minnesota Mother-Child Interaction Project

Jimerson (1999) conducted a same-grade study to determine how early grade retention effected adolescences in later years. Data were collected from 190 students participating in the Minnesota Mother-Child Interac-

tion Project, 21-year longitudinal study of students who were considered at risk. Jimerson not only looked at academic achievement groups with this sample, but also how many eventually dropped out of school. Within this sample, Jimerson compared scores from three student groups. One group had been retained once in kindergarten, first, second, or third grades. The second group was characterized as low-achieving but promoted students. The third group served as the control group and was randomly assigned and exhibited higher academic achievement. During the primary grades, data were collected through teacher interviews, student interviews and testing, and mother interviews and testing. During the adolescent grades, data were collected through student interviews and school counselor reporting. In regards to student academic achievement outcomes over time, Jimerson reported "that the retained group of children displayed significantly lower academic adjustment than both the low-achieving but promoted group, and the control group" (p. 258). Jimerson reported that his finding also suggested that a significantly higher percentage of the retained students dropped out of school when compared to the low-achieving but promoted group and the control group. "These results indicate that a greater percentage of the retained students dropped out of high school, in contrast to the low-achieving but promoted students 69% and 46%, respectively" (p. 260).

An analysis of the Jimerson study by Lorence (2006) found that the promoted and retained students were not similar within the study. This conclusion was drawn from the fact that the two groups of students scored significantly different on the Wechsler Intelligence Scale for Children-Revised test, the measure of student intelligence, and school attendance measures. Because Jimerson, "made no attempt to determine if differences existed in the intelligence or academic achievement of students who were retained, probably because of absences, with those who were promoted," Lorence (2006, p. 756) argued that the research was flawed.

### 2.3 NELS: 88 Studies

Several studies have used the National Education Longitudinal Study (NELS) of 1988 to generate data to study retention. The NELS was reported to be the most comprehensive study of student achievement ever conducted by the United States government.

Meisels and Liaw (1993), using same-grade methodology, studied the effects of retention in kindergarten through eighth grade using the NELS data. The researchers' sample consisted of a total of 16,623 students. The students were categorized into the following groups: 2,075 were reported to have been retained in kindergarten through third grade, 1,128 were reported to have been retained in grades four through eight, and 13,420 were never retained. In regards to student achievement outcomes at the end of the study, the authors concluded that "the early retainees had significantly higher grades than did later retainees" (p. 71). Meisels and Liaw also concluded that the two groups of retained students did not differ significantly on eighth-grade cognitive test scores. "In general, these comparisons do not favor definitely either early or later retention" (p. 73). Meisels and Liaw also compared the academic outcomes between the retained group of students and the students who had never been retained. The authors stated that when the two groups were compared, "retained students showed significantly lower grades and test scores after controlling for students' gender, race/ethnicity, SES, maternal education, and retention by covariate interactions" (p. 74). A weakness of this research study is the fact that Meisels and Liaw reported that they could not control for academics between the promoted and retained students before the retention year (Lorence, 2006). Therefore, the two groups could not be proven to be similar in some variables.

Fine and Davis (2003) analyzed the same NELS data but with a different intent. Fine and Davis wanted to determine if retention negatively impacted the post-secondary enrollment of students who had been retained. Using logistical regression to control for demographic variables, the authors analyzed 11,637 graduates for their sample. The authors concluded that if a student was retained in kindergarten through second grade, their chance of being enrolled in a post secondary school was half those of promoted peers. This was about the same for students retained in third through fifth grades. Fine and Davis concluded by stating that "retaining students at any time appears related to poorer post-secondary education enrollment odds" (p. 408).

Finally, Wiley (2006) used the NELS longitudinal data to determine if self perceptions and educational

outcomes of African American students were impacted by grade retention. Wiley reported that there were 2,218 African American $10^{th}$ and $12^{th}$ grade students in the sample from four different geographic regions of the United States. The author reported that results showed during the $10^{th}$ and $12^{th}$ grade years, there was a statistical significance in the self perception of students who had been retained versus those who had not. Interestingly, Wiley found that there was no significant difference in the self perception of the students and the grade at which they were retained. "These results were inconsistent with Lange (2004), who indicated that grade level retention would cause serious harm and destroy the academic futures for most students" (Wiley, 2006, p. 84).

