

Chicago Longitudinal Study

Summary Report on School Remedial Services

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School Remedial Services

Indicators of school remedial services

The Chicago Longitudinal Study (CLS) has collected two major indicators of school remedial services – grade retention and special education placement. Grade retention was measured in the following ways; if ever retained from kindergarten to eighth grade, if ever retained from first grade to eighth grade, number of times of retained, retention by year, and early versus late retention. For special education placement, similar measures were used, with types of special education placement (learning disability, speech and language, other) broken down. The original sample size of the Chicago Longitudinal study is 1,539. For grade retention, those who were active at least 6 years in Chicago Public School were used, resulting in a sample size of 1,267. For special education placement, those who were active in kindergarten and first grade were used, resulting in a sample size of 1,389.

Descriptive Statistics

The descriptive statistics of grade retention and special education placement are shown in Table 1 and 2. For the sample size 1,389, 33.3 percent had been retained from first grade to eighth grade or placed in special education from first grade to twelfth grade, 25 percent had been retained from first grade to eighth grade, 2.6 percent had multiple retentions from first grade to eighth grade, and 15.1 percent had been placed in special education placement from first grade to eighth grade. There are significant differences on both outcomes between preschool participation, gender, and extent of preschool participation. The preschool group had lower rates of retention (24.2% vs. 35.2%) and special education placement (12.6% vs. 20.0%) than the non-preschool group. Girls had lower rates of retention (18.7% vs. 37.7%) and special education placement (9% vs. 21%). Participants in the 4-6 year group had lower rates of retention and special education placement than those in the 1-3 year group (19% vs. 32% for retention; 10% vs. 19% for special education) and no participation group (19% vs. 38% for retention; 10% vs. 18% for special education).

Major indicators by Demographic/Achievement Variables and Subgroups

Among indicators of grade retention and special education placement, ever retained from first grade to eighth grade and ever placed in special education from first grade to eighth grade are the major indicators used in this report. The proportions of the sample who were ever retained from first grade to eighth grade are shown by demographic, socioeconomic, early achievement variables (race, parent education, free lunch status, neighborhood poverty) and by subgroups (preschool participation, gender, and extent of participation) in Table 3. The proportions of the sample who were ever placed in special education are compared by the same variables and subgroups in Table 4.

Comparisons to Selected Samples

Figure 1 shows retention rates for selected comparison groups. Retention rates for the CLS sample, although high (28.4% for grades k-8), are consistent with other sample estimates. Figure 2 shows special education placement rates nationally and for the CLS sample for various available age ranges. Special education placement rates both for first through eighth graders (15%) and for kindergarten through age 18 (17%) are slightly higher than national estimates (13%). Figure 3 shows special education placement rates by type of disability (learning disability, speech and language impairment, and other special education placements) nationally and for the CLS sample.

Correlations among Indicators

The correlations among indicators of grade retention are shown in Table 5. The measure of any retention from first grade to eighth grade is constructed by retention and by year. It is significantly correlated to other measures of retention, such as early retention ($r = .81$), late retention ($r = .52$), and retention by year. Correlations between special education placement indicators are also significant. Table 6 shows the correlations for special education placement. In addition, the correlations between indicators and explanatory variables are listed in Table 7 and 8 for two sample sizes. Explanatory variables examined in this report include child demographics, program participation, family characteristics, neighborhood characteristics, family experiences, school performance, school life, social adjustment, school commitment, and school quality and support. Descriptive statistics for those variables are shown in Table 7 and 8. Among those variables, classroom adjustment ($r = -.45$, with retention from first grade to eighth grade), ITBS work analysis at kindergarten ($r = -.33$, with retention from first grade to eighth grade), ITBS reading at eighth grade ($r = -.49$, with retention from first grade to eighth grade), and reading/math grade from grade 4 to 6 ($r = -.36$, with retention from first grade to eighth grade) have higher correlations with major indicators than other variables.

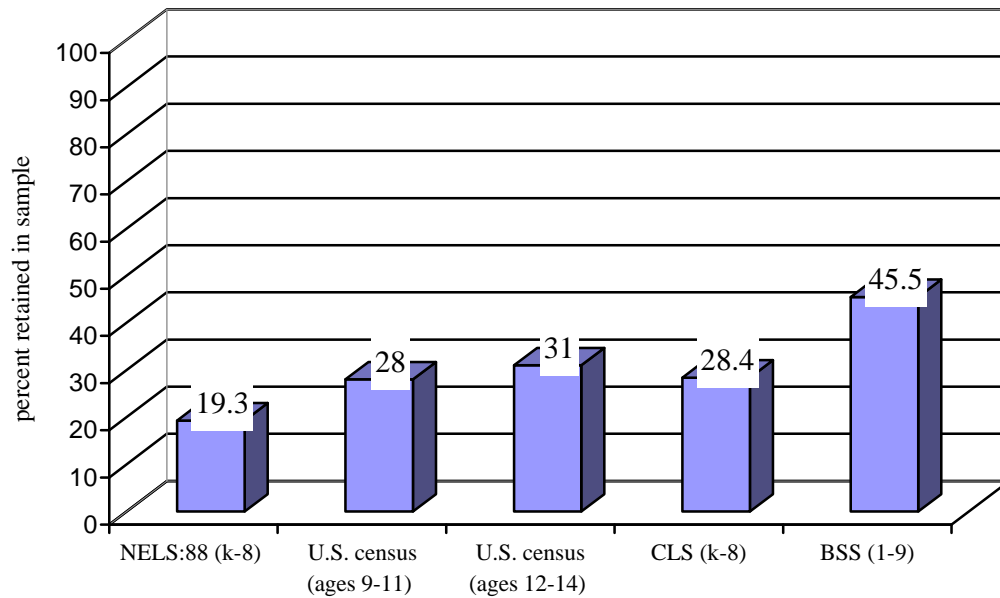
Predictors of the Major Indicators

Logistic regression was conducted to determine the major predictors of grade retention and special education placement. The results showed that early adjustment indicators (word analysis in kindergarten, classroom adjustment, ITBS reading scores in third grade), parent involvement, mobility (if moved once, twice, or three times between fourth grade and eighth grade) and school type (if enrolled in magnets between fourth grade to eighth grade) are significantly related to retention when other variables were controlled. The results are shown in Table 9. Similar results were obtained for special education placement. Early adjustment indicators (word analysis in kindergarten, classroom adjustment, perceived competence, ITBS reading scores at third grade) and school type are significantly related to retention when other variables were controlled. However, school mobility was not significantly correlated to special education placement. The results are shown in Table 10.

References

- Alexander, K.L., Entwisle, D.R., & Kabbani, N. (1999). Grade Retention, Social Promotion, and 'Third-Way' Alternatives. National Conference on Early Childhood Learning.
- Hauser, R., Pager, D., & Simmons, S. (2000). Race-ethnicity, social background, and grade retention. National invitational conference on retention: Can unlike students learn together? Grade retention, tracking, and grouping.
- Hafner, A., Ingels, S., Schneider, B., & Stevenson, D. (1990). A profile of the American eighth grader: The National Education Longitudinal Study of 1988. Washington, D.C.: National Center for Education Statistics, U.S. Department of Education.
- Miesels, S.T. & Liaw, F.R. (1993). Failure in grade: Do retained students catch up? Journal of Educational Research, 87 (2), 69-77.
- National Center for Education Statistics. (2000). Digest of Education Statistics 2000. Washington, DC: Government Printing Office.
- U.S. Bureau of the Census (1979). Relative Progress of Children in School: 1976. In Current Population Reports, 337. Washington, D.C.: Government Printing Office.
- U.S. Department of Education, Office of Special Education and Rehabilitative Services. (2000). Twenty Second Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act.

