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ABSTRACT

In the Cleveland (Ohio) Public Schools, the percent of students who are retained in grade, or who are not promoted, is high. At the high school level, retention rates ranged from 9 percent to 47 percent in the 1988-89 school year. School characteristics that correlate with the rate of retention are studied in an attempt to understand some of the dynamics of retention at the school level. Data from the 128 Cleveland Public Schools in a system-wide database are presented. The results show that school retention has negative effects on student achievement when the following variables relating to school characteristics are examined: (1) enrollment; (2) attendance; (3) dropout rates; (4) stability rates (percent of students who stay in the same school for the entire school year); (5) suspensions; (6) percent of male students; (7) percent of black students; and (8) reading comprehension scores on the California Achievement Test. A low retention rate correlates strongly with higher reading scores in the primary grades. In high school, there is a strong negative relationship between rate of retention and average attendance. Some variables, such as poverty, are beyond the ability of the school to remedy, but others such as attendance, student stability within the district, and reading achievement are variables that can be addressed. Statistical data are presented in two tables and five graphs. An eight-item list of references is included. (SLD)

Cleveland City School District

GRADE RETENTION:

A LONGITUDINAL STUDY OF SCHOOL CORRELATES OF RATES OF RETENTION

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April, 1991

Grade Retention: A Longitudinal Study
of School Correlates of Rates of Retention

In the Cleveland Public Schools the percent of students who are retained in grade, or who are not promoted, is high. While the over all retention rate is high this rate varies greatly across schools. Particularly at the high school level, school retention rates range from 9% to 47% in the 1988-1989 school year. This study will address the school characteristics that correlate with the rate of retention in an attempt to understand some of the dynamics of retention at the school level. Why should schools with similar student populations vary greatly in retention rates?

The practice of retaining students in a grade for more than one year is wide spread in schools in the United States. This practice persists despite research evidence which is at best seen as inconclusive (Larabee, 1984). Holmes and Matthew (1984), in a meta-analysis of research on retention, show negative effects on achievement, self concept and attitude toward school. They conclude that the "potential for negative effects consistently outweighs positive outcomes" (p. 232). Other reviewers agree that grade retention is not justified by the research evidence (See e.g. Doyle, 1989; Johnson, 1984; Smith & Shepard, 1987).

Research shows that certain student characteristics make it more likely that a student will be retained one or more times. Retention is associated with low academic achievement, and low IQ in the elementary school and with behavioral suspensions and excessive absenteeism in the junior high (Safer, 1986). Retention is more common for black and Hispanic students than whites and for male students (Center for Policy Research in Education, 1990). In addition, district policies affect the retention rates (Schwager & Barlow,

1990). But even within districts, there is large variation in the retention rates across schools with similar student populations, as evidenced in a report on retention rates in the Chicago Public Elementary Schools (Easton & Storey, 1990). To begin to understand why retention rates remain high a district needs to understand school differences.

Procedure

This study includes data from each of the 128 Cleveland Public Schools. The variables studied were those that were judged to be possible contributors of school climate or school dynamic. This study does not look at individual student characteristics that might contribute to the promotion or non promotion of individual students but at those school characteristics that might contribute to school differences in retention rates.

The variables included in this study are:

Nonpromote	School level retention rate
Number	Number of students enrolled with one or more days enrolled
Attrat	Attendance rate for enrolled students
Overag	% of enrolled students overage for grade
Rdlnch	% of enrolled students receiving free or reduced lunch
Drpout	Dropout rate for enrolled students
Stabil	Stability rate for enrolled students (% of students who stay in the same school for the entire school year)
Srate	Total number of suspensions per 100 enrolled students
Insrat	Number of in school suspensions per 100 enrolled students
Rgsrat	Number of out of school suspensions per 100 enrolled students
Pctmal	% of male students
Pctblk	% of black students
Read	Mean reading comprehension score (California Achievement Test).

All the variables were available on a system wide data base. Each variable was aggregated by school. Analyses were done separately for each grade and each grade level (primary 1-3, upper elementary 4-6, intermediate 7-8 and high school 9-12). Trends across years are examined and a discriminant analysis was used to identify variables useful in distinguishing school which have consistently low, average or high retention rates.

Results

Change in Non Promote Rates.

School non promote rates differ across grade levels. Non promote rates are highest for grades 9-12, followed by grades 7-8, grades 1-3 and grades 4-6, in that order. See figures 1 through 4 for trends.