### 2.4 National Longitudinal Survey of Youth Studies

Bhattacharya (2007) used data from the 1979 National Longitudinal Survey of Youth (NLSY79) to study retention and its effects on math and reading scores. Bhattacharya reported that the NLSY79 began in 1979 with a sample of 12,686 respondents. These respondents were interviewed annually until 1994 and then biennially after 1994. Children of the NLSY79 respondents were interviewed every two years for the NLSY79 Child Survey beginning in 1986. Math and reading scores on the Peabody Individual Achievement Test (PIAT) were pulled from the NLSY79 and analyzed. The study covered the years 1979 through 2002 and the sample size was 4,759 children. Parents reported on the survey whether their child was retained our not and the author matched this information with their PIAT math and reading scores. The data analysis measured value-added of repeating a grade by using a propensity score matching indicator. Bhattacharya concluded the findings of his study by stating that repeating a grade "does not add any value in terms of improved mathematics and reading test scores ... Children who repeat a grade are more likely to experience a decrease in test scores than they would have if they hadn't been retained" (p. 15-16).

Using the same data set as Bhattacharya's (2007), Eamon and Altshuler (2004) analyzed data from the National Longitudinal Survey of Youth (NLSY). Different than Bhattacharya's study though, Eamon and Altshuler used the data to determine if disruptive behavior could be predicted. The sample again consisted of 12,686 individuals. The sample for the study included 10 and 12 year old female students with the ethnic breakdown of 289 African Americans, 183 Hispanics, and 335 Caucasian students. The authors concluded that whether or not a student was retained significantly increased that occurrence of behavior problems at school.

### 2.5 Independently Collected Data

Silberglitt, Jimerson, Burns, and Appelton (2006) conducted a longitudinal study "to answer the following research question: Is retention in early grades (kindergarten through second grade) linked to better short and long-term outcomes relative to retention in later grades (third through fifth)" (p. 135). The sample consisted of 46 students in a school district, all of which had been retained. The authors divided the students into two groups: one group was comprised of kindergarten through second grade students and the other group was categorized as third through fifth grade students. Students were administered the Reading-Curriculum Based Measurement each fall, winter, and spring as a benchmark test. The authors plotted longitudinal growth curves for both early retained students and those retained at a higher grade level. The researcher concluded that there was no significant difference in the reading performance of students retained at the primary level when compared with those retained at the upper elementary level. The authors also concluded that students retained at a higher grade level showed a more rapid decline in reading performance. In conclusion, the authors stated that "the ideas of early retention has initiative appeal, the data fail to support retention, whether it is early or later" (Silberglitt, Jimerson, Burns, & Appelton, 2006, p. 140). A shortcoming of this research study is the extremely small sample size which has been reported to be a problem by Lorence (2006) and Lorence, Dworkin, Toenjes, and Hill (2002) in other published research articles.

In a 12 year longitudinal study conducted by Jimerson, Ferguson, Whipple, Anderson, and Dalton (2002), 58 retained students were studied through the eleventh grade. Teachers were surveyed concerning the students socio-emotional and behavior adjustments. Academic achievement was measured using various

academic tests throughout the students' career along with drop-out or enrolled status during the 11$^{th}$ grade year. Findings of the study indicated that the retained students who dropped out showed a lower personal-social functioning. The retained group who had dropped out also showed more aggression. Similar outcomes for retained students were reported by Anderson, Whipple, and Jimerson (2002). These authors stated that "retention was found to be one of the most powerful predictors of high school dropout, with retained students 2 to 11 times more likely to drop out of high school than promoted students" (p. 2).

Setencich (1994) followed students who had been retained in kindergarten or first grade to determine the retention's impact on the students in seventh and eighth grade. The author hypothesized that retention would significantly lower the self esteem of retained students when compared with their promoted peers. The sample used in the study consisted of 36 seventh and eighth grade students who were assigned to two groups. The first group was 18 students who had been retained in kindergarten or first grade and the other group was 18 students who had been promoted but were low performing. The groups were matched on the variables of gender, grade level, ethnicity, and socioeconomic status. Students were administered the Self-Esteem Inventory (SEI) which asked them 58 questions measuring self-esteem. Setencich reported that results from the SEI indicated that the students who had been retained scored significantly lower than the students who had been promoted which indicated negative effects on self-esteem. An obvious weakness of this study is the small sample size (Lorence, 2006; Lorence, Dworkin, Toenjes, & Hill, 2002).