Figure 1. Retention Rates for Selected Groups



Note: BSS refers to a sample of “at-risk” students tracked longitudinally in the Baltimore “Beginning School Study.” See Alexander et al, 1999.

Sources:

Alexander, K.L., Entwisle, D.R., & Kabbani, N. (1999). Grade Retention, Social Promotion, and ‘Third-Way’ Alternatives. National Conference on Early Childhood Learning.

Hauser, R., Pager, D., & Simmons, S. (2000). Race-ethnicity, social background, and grade retention. National invitational conference on retention: Can unlike students learn together? Grade retention, tracking, and grouping.

Miesels, S.T. & Liaw, F.R. (1993). Failure in grade: Do retained students catch up? Journal of Educational Research, 87 (2), 69-77.

Figure 2. Special Education Placement Rates for Selected Groups and Age Ranges

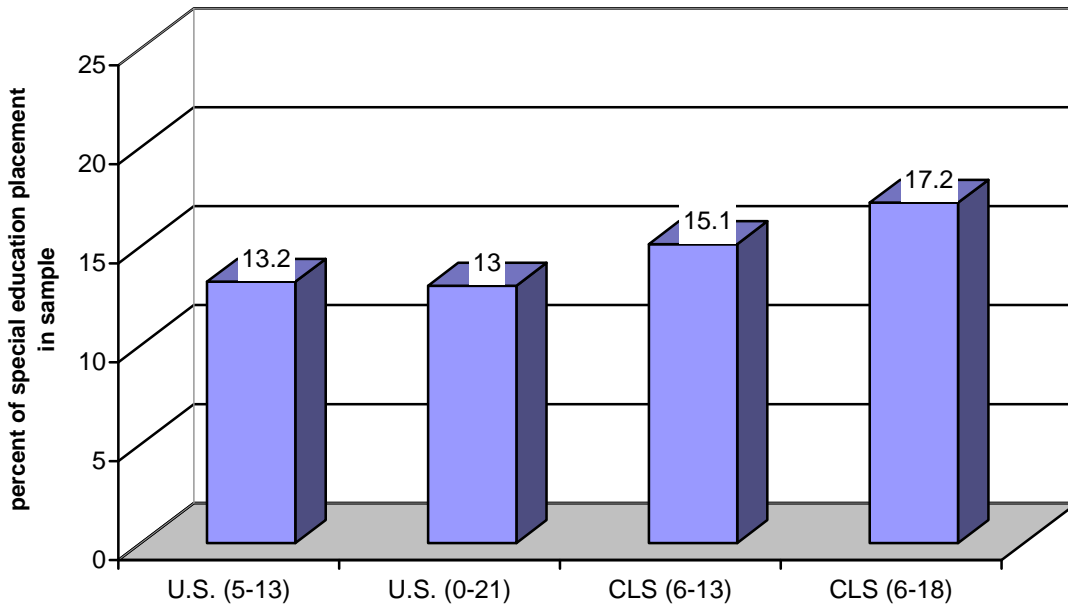
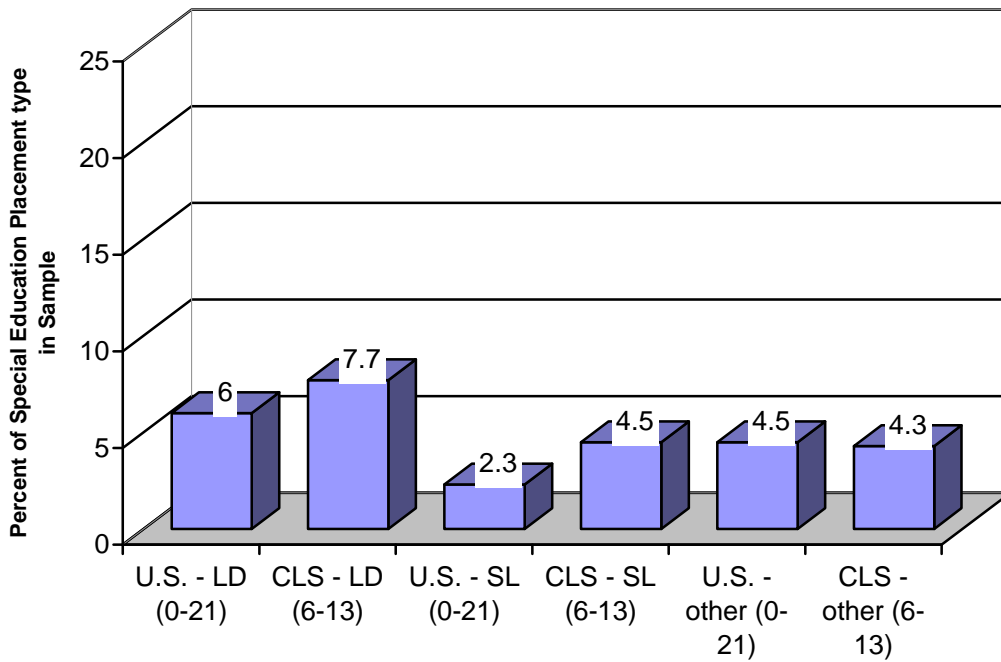


Figure 3. Special Education Placement Rates by Type of Disability for Selected Groups



Note: “LD” denotes learning disability, “SL” denotes speech and language impairment, and “other” denotes other special education placements.

Sources:

National Center for Education Statistics. (2000). Digest of Education Statistics 2000. Washington, DC: Government Printing Office.

U.S. Department of Education, Office of Special Education and Rehabilitative Services. (2000). Twenty Second Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act.

