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ABSTRACT

Affective and academic outcomes of grade retention were studied using the High School and Beyond (HSB) data set--a large, nationally representative sample of students. More specifically, the study: compared the academic (achievement and educational attainment) and affective (educational aspirations) outcomes of retained and non-retained students, compared the academic and affective (including self-efficacy) outcomes of early and late retained students; assessed potential factors influencing the success stories in retention; examined the contribution of sex and socioeconomic status (SE); and identified areas for more detailed inquiry. The cohort of high school sophomores was assessed in 1980 and reassessed in 1982, 1984, and 1986. A total of 1,015 schools were selected for the sample, and 36 seniors and 36 sophomores were randomly selected in each school. In those schools with fewer than 36 seniors and/or sophomores, all eligible students were included in the sample. Participants in all 4 waves of the survey included 13,425 students, of which 1,469 had been retained at some point in their scholastic careers. The Statistical Package for the Social Sciences (SPSSX) was used to conduct descriptive and inferential statistical procedures used to analyze the data. Variables were either items drawn directly from the HSB data or composite variables. Results indicate that there are some success stories for retained students. Slightly fewer than half of the higher SES students who were retained scored above the median on the sophomore achievement measure, whereas fewer than 20% of the lower SES retained students scored above the median on the achievement composite. Gender also played a part in retention decisions and outcomes. Five data tables are included. (TJH)

Grade Retention and Student Outcomes: Data from High School and Beyond

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Student retention practices have generally not been based on research, but on tradition, school and community norms, and teacher attitudes and values (Smith and Shepard, 1988). The beliefs in the value (if one exists) of retention are deeply rooted and not easily influenced by empirical findings.

One of the reasons that research findings tend not to influence practice is because the body of empirical literature offers conflicting findings. Riffel and Switzer (1986) noted that the research is as full of contradictions and subject to the same ideological biases that confound most retention policies. Their literature review argued that the consequences of retention vary considerably with student characteristics and the contingencies of the particular situation.

Shepard and Smith (1986) reviewed the existing research on school readiness and kindergarten retention and concluded that retention does not appear to lead to any significant gains in student achievement, but does adversely affect self-esteem. They reported that when retained children were compared to a similar group of promoted low achievers, the retained students fell behind the socially promoted students on both achievement and social-emotional measures. In a later article Smith and Shepard (1988) investigated how teacher belief systems influence retention practices. They reported that teachers believing in a nativistic child development model were more likely to retain kindergarten students than teachers believing in an environmental model. In addition, they suggested, that, while teacher beliefs about retention appeared to be independent of empirical evidence, they are often influenced by school norms.

In spite of conflicting evidence regarding the consequences of retention, research has consistently indicated that students who have been retained are more likely to drop out of school (Shepard and Smith 1986). There is an estimated 40% dropout rate for students who are held back at least one grade compared with 10% for those students never retained (Bachman et.al, 1972). Grade retention is such a strong predictor of dropping out that some writers have argued that retention may actually constitute a form

of punishment for disadvantaged students (Hahn, et. al, 1987).

The retention problem focuses attention on the balance between the academic and social purposes of schools. The push towards excellence and accountability has forced this issue into the forefront of educational concerns. Schools have become caught in a dilemma: On one side are the merit-based proponents, and on the other, advocates of a democratic system of education. Recent studies and literature reviews have generally not supported retention as an educational policy (Shepard and Smith, 1986; Smith and Shepard, 1987; Smith and Shepard, 1988; Jackson, 1975; Cuddy, 1987), but because most of the existing research is ambiguous, others (Riffel and Switzer, 1986) have suggested that the outcomes of retention are highly contingent upon individual factors. Most of the existing literature is based on studies with relatively small sample sizes, and resolving the present controversy demands more comprehensive assessments. The purpose of this study was to describe some affective and academic outcomes of grade retention using the High School and Beyond data set, a large, nationally representative sample of students.

Five objectives of this study were: 1) to compare the academic (achievement and educational attainment) and affective (educational aspirations) outcomes of retained and non-retained students, 2) to compare the academic and affective (including self-efficacy) outcomes of early and late retained students, 3) to describe potential factors that influence the success stories in retention, 4) to examine the contribution of sex and socioeconomic status to the outcomes above, and 5) to identify areas for more detailed inquiry.

Method

Subjects

We employed the High School and Beyond (HSB) data base, a nationally representative sample of high school sophomores in 1980, most of whom were surveyed again in 1982, 1984, and 1986 (National Opinion Research Center,1987). In the 1980 cohort, students were selected through a two-stage, stratified probability sample with schools as the first stage sampling units and students as the second stage. There were 1015 schools selected for the sample, and 36 seniors and 36 sophomores were randomly selected within each school. In those schools with fewer than 36 seniors and/or sophomores, all eligible students were included in the sample. There were a total of 13,425 students participating in all four waves of the survey, of which 1469 had been retained at some point in their scholastic careers. All analyses were conducted with the HSB sampling weights in effect. Because of over-sampling of certain groups during the 1980 base-year survey and the non random nature of the follow-up surveys, the National Center for Educational Statistics suggests that whenever inferential statistics and tests of significance are performed using HSB data, the weighting procedure should be employed (National Opinion Research Center, chap. 3, 1987). In order to preserve an accurate, but proportionally correct, sample size, the weight was divided by a mean weight to produce the weighting measure used in this study.

Variables

SPSSX statistical software (SPSS, 1988) was used to carry out both the descriptive and inferential statistical procedures used to analyze the data. The variables were either items drawn directly from the HSB data or composite variables were constructed.