Knoll (2003) conducted a study that was characterized as both longitudinal and matched. Knoll intent was to determine the long term impacts of grade retention using the following measures: academic achievement, IQ, dropping out of school, school related adjustment measures, school attendance, and referrals to special education. Knoll described the three part sample for the study as follows. One group was 12$^{th}$ grade students or graduates in 2001 or 2002 who had been retained in grades kindergarten through fourth grade. A second comparison group was selected and matched with the first group on gender and grade placement. A third group was matched with the retained group on gender and age. Knoll reported that data on all three groups was gathered from academic measures such as Cognitive Skills Index (CSI) and Comprehensive Tests of Basic Skills (CTBS). Report cards, attendance and teacher reports were also analyzed. Knoll found that "the group of retained students scored significantly lower on measures of IQ and academic achievement" (p. 107). After the researcher controlled for IQ scores, there was no significant differences between the three groups. Knoll found the incident of dropping out of school, overall attendance problems, and referral to special education was significantly higher for the retained group of students.

## 3 Longitudinal Literature that Show Positive Student Outcomes

Peterson, DeGracie, and Ayabe (1987) conducted a three year study to determine retention's effects on a group of 65 first grade students, 26 second grade students, and 15 third grade students. The authors examined more than 100 students in both retained and promoted groups and students were matched on sex, race, age, and scores on the California Achievement Test (CAT). The authors reported that separate analyses on all three grade levels showed that retained students performed higher in reading and math when compared with promoted students. "Although the advantage of first grade retention no longer existed in reading by third grade and mathematics by second grade, the benefits to second and third grade persisted over the next three years" (Lorence, 2006, p. 746). Lorence (2006) pointed out that one flaw in the research study was that initial raw CAT scores were not normed using the same reference group at all three grade levels.

In a study that seems to show a weak but positive impact of retention, Rust and Wallace (1993) conducted a longitudinal, same-age study to analyze the relationship between retention and further achievement scores by retained students in later grades. The authors divided 120 students, located in a large, southern metropolitan school district into two groups. One group was low achieving students who were retained and one group were low achieving students who were promoted. Students were matched on race, gender, free lunch status, and grade previous to the retention year. During the study, the retained students were in fifth grade and the promoted students were in sixth grade. They then collected data on the 120 students for the next four years. Data collected included not only demographic data but academic comparisons on both math

and reading scores on the CAT and various forms of the Stanford Achievement Tests. Rust and Wallace concluded that their findings "indicated that retention lead to higher achievement during the repeated year but leveled out for the third and fourth years of the study" (p. 165). The authors also stated that the low achieving students who were promoted had success the following year. The promoted students' academic achievement significantly increased the second year of the study. Overall, the authors concluded that the findings of the study were weak evidence that retention was positive during the first year. "In fact, during the year of retention both promoted and retained students did well even though the promoted students were working on the next grade assignments" (p. 166).

Similar to places such as Texas and Chicago, Florida's third grade students must meet specific proficiency standards on the Florida Comprehensive Test (FCAT) in order to be promoted. Positive findings within this Florida data were reported by Greene and Winters (2007) and Greene and Winters (2004) who were interested in the impact of retention on student performance one and two years after the retention year. Their data set included Florida students in grades 3 through 10 for the school years 2001-2002 and 2004-2005. The authors compared low performing students who were promoted before the adoption of a state retention policy to low performing students who were retained after the adoption of the policy. Comparisons were calculated using a regression discontinuity by across-year, a comparison also done with Chicago Public School data by Jacob and Lefgren (2002). In their comparisons, Greene and Winters reported that after one year retained students outperformed promoted students by 0.05 standard deviations. After two years, the reading increase was 0.40 standard deviations. When discussing their regression discontinuity findings, Greene and Winters stated "that after two years, students who were retained outperformed promoted students by about 0.46 percent" (p. 336).