Table 1 Percentage Grade retention by Age 20 in the Chicago Longitudinal Study

| Grade retention | Total Sample (N=1,539) | | Preschool (N=989) | Non-Preschool (N=550) | Boys (N=765) | Girls (N=766) | 4-6 years (N=559) | 1-3 years (N=599) | No participation (N=381) |
|---------------------------|------------------------|-----------|-------------------|-----------------------|--------------|---------------|-------------------|-------------------|--------------------------|
| | N | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean |
| Any retention (K-8) | 1539 | 25.5 | 22.4 | 31.1 | 33.2 | 18.0 | 18.3 | 27.2 | 33.3 |
| Number of retention (k-8) | 1539 | .29 (.54) | .25 (.50) | .37 (.59) | .38 (.58) | .21 (.48) | .19 (.44) | .31 (.55) | .40 (.62) |
| Any retention (1-8) | 1539 | 25.2 | 21.8 | 31.1 | 33.1 | 17.5 | 17.7 | 26.9 | 33.3 |
| Number of retention (1-8) | 1539 | .28 (.51) | .24 (.47) | .35 (.56) | .36 (.55) | .19 (.44) | .19 (.41) | .30 (.52) | .39 (.59) |
| Multiple retention (1-8) | 1539 | 3.4 | 2.3 | 5.3 | 4.1 | 2.7 | 1.1 | 3.5 | 6.6 |
| Any retention (K-8) | 1389 | 25.4 | 22.7 | 30.6 | 33.7 | 17.2 | 17.9 | 28.7 | 33.0 |
| Number of retention (k-8) | 1389 | .28 (.51) | .24 (.48) | .35 (.56) | .37 (.56) | .19 (.44) | .19 (.41) | .32 (.54) | .38 (.59) |
| Any retention (1-8) | 1389 | 25.1 | 22.3 | 30.6 | 33.7 | 16.6 | 17.6 | 28.3 | 33.0 |
| Number of retention (1-8) | 1389 | .28 (.51) | .25 (.48) | .35 (.56) | .37 (.56) | .18 (.43) | .18 (.41) | .31 (.53) | .38 (.59) |
| Multiple retention (1-8) | 1389 | 2.6 | 1.7 | 4.4 | 3.3 | 1.9 | .7 | 2.9 | 5.4 |
| Any retention (K-8) | 1267 | 28.4 | 24.8 | 35.2 | 37.8 | 19.4 | 19.2 | 32.5 | 37.9 |
| Number of retention (k-8) | 1267 | .33 (.56) | .26 (.49) | .58 (.40) | .43 (.60) | .23 (.49) | .20 (.45) | .37 (.58) | .46 (.65) |
| Any retention (1-8) | 1267 | 28.0 | 24.2 | 35.2 | 37.7 | 18.7 | 18.6 | 32.0 | 37.9 |
| Number of retention (1-8) | 1267 | .31 (.53) | .26 (.49) | .40 (.58) | .42 (.58) | .21 (.46) | .19 (.42) | .36 (.56) | .44 (.61) |
| Multiple retention (1-8) | 1267 | 3.8 | 2.4 | 6.4 | 4.8 | 2.8 | 1.0 | 4.2 | 8.0 |
| Early retention (1-3) | 1539 | 18.4 | 15.4 | 23.8 | 23.3 | 13.7 | 11.5 | 20.2 | 25.7 |
| Late retention (4-8) | 1539 | 8.3 | 7.6 | 9.6 | 11.8 | 5.0 | 7.0 | 8.0 | 10.8 |
| Kindergarten retention | 1471 | 1.3 | 1.3 | 1.4 | 1.0 | 1.6 | 0.7 | 1.6 | 1.7 |
| First grade retention | 1330 | 10.9 | 7.6 | 17.1 | 13.7 | 8.3 | 4.3 | 13.2 | 19.2 |
| Second grade retention | 1284 | 5.9 | 5.4 | 6.9 | 8.0 | 3.9 | 3.6 | 7.6 | 7.5 |
| Third grade retention | 1281 | 5.9 | 5.9 | 6.0 | 7.2 | 4.7 | 4.5 | 7.2 | 6.6 |
| Fourth grade retention | 1282 | 3.9 | 3.1 | 5.3 | 6.1 | 1.7 | 1.9 | 5.0 | 5.6 |
| Fifth grade retention | 1170 | 1.9 | 2.1 | 1.5 | 2.6 | 1.2 | 1.7 | 2.6 | 1.1 |
| Sixth grade retention | 1153 | 8.7 | 7.9 | 1.0 | 1.2 | 0.5 | 1.1 | 2.4 | 1.5 |
| Seventh grade retention | 1146 | 2.4 | 1.7 | 3.8 | 3.8 | 1.2 | 1.5 | 2.2 | 4.4 |
| Eighth grade retention | 1066 | 2.2 | 2.1 | 2.2 | 2.5 | 1.8 | 2.4 | 1.3 | 3.1 |

*Standard Deviation is in parentheses.

*Active at least 6 years in CPS (N=1,267)

*Active at kindergarten and first grade in CPS (N=1,389)

Table 2 Percentage Special education placement by Age 20 in the Chicago Longitudinal Study

| Indicators of Special education placement | N | Total Sample (N=1,389) | Preschool (N=908) | Non-Preschool (N=481) | Boys (N=695) | Girls (N=694) | 4-6 years (N=552) | 1-3 years (N=519) | No participation (N=318) |
|---|------|------------------------|-------------------|-----------------------|--------------|---------------|-------------------|-------------------|--------------------------|
| | | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean |
| 1. If ever retained (1-8) or in special education placement (1-12) | 1389 | 33.3 | 29.6 | 40.1 | 44.0 | 22.5 | 23.9 | 38.5 | 40.9 |
| 2. Number of years in special education placement (1-8) | 1389 | .57 (1.5) | .44 (1.3) | .80 (1.8) | .78 (1.75) | .35 (1.26) | .32 (1.11) | .72 (1.70) | .75 (1.8) |
| 3. If ever in special education placement (1-8) | 1389 | 15.1 | 12.6 | 20.0 | 21 | 9.2 | 9.96 | 19.1 | 17.6 |
| 4. Number of years in special education placement (1-12) | 1389 | .86 (2.3) | .68 (2.0) | 1.2 (2.7) | 1.21 (2.63) | .51 (1.85) | .47 (1.6) | 1.1 (2.6) | 1.2 (2.7) |
| 5. If ever in special education placement (1-12) | 1389 | 16.6 | 14.0 | 21.4 | 23.3 | 9.8 | 11.1 | 20.8 | 19.2 |
| 1a. If ever retained (1-8) or in special education placement (1-12) | 1267 | 35.8 | 31.3 | 44.1 | 47.8 | 24.2 | 24.9 | 41.7 | 45.2 |
| 2a. Number of years in special education placement (1-8) | 1267 | .62 (1.6) | .48 (1.4) | .90 (1.9) | .89 (1.9) | .37 (1.3) | .33 (1.2) | .80 (1.8) | .86 (2.0) |
| 3a. If ever in special education placement (1-8) | 1267 | 15.6 | 13.1 | 20.5 | 22.4 | 9.1 | 10.2 | 19.7 | 18.6 |
| 4a. Number of years in special education placement (1-12) | 1267 | .96 (2.4) | .74 (2.1) | 1.4 (2.9) | 1.4 (2.8) | .56 (1.96) | .48 (1.7) | 1.3 (2.7) | 1.3 (2.9) |
| 5a. If ever in special education placement (1-12) | 1267 | 17.2 | 14.5 | 22.3 | 24.8 | 9.9 | 11.2 | 21.7 | 20.6 |
| 6. Number of years early special education placement (1-3) | 1389 | .11 (.42) | .08 (.36) | .17 (.51) | .15 (.47) | .08 (.36) | .08 (.35) | .12 (.42) | .17 (.52) |
| 7. If ever in early special education placement (1-3) | 1389 | 7.99 | 5.95 | 11.85 | 10.1 | 5.9 | 5.25 | 8.86 | 11.32 |
| 8. Number of years late special education placement (4-8) | 1389 | .45 (1.3) | .35 (1.1) | .62 (1.5) | .63 (1.46) | .26 (1.01) | .23 (.88) | .60 (1.5) | .58 (1.45) |
| 9. If ever in late special education placement (4-8) | 1389 | 12.9 | 10.6 | 17.3 | 18.6 | 7.21 | 7.79 | 16.2 | 16.4 |
| 10. Number of years in special education placement for learning disability (1-8) | 1389 | .30 (1.12) | .23 (1.0) | .43 (1.32) | .40 (1.27) | .20 (.95) | .16 (.81) | .37 (1.24) | .44 (1.35) |
| 11. If ever in special education placement for learning disability (1-8) | 1389 | 7.78 | 5.95 | 11.23 | 10.9 | 4.6 | 4.35 | 9.25 | 11.32 |
| 12. Number of years in special education placement for speech and language impairment (1-8) | 1389 | .13 (.71) | .10 (.59) | .18 (.90) | .14 (.69) | .12 (.73) | .10 (.55) | .14 (.71) | .17 (.93) |
| 13. If ever in special education placement for speech and language impairment (1-8) | 1389 | 4.46 | 4.08 | 5.20 | 5.32 | 3.60 | 4.53 | 4.43 | 4.40 |
| 14. Number of years in special education placement for reasons other than LD or SPL (1-8) | 1389 | .14 (.77) | .11 (.63) | .22 (.99) | .25 (1.0) | .04 (.41) | .07 (.48) | .22 (.97) | .15 (.81) |
| 15. If ever in special education placement for reasons other than LD or SPL (1-8) | 1389 | 4.25 | 3.52 | 5.61 | 7.48 | 1.01 | 2.17 | 6.55 | 4.09 |