Non promote rates have decreased in the elementary schools from 1987 to 1990. This decrease is greatest for grades 1-3 ($X_{1987} = 8.78$, $X_{1989} = 6.17$, $X_{1990} = 5.97$). For intermediate schools the rate of non promote peaked in 1988 ($X = 14.145$) and decreased in 1989 ($X = 10.54$). There was little change at the high school level for the first three years. However, the high school retention rates decreased dramatically in 1990. This was due in part to a change in the number of credit hours required to pass from grade 9 to grade 10.

The lowest non promote rate was observed at grades 4-6. The rate decreased from a mean of 2.87 in 1987 to a mean of 1.80 in 1989. In 1990 the rate increased to a mean of 2.27. In 1989, 13 of 54 schools (almost 25%) had zero non promotes in grades 4-6.

Correlates to Non Promote Rates.

For elementary levels, grades 1 - 6, there are no consistent correlations between non promote rate and other school variables. The only correlation that held for 1987 and 1989 was a significant negative correlation between non

promote and mean reading score for first grade. (See Tables 1 and 2 for correlations for each grade.)

For intermediate, grades 7-8, there are no significant correlations between school variables and non promote rate.

However, for high school, grades 9 - 12, there are several strong, significant and consistent correlations. The strongest relationships exist between rate of attendance and per cent of students overage, and rate of non promote. There exist high negative correlations between rate of attendance and rate of non promote for grade 9 through 12 in 1987 and grade 10 through 12 in 1989. Correlations range from $r = -.64$ to $r = -.88$. There are high, positive correlations between per cent overage and rate of non promote for grades 9 through 12 in 1987 and grades 10 through 12 in 1989. Correlations range from $r = .54$ to $r = .79$.

For primary, upper elementary and intermediate levels the predictors of school retention rate are weak and inconsistent across years. The one variable that appears as a statistically significant predictor more than once is the percent of students receiving free or reduced lunch. However, the relationships between reduced lunch and non promote rate are weak and the percent of explained variance are low (under 20%).

To further understand the school retention rates in early elementary, schools were identified which had consistently low, average or high retention rates over the three study years. Discriminant analysis identified 6 variables that clearly distinguished low retention schools from high and average. Schools with low retention rates were correctly classified 91% of the time. The four most important distinguishing characteristics were: high 1st grade reading achievement, high student stability rate, high average attendance, and low poverty rate.

Students of Low vs. High Retention Schools.

Students from high retention schools, who were retained in the first grade were matched with promoted students in low retention school. All matched students were first grade students in 1986-87 school year. All students were 6 years old as of September 30, 1986. Students were matched on reading achievement, school attendance, age, sex and race. Matching resulted in 49 matched pairs. The pairs were 61% black, and 71% male. This is slightly smaller than the district wide percentage of black (68%) and a larger percentage of male students than is true for the district as a whole. Paired t test confirmed the equivalence of the matched students in reading achievement and number of days absent.

Matched students were compared on several variables for 3 yrs following their initial entrance into first grade, through the 1989-90 school year. The paired students did not differ in number of days absent for the next three years.

The California Achievement Test (CAT) reading subscale is administered in the spring of each school year. The mean NCE scores on CAT reading comprehension for first grade were 34.90 and 35.16 for promoted and non promoted students respectively. Second grade reading scores were available for 35 pairs. There was no significant difference in second grade reading achievement ($t_{34} = -.60$, $p > .05$) with the mean CAT, NCE scores of 32.63 and 34.77 for promoted and retained students. The second grade performance of the two groups was similar even though the retained students had an extra year of schooling before reaching grade 2. When the students reach third grade data is available for only 22 pairs. The data shows that students who progressed through the three grades without retention show significantly higher reading scores in third grade than did students who were retained in grade one. The

mean NCE score for reading was 44.36 for students who progressed normally and 33.36 for students who were retained in grade one.

In addition, students who were retained were more mobile than the promoted students. Of the 49 students who were initially in low retention schools, and were promoted in grade one, 39 (80%) remained in the district over three years, and 30 of these (77%) remained in the same school for all three years. Of the 49 students who were initially enrolled in high retention schools, and who were retained in grade one, 37 (76%) remained in the district for their first three years of schooling, and 23 of these students (62%) remained in the same school. At the end of the fourth year, 12 of the 49 promoted students (24%) withdrew from Cleveland Schools, as compared to 16 of the 49 retained students (33%).