## 4 Retention Studies Focusing on Texas

Much literature has been written concerning the state of Texas and its high stakes testing procedures. Literature concerning Texas data is mixed. Toenjes, Dworkin, Lorence, and Hill (2000) reported that to assess problem solving skills and critical thinking skills, the state of Texas implemented the Texas Assessment of Academic Skills (TAAS). Starting in 1993-1994 the reading and math test was given to students in grades three through eight and a writing test was given to students in grades four through eight. The authors reported that in 1994, 55.6% of students tested passed the TAAS and in 1999, 78.3% passed the test. This accountability system seemed to increase overall averages in reading scores by 6 points and math scores by 11 points. Examining the Houston Independent School district in detail revealed increased achievement similar to the overall state (Toenjes, Dworkin, Lorence, and Hill, 2000). However, Thomas and Stockton (2003) cited a study by Haney (2000) who credited retention as the cause for nearly 700,000 students dropping out school in an eight year period, 1992 to 1999.

Neblett (2007) reported similar positive increases in achievement for Texas students. The authors used a sample of retained third and fifth grade students to determine if retention increased reading scores one and two years after the retention year. The sample consisted of 33 third grade students and 49 fifth grade students. Neblett's findings showed that both third grade and fifth grade students showed an improvement that was statistically significant in their reading and math scores the year after retention. This included Hispanic and African American students. Finally, findings also showed that students who were retained in the third grade scored above the proficiency standard for math in the fifth grade. A major weakness in the argument of the report was the small sample size.

Lorence, Dworkin, Toenjes, and Hill (2002) argued that their study was superior to previous research because it was large, contained all academically challenged students who were retained or promoted, and included data for six years. The authors used data provided by the Texas Education Agency (TEA) which provided information on 159,218 third grade students test scores on TAAS. The authors analyzed TAAS data starting in the 1994 school year and running through the 1999 school year. Two groups were compared in this data set, those with low reading scores who had been promoted and those who had low reading scores but had been retained. The authors described this approach as quasi-experimental. Data was analyzed in many ways with their conclusion being that requiring low-performing students to repeat a grade does not

harm their academic performance. The findings support the position that holding low-performing students back an additional year in school provides them more time to obtain the skills necessary for later success in school (p. 38).

Specifically, the authors reported that the group of third grade students who had low reading scores on the TAAS in 1994 and were retained, increased their score about 18 points when they retook the TAAS reading assessment in 1995. This same group of students had a gain of nearly 17 points in the fourth grade. The authors also stated that this group of students passed the TAAS reading assessment in their fifth grade year.

Using the same Texas data as Lorence, Dworkin, Toenjes, and Hill (2002), Lorence and Dworkin (2006) followed third grade students who had failed the 1994 Texas reading test through the tenth grade and compared their reading scores with low-performing students who had been promoted in 1994. The authors compared "the average reading scores of those failing students required to repeat third grade (the experimental group) with that of the socially promoted students who also did not have a passing third grade reading score (the control group)" (p. 1005). The sample for the study consisted of 38,445 Texas public school students. Of this sample, 1,244 were retained at least one time. Lorence and Dworkin used a nonequivalent control group design to study the sample. The authors concluded that students who were retained in the third grade increased their reading performance when compared to similar at-risk students who were not retained but promoted. Summarizing their findings, the authors asserted that "comparing adjusted same-grade reading scores through six grades after retention revealed that socially promoted pupils lagged behind the reading ability of the retainees" (p. 1026-1027).

Lorence and Dworkin (2006) explained why their findings were different than most retention studies. The authors stated that their analysis only looked at retention in the third grade. The authors hypothesized the impact of retention may be grade specific, with retention more likely to beneficial for older students. They argued that retention at the third grade level, as opposed to the primary years, possibly helps to avoid any learning disabilities students might have because many learning disabled students have already been identified. In other words, these third grades students simply needed more time to meet the standard.