*Standard Deviation is in parentheses.

*Active at least 6 years in CPS (N=1,267)

*Active at kindergarten and first grade in CPS (N=1,389)

Table 3 Proportions of CLS sample (N=1,267) who ever retained from year 1 to 8

| | Total sample | <u>CPC preschool</u> | | <u>CPC extended</u> | | | <u>Sex of child</u> | |
|--------------------------|--------------|----------------------|------|---------------------|--------|------|---------------------|-------|
| | | Any | None | 4 to 6 | 1 to 3 | None | Boys | Girls |
| Grand total | 28 | 24 | 35 | 19 | 32 | 38 | 25 | 28 |
| CPC preschool | 24 | -- | -- | -- | -- | -- | 34 | 16 |
| No CPC preschool | 35 | -- | -- | -- | -- | -- | 44 | 25 |
| CPC 4 to 6 years | 19 | -- | -- | -- | -- | -- | 28 | 10 |
| CPC 1 to 3 years | 32 | -- | -- | -- | -- | -- | 42 | 22 |
| No CPC partic | 38 | -- | -- | -- | -- | -- | 46 | 30 |
| Blacks | 28 | 25 | 35 | 20 | 32 | 38 | 38 | 19 |
| Latinos | 25 | 18 | 36 | 6 | 32 | 41 | 32 | 16 |
| Parent HS grad | 22 | 19 | 29 | 14 | 28 | 29 | 30 | 14 |
| Nongraduate | 35 | 31 | 41 | 26 | 37 | 44 | 47 | 25 |
| Free lunch | 28 | 24 | 37 | 19 | 32 | 39 | 38 | 19 |
| Reduced/none | 12 | 9 | 17 | 3 | 21 | 18 | 15 | 9 |
| 60% K sch poverty | 28 | 25 | 35 | 19 | 32 | 40 | 39 | 19 |
| <60% K sch poverty | 27 | 21 | 36 | 19 | 32 | 33 | 35 | 19 |
| Overage at K | 14 | 8 | 17 | 10 | 8 | 23 | 5 | 27 |
| not overage at K | 28 | 24 | 36 | 19 | 33 | 39 | 39 | 29 |
| Four or more risks | 32 | 28 | 39 | 23 | 35 | 43 | 43 | 22 |
| Three or fewer risks | 22 | 18 | 29 | 14 | 28 | 30 | 30 | 14 |
| ITBS1 read 50%ile | 7 | 7 | 7 | 6 | 7 | 10 | 12 | 4 |
| Below 50%ile | 40 | 37 | 45 | 31 | 43 | 47 | 48 | 30 |
| ITBS1 math 50%ile | 9 | 9 | 10 | 6 | 14 | 12 | 15 | 5 |
| Below 50%ile | 39 | 36 | 44 | 32 | 40 | 46 | 49 | 28 |
| ITBS3 read 50%ile | 6 | 5 | 9 | 4 | 5 | 14 | 9 | 4 |
| Below 50%ile | 36 | 32 | 43 | 27 | 39 | 44 | 45 | 26 |
| ITBS3 math 50%ile | 5 | 6 | 2 | 5 | 6 | 3 | 7 | 3 |
| Below 50%ile | 38 | 33 | 47 | 27 | 40 | 50 | 48 | 27 |
| 3 or more school moves | 49 | 38 | 59 | 32 | 49 | 57 | 59 | 35 |
| Less than 3 school moves | 26 | 23 | 31 | 18 | 30 | 34 | 35 | 17 |

The sample size includes who were active at least 6 years in CPS.

Table 4 Proportions of CLS sample (N=1,389) who ever placed in special education from year 1 to 8

| | Total sample | <u>CPC preschool</u> | | <u>Sex of child</u> | | <u>CPC extended</u> | | |
|--------------------------|--------------|----------------------|------|---------------------|-------|---------------------|--------|------|
| | | Any | None | Boys | Girls | 4 to 6 | 1 to 3 | None |
| Grand total | 15 | 13 | 20 | 21 | 9 | 10 | 19 | 18 |
| CPC preschool | 13 | -- | -- | 17 | 8 | -- | -- | -- |
| No CPC preschool | 20 | -- | -- | 27 | 12 | -- | -- | -- |
| CPC 4 to 6 years | 10 | -- | -- | 14 | 7 | -- | -- | -- |
| CPC 1 to 3 years | 19 | -- | -- | 26 | 11 | -- | -- | -- |
| No CPC partic | 18 | -- | -- | 24 | 11 | -- | -- | -- |
| Blacks | 15 | 13 | 20 | 21 | 10 | 10 | 19 | 18 |
| Latinos | 15 | 12 | 21 | 24 | 0 | 8 | 22 | 19 |
| Parent HS grad | 13 | 12 | 16 | 19 | 9 | 10 | 18 | 13 |
| Nongraduate | 17 | 11 | 26 | 23 | 11 | 6 | 20 | 27 |
| Free lunch | 16 | 13 | 22 | 23 | 10 | 10 | 22 | 19 |
| Reduced/none | 14 | 12 | 18 | 20 | 7 | 14 | 13 | 14 |
| 60% K sch poverty | 16 | 13 | 21 | 22 | 9 | 11 | 18 | 20 |
| <60% K sch poverty | 14 | 13 | 16 | 18 | 9 | 7 | 24 | 11 |
| Overage at K | 43 | 29 | 52 | 57 | 25 | 17 | 57 | 55 |
| not overage at K | 14 | 12 | 18 | 20 | 9 | 10 | 18 | 16 |
| Four or more risks | 17 | 14 | 22 | 23 | 10 | 11 | 19 | 21 |
| Three or fewer risks | 13 | 11 | 16 | 17 | 8 | 8 | 19 | 13 |
| ITBS1 read 50%ile | 5 | 6 | 4 | 6 | 5 | 4 | 9 | 4 |
| Below 50%ile | 21 | 18 | 26 | 27 | 13 | 16 | 24 | 22 |
| ITBS1 math 50%ile | 7 | 6 | 8 | 9 | 5 | 5 | 11 | 5 |
| Below 50%ile | 21 | 18 | 26 | 28 | 13 | 16 | 23 | 23 |
| ITBS3 read 50%ile | 6 | 6 | 6 | 8 | 4 | 5 | 9 | 3 |
| Below 50%ile | 19 | 16 | 25 | 26 | 12 | 13 | 24 | 22 |
| ITBS3 math 50%ile | 7 | 7 | 6 | 8 | 5 | 4 | 12 | 5 |
| Below 50%ile | 19 | 16 | 25 | 26 | 11 | 13 | 22 | 22 |
| 3 or more school moves | 20 | 15 | 24 | 28 | 9 | 9 | 28 | 16 |
| Less than 3 school moves | 15 | 13 | 21 | 22 | 9 | 10 | 19 | 19 |