Discussion

Cleveland Public Schools have high average retention rates yet schools within the district vary in school retention rates. School retention can have negative effects on student achievement and has been shown to be directly related to higher dropout rates. These facts make it important for schools to understand how to reduce the rate of retention. Some schools at all levels exhibit very low rates of retention. This low retention rate is correlated with higher reading scores in primary grades. In high school there is a very strong negative relationship between rate of retention and average attendance. While some variables, such as poverty rate are beyond the control of the schools, variables such as attendance, student stability within the district and reading achievement are variables which can be modified. Schools with low retention rate must be studied further in an attempt to understand the environmental factors which affect the difference.

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Table 1

Correlations for School Level Non Promote Rates and Selected School Indicators by Grade for 1986 - 1987

School Indicator	GRADE 1	2	3	4	5	6
NUMBER	.1565	.0352	.0017	.1555	1721	.1365
ATTRAT87	-.2000	-.1006	-.1483	-.1336	-.2908	-.2189
OVERAG87	.1554	.3542*	.3404*	.2943	.1479	.2182
READ87	-.4721**	-.3140	-.2367	-.2112	-.3255*	-.2021
RDLNCH87	.0519	.2969	.1986	.2660	.2593	.0267
DRPOUT87	.	.	.	.	.	.
STABIL87	.0863	-.1637	-.0794	.1709	.0908	.2639
SRATE87	-.0120	-.0979	.2006	-.0729	-.0435	.0143
INSRAT87	.	.	.	.	.	.
RGSRAT87	-.0120	-.0999	.1843	-.0729	-.0602	.0189
PCTMAL87	.1794	.2959	.0306	.0552	-.0822	-.0849
PCTBLK87	-.0583	.0075	.0505	.2077	.0098	-.1533
N of cases:	54	54	54	52	51	51

	Grade 7	8	9	10	11	12
NUMBER	.0431	.2335	.6329*	.7298**	.3935	.5891*
ATTRAT87	-.4243	-.5435*	-.7971**	-.8048**	-.6377*	-.7357**
OVERAG87	.3783	.4507	.7976**	.7721**	.6148*	.6415*
READ87	-.4507	-.2525	-.6739*	-.6192*	-.3460	-.3356
RDLNCH87	.3388	.0876	.0666	-.3211	-.2073	-.0246
DRPOUT87	-.1412	.3966	.6758*	.7123**	.4692	.4340
STABIL87	-.3868	-.3632	-.5240	-.6901*	-.5776*	-.5432*
SRATE87	.1375	.2904	.6974*	.4940	.6405*	.2106
INSRAT87	.1261	.2552	.5518	.1726	.5278	-.0790
RGSRAT87	.1105	.2578	.6484*	.6396*	.5322*	.5521*
PCTMAL87	.3054	.1827	.3891	-.0090	.4466	.0009
PCTBLK87	.0526	.0051	-.1891	.1119	-.1725	-.2201
N of cases:	24	25	15	16	19	19

1-tailed Signif: * p < .01. ** p < .001.

" . " is printed if a coefficient cannot be computed

Table 2

Correlations for School Level Non Promote Rates and Selected School Indicators by Grade for 1988 - 1989

School Indicator	GRADE 1	2	3	4	5	6
NUMBER	.3427*	.1256	.0908	.3629*	.3881*	-.0254
ATTRAT89	-.2857	-.0672	-.0164	-.3524*	-.1827	-.1346
OVERAG89	.1535	.1094	.0865	.2620	-.0171	-.0925
READ89	-.3786*	-.0712	-.1346	-.2820	-.0782	-.0294
RDLNCH89	.3169*	.1651	.1736	.3323*	.1621	-.1336
DRPOUT89	.	.	.	.	.	.
STABIL89	.1386	.0599	.0822	-.2705	-.0610	-.0633
SRATE89	.0313	.2280	.1002	.1420	-.0060	.0066
INSRAT89	.	.	.	.	.	.
RGSRAT89	.0313	.2225	.1047	.1460	.0108	.0106
PCTMAL89	.1836	.0186	.0117	-.0383	-.1625	-.2132
PCTBLK89	.0718	.2457	.2827	.0474	-.0475	-.1761
N of cases:	54	54	54	52	52	52