Thormalen (1998) conducted a study to determine how primary grade retention impacted Texas students' academic achievement and self perception in adolescent years. The sample in the study consisted of 41 eighth grade students who were retained in first or second grade. The academic performance of these students on the TAAS and Total Reading and Total Math fifth grade Texas Learning Index (TLI) during their fifth and eighth grade years was analyzed. Surveys were also sent to the students and parents concerning their school experience. The author found that 76.7% of the retained group failed to meet the reading standard in the fifth grade. In the eighth grade, Thormalen reported that 57.5% of the eighth grade students failed to meet the reading standard. In regards to student perceptions, a greater number of students indicated that retention had helped them academically even if the data did not show this. Parents' perceptions of retention were similar to the students, in that retention was a beneficial intervention. Thormalen conclusion was "that retention of this population of students in the primary grades had no observable impact on their academic performance either four years later or seven years later as measured by the mandated Texas Assessment of Basic Skills" (p. 122).

## 5 Retention Studies Focusing on Chicago

Similar to Texas, several studies have used Chicago Public School retention data as a basis for discussion on retention. Starting with the 1995-1996 eighth grade class, Chicago Public School students were held accountable by high-stakes testing. The students' performance on Iowa Test of Basic Skills was the single factor that determined if they were promoted to high school or whether they were retained. In its first year of implementation, 1,800 eighth grade students were retained (Nagaoka, & Roderick, 2004). House (1998) predicted the Chicago high stakes testing policy, similar to New York City's retention program implemented in the 1980's, would fail to solve the problems of social promotion. Results from analysis of the Chicago data so far have been mixed.

Researchers with Consortium of School Research have analyzed the data from Chicago in a series of

studies (Greene & Winters, 2004). Nagaoka and Roderick (2004) attempted to determine how successful the retained Chicago students were in raising their tests scores to the promotional standard during their retained year. Using a same age, matched methodology, Nagaoka and Roderick compared the achievement of both third grade and sixth grade students who scored below the promotion standard with similar students who scored above the promotion standard. The authors measured the improvements of both groups without accounting for retention. They then statistically adjusted whether a student was retained or promoted (Greene, & Winters, 2004). The authors reported that less than 60% of retained third and sixth graders in 1998 and 1999 were able to increase their scores to minimum standards. The authors also stated that approximately 20% of retained third and sixth graders were placed in special education classes within two years after the retention year. Overall, the authors concluded that there was little evidence that students who were retained in third grade did better than similar students who were socially promoted. The authors also found that sixth graders who were retained had lower achievement growth than low-achieving sixth graders who were promoted.

Allensworth (2004) reported on seven cohorts of Chicago students who were followed to determine whether a mandatory retention policy influenced their tendency to drop out of school and academic achievement. Results showed both positive and negative outcomes for the Chicago students. Cohorts were selected and compared before the implementation of the policy and after the implementation of the policy. The study consisted of 171,471 students. Allensworth concluded that the students who were retained at the eighth grade level had an 8% greater chance of dropping out of school by the time they turned 17 than those who were promoted. By the time these retained students reached 19, they had a 13% greater chance of dropping out when compared to other students in their cohort who had been promoted. In regards to student achievement data, Allensworth reported that student achievement "improved substantially with the post policy cohorts" (p. 11). By the 1998 cohort, student achievement had risen one-half of a standard deviation higher than pre-policy cohorts. It seemed to indicate that the policy had motivated students to perform academically for fear of retention. Allensworth warned that the degree to which the policy caused student achievement to rise was debatable and other factors in the Chicago Public Schools should be considered.

Jacob and Lefgren (2002) conducted a regression discontinuity design research format, similar to Greene and Winters (2007), to analyze data collected from the Chicago Public Schools data. This design controlled for the students' previous test performance as well as social and demographic characteristics. The authors stated their population consisted of students who were in third and sixth grades from the 1993-1994 school year to the 1998-1999 school year. This included a sample of 346,909 student records. When the authors applied their regression discontinuity design to the data, they concluded that grade retention had a positive academic impact on math and reading at the third grade. Jacob and Lefgren concluded that summer school and grade retention had increased student achievement by 20% in students in the third grade. After the second year, the effect was not as large but was still statistically significant. Findings for sixth grade students were not significant for any year analyzed. Jacob and Lefgren concluded their findings by stating the evidence "suggests that summer school and grade retention have a modest but positive net impact on student achievement scores for third grade students" (p. 27).