The sample size includes who were active at kindergarten and first grade in CPS.

Table 5 Correlations among indicators of grade retention in the Chicago Longitudinal Study

| Indicators | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|----------------------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 1.Any retention (K-8) | 1.000 | | | | | | | | | | | | |
| 2.Any retention (1-8) | .991* | 1.000 | | | | | | | | | | | |
| 3.Early retention (1-3) | .812* | .819* | 1.000 | | | | | | | | | | |
| 4.Late retention (4-8) | .515* | .520* | .003 | 1.000 | | | | | | | | | |
| 5.Kindergarten retention | .193* | .126* | .146* | .008 | 1.000 | | | | | | | | |
| 6.First grade retention | .575* | .575* | .702* | .047 | .244* | 1.000 | | | | | | | |
| 7.Second grade retention | .398* | .402* | .487* | -.032 | .000 | -.019 | 1.000 | | | | | | |
| 8.Third grade retention | .401* | .405* | .489* | -.030 | -.029 | .002 | -.059* | 1.000 | | | | | |
| 9.Fourth grade retention | .321* | .324* | -.021 | .630* | .010 | .011 | -.009 | -.043 | 1.000 | | | | |
| 10.Fifth grade retention | .224* | .226* | -.005 | .436* | -.016 | .020 | -.032 | .028 | -.026 | 1.000 | | | |
| 11.Sixth grade retention | .152* | .153* | -.046 | .292* | -.011 | -.033 | -.023 | -.024 | .030 | -.013 | 1.000 | | |
| 12.Seventh grade retention | .247* | .249* | -.025 | .476* | -.018 | .004 | -.039 | -.016 | .032 | -.019 | -.013 | 1.000 | |
| 13.Eighth grade retention | .225* | .213* | .048 | .412* | .092* | .110* | .025 | -.007 | -.029 | -.018 | .070* | -.021 | 1.000 |

*Active at least 6 years in Chicago Public School, N=1,267

Table 6 Correlations among indicators of special education placement in the Chicago Longitudinal Study

| Indicators | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.Number of years in special education placement (1-8) | 1.000 | | | | | | | | | | | | | |
| 2.If ever in special education placement (1-8) | .870* | 1.000 | | | | | | | | | | | | |
| 3.Number of years in special education placement (1-12) | .956* | .844* | 1.000 | | | | | | | | | | | |
| 4.If ever in special education placement (1-12) | .824* | .947* | .843* | 1.000 | | | | | | | | | | |
| 5.Number of years early special education placement (1-3) | .709* | .646* | .619* | .612* | 1.000 | | | | | | | | | |
| 6.If ever in early special education placement (1-3) | .715* | .698* | .627* | .662* | .925* | 1.000 | | | | | | | | |
| 7.Number of years late special education placement (4-8) | .968* | .831* | .943* | .788* | .529* | .561* | 1.000 | | | | | | | |
| 8.If ever in late special education placement (4-8) | .889* | .911* | .879* | .863* | .504* | .536* | .912* | 1.000 | | | | | | |
| 9.Number of years in special education placement for learning disability (1-8) | .726* | .635* | .720* | .601* | .388* | .424* | .752* | .681* | 1.000 | | | | | |
| 10.If ever in special education placement for learning disability (1-8) | .678* | .688* | .697* | .652* | .343* | .371* | .709* | .723* | .922* | 1.000 | | | | |
| 11.Number of years in special education placement for speech and language impairment (1-8) | .440* | .433* | .345* | .410* | .515* | .471* | .357* | .402* | -.001 | .028 | 1.000 | | | |
| 12.If ever in special education placement for speech and language impairment (1-8) | .410* | .512* | .315* | .485* | .572* | .553* | .303* | .385* | .017 | .922* | .845* | 1.000 | | |
| 13.Number of years in special education placement for reasons other than LD or SPL (1-8) | .486* | .428* | .484* | .407* | .273* | .312* | .481* | .450* | .002 | .033 | -.014 | .014 | 1.000 | |
| 14.If ever in special education placement for reasons other than LD or SPL (1-8) | .442* | .459* | .459* | .444* | .223* | .267* | .449* | .473* | .055* | .099* | -.018 | .006 | .883* | 1.000 |

*Active at kindergarten and first grade N=1,389

TABLE 7 : School remedial services- Descriptive Statistics for Study Variables in the CLS (N = 1,267)