	GRADE 7	8	9	10	11	12
NUMBER	-.0511	.0605	.4019	.4933	.3985	.2293
ATTRAT89	-.2682	-.0825	-.4327	-.7925**	-.7561**	-.8826**
OVERAG89	.1717	.1152	.1973	.5354*	.6109*	.6965**
READ89	-.3222	-.3011	-.1500	-.7904**	-.7250**	-.4857
RDLNCH89	.0905	.1278	-.3245	.0891	-.0323	.0497
DRPOUT89	.2081	.1101	.4819	.2747	.1652	.0579
STABIL89	-.0275	-.3089	-.3010	-.3682	-.4995	-.2232
SRATE89	.1596	.2143	-.0009	.3654	.3024	.0579
INSRAT89	.0323	.2435	.0857	.2885	.2331	.0203
RGSRAT89	.2159	.0943	-.1926	.3456	.3430	.1437
PCTMAL89	.1492	.0888	.5994*	.1098	-.1994	.1293
PCTBLK89	-.0816	.0938	-.2765	.1404	.1681	-.0118
N of cases:	24	24	19	19	19	19

1-tailed Signif: * p < .01. ** p < .001.

" . " is printed if a coefficient cannot be computed

School Non Promote Rates
By Grade Level and School Type
For 1986-87 through 1989-90 School Years