Similar to their 2002 study, Jacob and Lefgren (2007) used the Chicago Public Schools data and attempted to determine if retention in the sixth or eighth grades increased the chances of students dropping out in high school and its academic outcomes for the students. The authors reported their final data sample consisted of 8,573 sixth grade students and 5,402 eighth grade students during the 1997, 1998, and 1999 school years. Students were followed to determine if they had graduated from the Chicago Public School by the fall of 2005. Jacob and Lefgren found that grade retention in the sixth grade had little effect on the probability of dropping out of school at a later date. Based on their findings, the authors concluded that it appeared "eighth grade retention is more harmful than sixth grade retention, possibly due to the greater social dislocation caused by preventing students from moving to high school with their peers" (p. 22).

Reynolds (1992) conducted a same-age, same-grade longitudinal study following retained first, second and third grades students in the Chicago Longitudinal Study (CLS). The final sample consisted of 1,255 student records. A majority of the retained students were African American and from a low socioeconomic background. Reynolds stated that data from four areas was analyzed: reading scores, math scores, teacher

ratings of school performance, and self perceptions reported by the students themselves. The author stated that data was analyzed using a hierarchical regression analysis using two steps. After controlling for socioeconomic factors and school readiness, the author found that retained students scored significantly lower in reading and math than their promoted peers. Specifically, retained students scored eight months lower in reading achievement and six months lower in math achievement. Reynolds concluded by stating "The effect sizes on academic achievement in the present study...are over twice the size of the one-third of a standard deviation effect found in many previous studies" (p. 115).

In extension of the CLS data by McCoy and Reynolds (1998) found similar results using the CLS data to determine retention's effects on school achievement, perceived school competence, and behavior occurrences up to 14 years old. The authors reported that their sample consisted of 1,164 low income children, which was 93% of the population sample for the Reynolds (1992) study. Retained students were tracked from first through seventh grades and data was collecting on reading achievement, math achievement, and behavior referrals. Data was analyzed using both same grade and same age comparisons (Malone, West, Flanagan, & Park, 2006). Same age results indicated that retained students scored 9.5 standard score points lower in reading and 8.9 standard score points lower in math. Same grade comparison showed that retained students scored significantly lower in reading but not in math. Finally, retention did not significantly impact behavior referrals.

The Reynolds (1992) and McCoy and Reynolds (1998) studies are considered strong retention research by Lorence (2006) because both studies statistically controlled for many variables of achievement previous to the retention year. "Most important is the availability of similar low-achieving pupils...which allowed for the creation of a control group more comparable to the retained pupils" (Lorence, 2006, p. 757).

## 6 Summary of Retention Research

The majority of educational research has come to the conclusion that retention is not a sound intervention and does more harm than good (Lorence, & Dworkin, 2006). For many, retention seems to help the struggling learner the year after the retention, but gains quickly drop off after several years. Research as early as the 1970's has reported that retention is harmful to students (Jackson, 1975). These negative student outcomes appear as lower academic achievement, poor self-esteem, and dropping out of school (Jimerson, & Kaufman, 2003; Anderson, Whipple, & Jimerson, 2002).

Others contend that much of this retention research is flawed leaving a legitimate argument that retention may be beneficial for the struggling student (Lorence, 2006). Retention's positive effects on students' cognitive development have also been reported in the several research articles (Powell, 1997; Southard, & May, 1996; Lorence, Dworkin, Toenjes, & Hill, 2002). While methodological issues plague much of this research there is also the question of how retention works differently for different types of students.

Gender, race, socioeconomic status, and parental involvement all play a role in the retention of students (Thomas, & Stockton, 2003). Retention occurs more often to minority males who are from a low socioeconomic background. These students are retained by educators for reasons such as low academic achievement, maturation of the student, and parental support (Witmer, Hoffman, & Nottis, 2004; Freeman, Gum, & Blackbourn, 1999). If retention is not to be used for low performing students, educators must find research based interventions such as multiage classrooms, looping, personal learning plans, and reduced class size that remediate struggling learners.

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