| Variable Name | Label | N | Mean | Std. Dev. | Correlation Coefficients | | | |
|--|----------|------|-------|-----------|--------------------------|---------------------|------------------------------|--------------------------------|
| | | | | | Ever retained (K-8) | Ever retained (1-8) | Ever in special Edu PL (1-8) | Ever in special Edu. PL (1-12) |
| <u>Child Demographics</u> | | | | | | | | |
| Percent African American | Blackk | 1267 | .94 | .25 | .022 | .019 | .015 | .025 |
| Percent Girls | Sexk2 | 1267 | .51 | .50 | -.205* | -.211* | -.182* | -.197* |
| <u>Program Participation</u> | | | | | | | | |
| Preschool Participation | Anyprek | 1267 | .65 | .48 | -.110* | -.117* | -.097* | -.098* |
| Follow-on Participation | Anyfol | 1267 | .59 | .49 | -.144* | -.144* | -.063* | -.077* |
| <u>Family Characteristics</u> | | | | | | | | |
| Family risk index | Risk4com | 1267 | 3.59 | 1.34 | .133* | .132* | .080* | .079* |
| Parents years of education | Pedu12 | 1043 | 11.7 | 1.92 | -.113* | -.109* | -.039 | -.040 |
| Parent' education less than HS | P12lshs | 1043 | .37 | .48 | .145* | .140* | .034 | .036 |
| Parents completed HS | P12cmhs | 1043 | .32 | .46 | -.048 | -.045 | .022 | .019 |
| Parents had some college | P12scoll | 1043 | .27 | .44 | -.097* | -.096* | -.062* | -.056 |
| Parents completed college | P12coll4 | 1043 | .05 | .22 | -.021 | -.019 | .005 | -.006 |
| If parent completed HS or not (1=yes) | P12hs | 1043 | .64 | .48 | -.145* | -.140* | -.034 | -.036 |
| If parent had some college or not (1=yes) | P12col | 1043 | .32 | .47 | -.102* | -.100* | -.056 | -.056 |
| Free lunch status | Frdmy14 | 1175 | .93 | .26 | .098* | .096* | .014 | .017 |
| <u>Neighborhood Characteristics</u> | | | | | | | | |
| Income level is 60% or more | Income60 | 1267 | .76 | .43 | .010 | .009 | .028 | .036 |
| Average 1980-90 % all families in poverty (Unit k) | Avgfmpov | 1267 | 43.9 | 13.4 | .049 | .050 | .047 | .062* |
| Average 1090-90 % persons 16+ unemployed (Unit k) | Avgunemp | 1267 | 23.8 | 5.7 | .030 | .033 | .027 | .045 |
| Year 10 neighborhood quality (% family w/incs >\$30k+%persons 25+ HS grads + med fam inc +%males 16+ employed +% fem headed HH in pov + % pop white)/6 | Yr10neiq | 1255 | .01 | .59 | -.108* | -.104* | -.068* | -.078* |
| Neighborhood risk index 1980 (Unit K) | Neigr80k | 1267 | 3.08 | 1.27 | -.042 | -.045 | .032 | .020 |
| <u>Family Experiences</u> | | | | | | | | |
| Parent school involvement (combine teacher and parent rating) | Npsch | 1267 | 1.77 | 1.37 | -.264* | -.263* | -.093* | -.104* |
| Parent school involvement (teacher rating) | T16q16av | 1267 | 2.09 | 1.51 | -.315* | -.313* | -.154* | -.162* |
| Ed expectation for child (From Parent 4,2,11) | Pexpect | 1045 | 3.2 | .96 | -.272* | -.282* | -.144* | -.152* |
| <u>School Performance</u> | | | | | | | | |
| ITBS Word analysis | Sswordk | 1263 | 63.7 | 13.3 | -.328* | -.334* | -.230* | -.251* |
| ITBS read 8 | Ssread8 | 1264 | 145.0 | 22.0 | -.486* | -.488* | -.329* | -.354* |
| Reading/Math grade (grade 4-6) | Gpaav46 | 1171 | 1.95 | .90 | -.356* | -.361* | -.246* | -.280* |
| Days of absence (up to 6th grade) | Dayab12a | 1142 | 7.29 | 5.07 | .082* | .086* | .058 | .067* |
| If ability of class ever been rated below average | Tabilbad | 1164 | .49 | .50 | .145* | .148* | .107* | .115* |
| <u>School life</u> | | | | | | | | |
| If ever been retained (1-8) | Ret18d | 1267 | .28 | .45 | .990* | 1.000 | .240* | .274* |
| Early retention (1-3) | Ret13 | 1267 | .20 | .40 | .801* | .809* | .210* | .243* |
| Later retention (4-8) | Retl | 1267 | .10 | .29 | .513* | .518* | .128* | .160* |
| If ever been in special education (1-8) | Spent18d | 1267 | .16 | .36 | .235* | .240* | 1.000 | .944* |
| <u>Social adjustment</u> | | | | | | | | |
| Class adjustment grade 1 to 3 | Semat13 | 1252 | 19.2 | 4.8 | -.444* | -.451* | -.313* | -.331* |
| <u>School Commitment</u> | | | | | | | | |
| Zscore of average of year 3 to year 6 perceived competence | S36factz | 1233 | -.02 | .81 | -.245* | -.251* | -.214* | -.225* |
| Ed. Expectations (student's, year 4) | Expcol | 1100 | .80 | .40 | -.191* | -.197* | -.112* | -.113* |
| If student rating of teacher's expectation has been highest twice or more | S46teae2 | 1154 | .53 | .50 | -.113* | -.111* | -.034 | -.047 |
| <u>School Quality and support</u> | | | | | | | | |
| If had 1 school move (4-8) | Tmob481 | 1267 | .32 | .47 | .025 | .024 | -.014 | -.011 |
| If had 2 times or more school moves (4-8) | Tmob4822 | 1267 | .16 | .37 | .081* | .085* | .072* | .068* |
| If had 3 times or more school moves (4-8) | Tmob4833 | 1267 | 8.4 | .28 | .132* | .135* | .043 | .044 |
| If ever enrollment in magnets (4-8) | Scmag48d | 1267 | .11 | .31 | -.155* | -.153* | -.008 | -.022 |
| Enrollment in good schools (4-7) | Schq47 | 1267 | .81 | 1.5 | -.098* | -.093* | .016 | .008 |
| If ever enrollment in magnets (9-12) | Schm912d | 1086 | .15 | .36 | -.085* | -.094 | -.038 | -.030 |
| If ever enrollment in career academy (9-12) | Schc912d | 1086 | .24 | .43 | -.108* | -.108* | -.071* | -.083* |
| If ever enrollment in technical schools (9-12) | Scht912d | 1086 | .02 | .15 | -.060* | -.059 | -.002 | -.010 |
| Year 10 school quality (HS grad % +mobility%+low inc %+truancy%)/4 | Yr10scq2 | 1043 | .74 | .73 | -.178* | -.185* | -.070* | -.095* |
| Attended a Chicago Non public high school | Chinonpu | 1267 | .03 | .16 | -.023 | -.022 | -.014 | -.020 |
| Attended high school outside of Chicago | Hsoutchi | 1267 | .08 | .27 | .017 | .013 | -.013 | -.025 |

TABLE 8 : School remedial services -Descriptive Statistics for Study Variables in the CLS (N = 1,389)