Figure 1. Grades 1 through 3

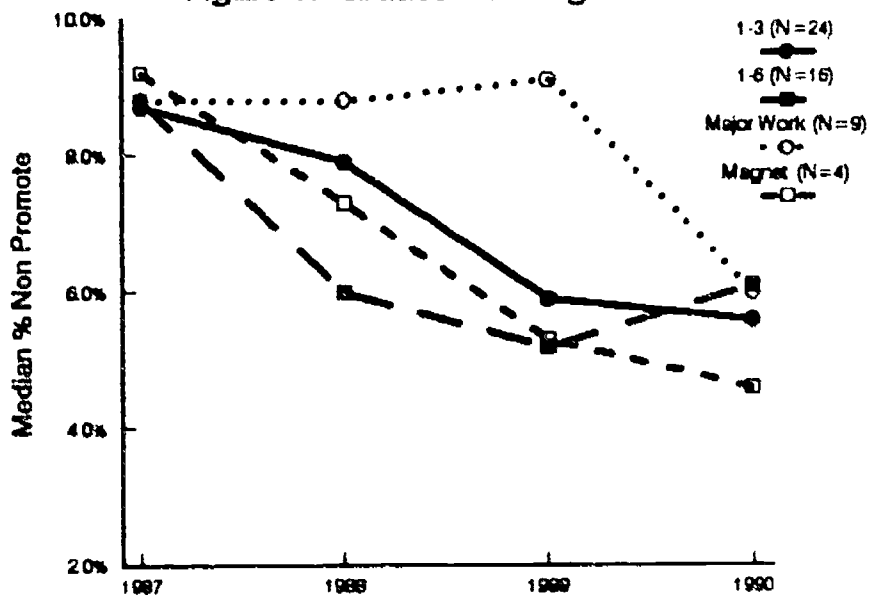

Figure 2. Grades 4 through 6

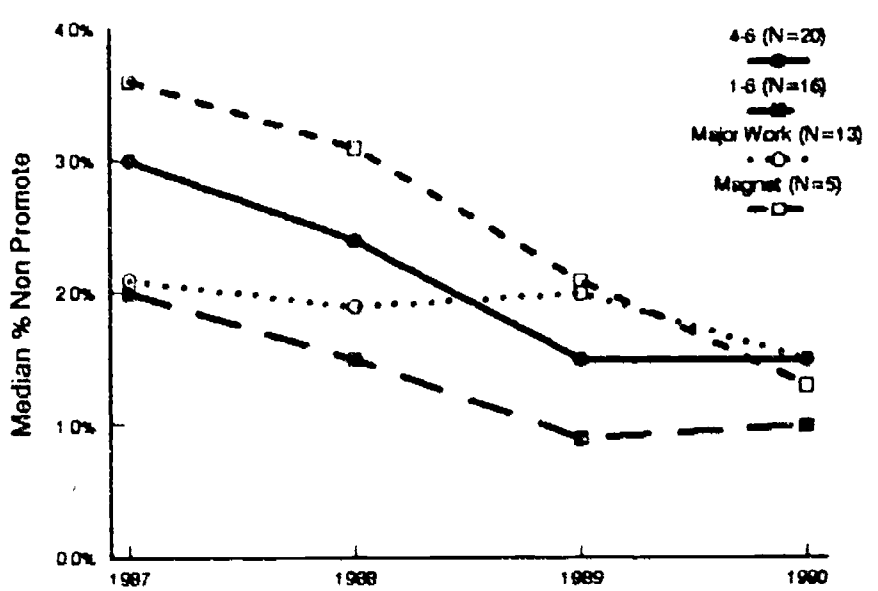

Figure 3. Grades 7 and 8

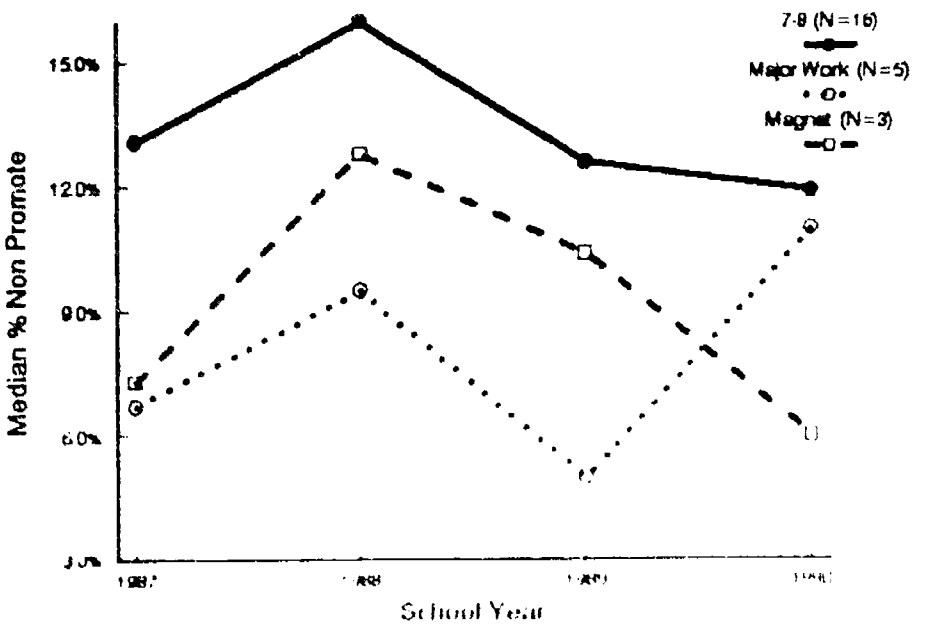

Figure 4. Grades 9 through 12

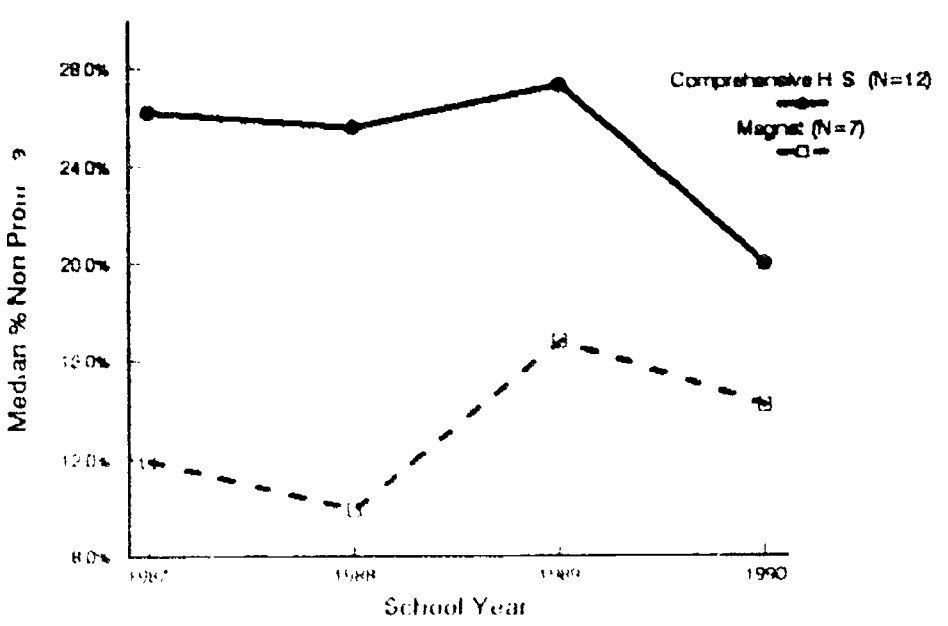

Figure 5. Mean Reading Scores for Retained and Non retained 1st Graders