| Variable Name | Label | N | Mean | Std. Dev. | Correlation Coefficients | | | |
|--|----------|------|-------|-----------|--------------------------|---------------------|------------------------------|--------------------------------|
| | | | | | Ever retained (K-8) | Ever retained (1-8) | Ever in special Edu PL (1-8) | Ever in special Edu. PL (1-12) |
| <u>Child Demographics</u> | | | | | | | | |
| Percent African American | Blackk | 1389 | .95 | .23 | .039 | .037 | .004 | .014 |
| Percent Girls | Sexk2 | 1389 | .50 | .50 | -.190* | -.197* | -.164* | -.182* |
| Activated at least 6 years in CPS | Activk8d | 1389 | .87 | .33 | .113* | .111* | .034 | .042 |
| <u>Program Participation</u> | | | | | | | | |
| Preschool Participation | Anyprek | 1389 | .65 | .48 | -.086* | -.091* | -.098* | -.095* |
| Follow-on Participation | Anyfol | 1389 | .60 | .49 | -.121* | -.120* | -.043 | -.053* |
| <u>Family Characteristics</u> | | | | | | | | |
| Family risk index | Risk4com | 1389 | 3.65 | 1.33 | .101* | .102* | .068* | .064* |
| Parents years of education | Pedu12 | 1074 | 11.7 | 1.9 | -.124* | -.123* | -.052 | -.057 |
| Parent' education less than HS | P12lshs | 1074 | .36 | .48 | .156* | .154* | .044 | .052 |
| Parents completed HS | P12cmhs | 1074 | .33 | .47 | -.053 | -.052 | .015 | .006 |
| Parents had some college | P12scoll | 1074 | .27 | .44 | -.098* | -.098* | -.063* | -.058 |
| Parents completed college | P12coll4 | 1074 | .05 | .22 | -.029 | -.027 | .001 | -.009 |
| If parent completed HS or not (1=yes) | P12hs | 1074 | .64 | .48 | -.156* | -.154* | -.044 | -.052 |
| If parent had some college or not (1=yes) | P12col | 1074 | .32 | .47 | -.106* | -.106* | -.060 | -.060 |
| Free lunch status | Frdmy14 | 1187 | .93 | .27 | .104* | .102* | .020 | .015 |
| <u>Neighborhood Characteristics</u> | | | | | | | | |
| Income level is 60% or more | Income60 | 1389 | .76 | .43 | -.008 | -.008 | .016 | .020 |
| Average 1980-90 % all families in poverty (Unit k) | Avgfmpov | 1389 | 44.1 | 13.4 | .045 | .045 | .044 | .059* |
| Average 1090-90 % persons 16+ unemployed (Unit k) | Avgunemp | 1389 | 23.9 | 5.6 | .038 | .039 | .022 | .039 |
| Year 10 neighborhood quality (% family w/incs >\$30k+% persons 25+ HS grads + med fam inc +% males 16+ employed +% fem headed HH in pov + % pop white)/6 | Yr10neiq | 1331 | -.004 | .57 | -.095* | -.092* | -.049 | -.058* |
| Neighborhood risk index 1980 (Unit K) | Neigr80k | 1389 | 3.1 | 1.2 | -.062* | -.065* | .026 | .014 |
| <u>Family Experiences</u> | | | | | | | | |
| Parent school involvement (combine teacher and parent rating) | Npsch | 1389 | 1.61 | 1.38 | -.203* | -.203* | -.076* | -.082* |
| Parent school involvement (teacher rating) | T16q16av | 1389 | 1.97 | 1.50 | -.262* | -.263* | -.138* | -.140* |
| Ed expectation for child (From Parent 4,2,11) | Pexpect | 1078 | 3.2 | .95 | -.268* | -.277* | -.151* | -.155* |
| <u>School Performance</u> | | | | | | | | |
| ITBS Word analysis | Sswordk | 1386 | 64.0 | 13.2 | -.309* | -.316* | -.227* | -.247* |
| ITBS read 8 | Ssread8 | 1272 | 145.1 | 21.8 | -.482* | -.487* | -.327* | -.354* |
| Reading/Math grade (grade 4-6) | Gpaav46 | 1160 | 1.96 | .90 | -.347* | -.355* | -.251* | -.285* |
| Days of absence (up to 6th grade) | Dayab12a | 1127 | 7.22 | 5.1 | .098* | .103* | .066* | .076* |
| If ability of class ever been rated below average | Tabilbad | 1151 | .49 | .50 | .141* | .145* | .112* | .119* |
| <u>School life</u> | | | | | | | | |
| If ever been retained (1-8) | Ret18d | 1389 | .25 | .43 | .992* | 1.000 | .228* | .264* |
| Early retention (1-3) | Ret13 | 1389 | .18 | .38 | .805* | .811* | .214* | .244* |
| Later retention (4-8) | Retl | 1389 | .09 | .28 | .527* | .531* | .106* | .139* |
| If ever been in special education (1-8) | Spent18d | 1389 | .15 | .36 | .224* | .228* | 1.000 | .947* |
| <u>Social adjustment</u> | | | | | | | | |
| Class adjustment grade 1 to 3 | Semat13 | 1366 | 19.2 | 4.8 | -.435* | -.440* | -.299* | -.319* |
| <u>School Commitment</u> | | | | | | | | |
| Zscore of average of year 3 to year 6 perceived competence | S36factz | 1265 | -.01 | .82 | -.236* | -.240* | -.223* | -.231* |
| Ed. Expectations (student's, year 4) | Expcol | 1100 | .81 | .39 | -.178* | -.183* | -.109* | -.103* |
| If student rating of teacher's expectation has been highest twice or more | S46teae2 | 1144 | .51 | .50 | -.101* | -.097* | -.037 | -.046 |
| <u>School Quality and support</u> | | | | | | | | |
| If had 1 school move (4-8) | Tmob481 | 1281 | .35 | .48 | .019 | .017 | -.015 | -.014 |
| If had 2 times or more school moves (4-8) | Tmob4822 | 1281 | .16 | .37 | .079* | .083* | .071* | .067* |
| If had 3 times or more school moves (4-8) | Tmob4833 | 1281 | .08 | .27 | .124* | .126* | .034 | .036 |
| If ever enrollment in magnets (4-8) | Scmag48d | 1389 | .10 | .30 | -.144* | -.142* | -.006 | -.018 |
| Enrollment in good schools (4-7) | Schq47 | 1389 | .73 | 1.4 | -.081* | -.078* | .036 | .030 |
| If ever enrollment in magnets (9-12) | Schm912d | 1112 | .15 | .36 | -.067* | -.077* | -.023 | -.015 |
| If ever enrollment in career academy (9-12) | Schc912d | 1112 | .22 | .42 | -.088* | -.085* | -.060* | -.066* |
| If ever enrollment in technical schools (9-12) | Scht912d | 1112 | 2.16 | .15 | -.075* | -.075* | .006 | -.002 |
| Year 10 school quality (HS grad % +mobility%+low inc % +truancy%)/4 | Yr10scq2 | 1023 | .74 | .74 | -.083* | -.190* | -.065* | -.089* |
| Attended a Chicago Non public high school | Chinonpu | 1389 | .03 | .16 | -.031 | -.030 | -.004 | -.010 |
| Attended high school outside of Chicago | Hsoutchi | 1389 | .09 | .29 | .030 | .026 | -.010 | -.022 |

Table 9. Logistic Regression Odds Ratio of Model predicting grade retention (First grade to 8th grade)

| Predictors | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 |
|---|---------|----------|----------|----------|---------|---------|---------|---------|
| Program | | | | | | | | |
| Preschool participation (1=yes) | .73** | .72** | .92 | .98 | 1.01 | .99 | 1.08 | 1.08 |
| Follow-on participation (1=yes) | .59*** | .55*** | .62*** | .62*** | .73* | .74* | .83 | .82 |
| Sociodemographic Factors | | | | | | | | |
| Race (1=black) | | 1.67* | 1.85** | 1.21 | .93 | .90 | .81 | .80 |
| Sex (1=girls) | | .37*** | .39*** | .53*** | .50*** | .52*** | .53*** | .52*** |
| Parent education (highest grade completed through child's age 12) | | .88*** | .90*** | .92** | .95 | .97 | .97 | .97 |
| Ever reported Free Lunch (1=yes) | | 2.66*** | 2.34** | 1.91* | 1.79 | 1.7 | 1.45 | 1.42 |
| Average 1980-90 % all families in poverty (Unit k) | | 1.02** | 1.02* | 1.01 | 1.0 | 1.0 | .99 | .99 |
| Average 1980-90 % persons 16+ unemployed (Unit k) | | .98 | .98 | .99 | 1.0 | 1.0 | 1.01 | 1.01 |
| If missing from parent education or free lunch status (1=yes) | | 1.19 | 1.11 | .86 | .90 | .91 | .89 | .89 |
| Early Adjustment Indicators | | | | | | | | |
| Word analysis (grade k) | | | .95*** | .97*** | .98*** | .98** | .99* | .99** |
| Classroom adjustment (grade 1-3) | | | | .81*** | .88*** | .88*** | .89*** | .89*** |
| Perceived competence (grade 3-6) | | | | .92 | .98 | 1.02 | 1.09 | 1.10 |
| Missing index | | | | .98 | .99 | .97 | .90 | .90 |
| ITBS reading scores (grade 3) | | | | | .94*** | .94*** | .94*** | .94*** |
| If missing ITBS reading scores (grade 3) | | | | | 2.5*** | 2.4*** | 1.86* | 1.85* |
| School commitment | | | | | | | | |
| Parent expectation for kids (years of education: 10-16) | | | | | | .86*** | .87*** | .87*** |
| Ability level below average (teacher's rating) | | | | | | .97 | .97 | .97 |
| Student expect to go to college (1=yes) | | | | | | .76 | .78 | .78 |
| Teacher's expectation are high (from students) | | | | | | .92 | .95 | .95 |
| Days of absence by age 12 | | | | | | .99 | .99 | .99 |
| Intervening School- Based Factors | | | | | | | | |
| Parent Involvement (grade 1-6) | | | | | | | .83*** | .83*** |
| If moved once (grade 4-8) (1=yes) | | | | | | | 1.47** | 1.47** |
| If moved twice (grade 4-8) (1=yes) | | | | | | | 1.81** | 1.81** |
| If moved three times (grade 4-8) (1=yes) | | | | | | | 2.18*** | 2.1*** |
| Ever in special education (grade 1-8) (1=yes) | | | | | | | 1.16 | 1.15 |
| If ever enrollment in magnets (grade 4-8) (1=yes) | | | | | | | .47* | .48* |
| Others | | | | | | | | |
| Any child abuse/neglect | | | | | | | | 1.31 |
| -2 log likelihood | 1471.7 | 1378.7 | 1272.9 | 1135.9 | 1034.2 | 1020.2 | 993.98 | 993.1 |
| Cox & Snell R Square | .024 | .093 | .166 | .252 | .309 | .317 | .331 | .331 |
| Chi-Square | 31.3*** | 124.3*** | 231.1*** | 367.1*** | 468.8 | 482.8 | 509.1 | 509.9 |
| Percent correct | 71.98 | 72.69 | 75.77 | 79.4 | 81.9 | 82.64 | 82.4 | 81.9 |
| Number of cases | 1267 | 1267 | 1267 | 1267 | 1267 | 1267 | 1267 | 1267 |

* p < .10 ** p < .05 *** p < .01

Table 10. Logistic Regression Odds Ratio of Model predicting special education placement (First grade to 8th grade)

| Predictors | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 | Model 7 | Model 8 |
|---|----------|---------|----------|---------|---------|----------|----------|----------|
| <i>Program</i> | | | | | | | | |
| Preschool participation (1=yes) | .58*** | .57*** | .69** | .71* | .70* | .70* | .66** | .67** |
| Follow-on participation (1=yes) | .97 | .91 | 1.0 | 1.06 | 1.15 | 1.17 | 1.1 | 1.07 |
| <i>Sociodemographic Factors</i> | | | | | | | | |
| Race (1=black) | | 1.36 | 1.39 | .99 | .93 | .93 | .91 | .89 |
| Sex (1=girls) | | .39*** | .42*** | .56*** | .56*** | .58*** | .56*** | .55*** |
| Parent education (highest grade completed through child's age 12) | | .93 | .96 | .99 | 1.0 | 1.0 | .99 | .99 |
| Ever reported Free Lunch (1=yes) | | .95 | .82 | .66 | .60 | .59 | .67 | .65 |
| Average 1980-90 % all families in poverty (Unit k) | | 1.02 | 1.02* | 1.01 | 1.0 | 1.01 | 1.01 | 1.01 |
| Average 1980-90 % persons 16+ unemployed (Unit k) | | .97 | .97 | .98 | .99 | .99 | .98 | .98 |
| In Chicago public school 6 years or more (1=yes) | | 1.66* | 1.61* | 1.26 | 1.6 | 1.6 | 1.4 | 1.36 |
| If missing from parent education or free lunch status (1=yes) | | 1.11 | 1.11 | 1.0 | .99 | .99 | .97 | .96 |
| <i>Early Adjustment Indicators</i> | | | | | | | | |
| Word analysis (grade k) | | | .96*** | .97*** | .98*** | .98*** | .98*** | .98*** |
| Classroom adjustment (grade 1-3) | | | | .87*** | .90*** | .90*** | .90*** | .90*** |
| Perceived competence (grade 3-6) | | | | .74*** | .75** | .75** | .76** | .77** |
| Missing index | | | | .95 | .93 | .91 | .92 | .92 |
| ITBS reading scores (grade 3) | | | | | .98*** | .98*** | .98*** | .98*** |
| If missing ITBS reading scores (grade 3) | | | | | 2.4*** | 2.4*** | 2.49*** | 2.5*** |
| <i>School commitment</i> | | | | | | | | |
| Parent expectation for kids (years of education: 10-16) | | | | | | .96 | .95 | .95 |
| Ability level below average (teacher's rating) | | | | | | 1.01 | 1.03 | 1.01 |
| Student expect to go to college (1=yes) | | | | | | .77 | .76 | .76 |
| Teacher's expectation are high (from students) | | | | | | 1.19 | 1.25 | 1.24 |
| Days of absence by age 12 | | | | | | 1.0 | 1.0 | 1.0 |
| <i>Intervening School- Based Factors</i> | | | | | | | | |
| Parent Involvement (grade 1-6) | | | | | | | 1.02 | 1.03 |
| If moved once (grade 4-8) (1=yes) | | | | | | | .93 | .93 |
| If moved twice (grade 4-8) (1=yes) | | | | | | | 1.3 | 1.3 |
| If moved three times (grade 4-8) (1=yes) | | | | | | | 1.01 | .95 |
| If ever enrollment in magnets (grade 4-8) (1= yes) | | | | | | | 2.75*** | 2.8*** |
| <i>Others</i> | | | | | | | | |
| Any child abuse/neglect | | | | | | | | 1.6 |
| -2 log likelihood | 1167.0 | 1117.0 | 1065.7 | 1001.2 | 985.7 | 982.1 | 970.5 | 968.01 |
| Cox & Snell R Square | .009 | .044 | .079 | .121 | .131 | .133 | .140 | .142 |
| Chi-Square | 13.04*** | 63.0 | 114.3*** | 178.8 | 194.3 | 197.9*** | 209.5*** | 212.0*** |
| Percent correct | 84.88 | 84.88 | 85.31 | 86.0 | 86.2 | 86.5 | 86.1 | 86.3 |
| Number of cases | 1389 | 1389 | 1389 | 1389 | 1389 | 1389 | 1389 | 1389 |

* p < .10 ** p < .05 *** p < .01