The achievement variable was an HSB-created composite score formed by adding the standardized scores from a 21-item vocabulary test, a 19-item reading test, and the 28-item math test (see Heyns and Hilton,1982).

The educational aspirations variable was a single item "As things stand now, how far in school do you think you will get?", with choices ranging from "less than high school graduation" to "Ph.D., M.D., or other advanced professional degree".

The educational attainment variable was drawn from the 1986 survey and reflects the highest level of education achieved by the respondent at that time. Choices are similar to those for the educational aspirations variable described above.

The self-efficacy composite was created from the following HSB items: "I take a positive attitude towards myself"; "I'm a person of worth"; "I am able to do things as well as most other people";" On the whole, I am satisfied with myself"; "What happens to me is my own doing"; "When I make plans, I am almost certain I can make them work"; "Every time I try to get ahead, something or somebody stops me"; "At times I think I am no good at all"; "I feel I do not have much to be proud of". All items were coded so that the most positive response received the highest value. The scores were standardized and averaged if the student had a valid response on at least 6 of the 9 items.

Socioeconomic status is a HSB-created composite based on five components: 1) father's occupation, 2) father's education, 3) mother's education 4) family income, and 5) material possessions in the household (e.g., personal calculator, 50 or more books, place to study, etc.). The socioeconomic status composite is the simple average of the non-missing components, after each of the five scores have been standardized. All of the variables mentioned above, except educational attainment, were taken from the 1980 survey.

The retention variables were taken from the 1982 wave of the survey. The students were asked whether or not they had been retained, and those students who had been retained were asked which grade they repeated, with choices ranging from first grade to ninth grade. These were both coded as dummy variables. In the first case, retained=0 and non-retained=1, and in the second case, early retained (first or second grade)=0, and late retained (third through ninth grade)=1.

Sex was also coded as a dummy variable, males=0 and females=1.

Procedure

Basic descriptive statistics and intercorrelations were computed for all variables. In order to assess the differences between retained and non-retained students, chi-squares were calculated: a 2 x 2 table to examine sex differences, and two 2 x 4 tables to investigate the retention distributions in the four SES and four achievement test quartiles.

Due to the strong relationship between the dependent variables and socioeconomic status, a second set of chi-square analyses, alternately using only the top 50% and the lowest 50% of the SES distribution were performed. It was hypothesized that this analysis would help illustrate the effects of socioeconomic status on the achievement, aspirational, and educational attainment levels of students who have been retained.

In order to investigate the differences between early and late retained students a two (retained or non-retained) by two (sex) analysis of covariance with SES as the covariate was performed with the various academic and affective outcomes as the dependent variables.

Results

Means, standard deviations, ranges, and intercorrelations are reported in Table 1. The intercorrelations among achievement, SES, aspirations, and educational attainment were positive and fairly strong (r=.21 to .47). The correlations with the sex and retention variables and the dependent variables were somewhat suppressed because of the reduced range of the dummy variables.

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Insert Table 1 about here

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Comparing students who were retained with those students never retained.

As expected, a significantly ($p \leq .05$) higher proportion of retained students were from the lower end of the socioeconomic spectrum. Retained students were also disproportionately represented in the lower half of the achievement test distribution. Sex appears to play a strong role in retention decisions; significantly more boys than girls were retained throughout their school careers. Retained students were significantly lower on the educational aspirations and educational attainment measures, but the differences were not as great as those observed on the achievement and SES variables (see Table 2).

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Insert Table 2 about here

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Due to the apparent influence of SES on retention decisions and later school achievement, separate analyses were conducted for high and low SES students (see Tables 3 and 4). The trends observed in the achievement results in the two analyses are particularly striking; in the analysis of low SES students, an overwhelming majority (78%) who were retained scored in the lower half of the achievement distribution,

while the achievement results of higher SES students who were retained were fairly evenly distributed throughout all quartiles. The positive relationship of SES to achievement is further illustrated by the trends in achievement scores of non-retained students from the high SES group.

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Insert Tables 3 & 4 about here

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The relationship of SES to retention, educational aspirations, and educational attainment does not appear to be as strong as the influence exerted on the achievement scores. Although there are statistically significant differences between the aspirations and attainment of retained and non-retained students in both the high and low SES analyses (see Tables 3 and 4), the general trends for both aspirations and educational attainment are similar for those students who have been retained and those who have not. SES still appears to exert a greater influence over educational progress than whether or not a student has been retained. For instance, similar percentages of retained students from high SES backgrounds and non-retained students from low SES backgrounds had attended and/or completed college by 1986.

Boys were consistently overrepresented in the retained students group. Over 55% of the students who were retained at some point in their school careers were boys.

The effects of the grade of retention on academic and affective outcomes.

The relative contributions of SES, grade of retention, and sex for explaining the variability in the four dependent measures were assessed with a two (early or late-retained) by two (sex) analysis of covariance with SES as the covariate (see Table 5). Coladarci and McIntire (1988) suggested that with large sample sizes, merely examining the statistical significance of the explained variance may be inappropriate. This issue is easily observed in Table 5; where if as little as one-half of one percent of

the variance in the dependent measures is explained by the covariate or one of the main effects it is statistically significant.

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Insert Table 5 about here

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Socioeconomic status (SES) explained far more of the variance in the dependent measures than either of the main effects (retention or sex) or the interaction term (retention X sex). SES explained between 6 and 10% of the variability in achievement and aspirations, but less than 1% of the variability in efficacy and educational attainment (partially due to the truncated range in educational attainment). In all cases, grade of retention, sex, and the interaction of retention and sex explained little to no variability in the dependent measures.

Table 5 further illustrates the negligible influence of the main effects upon the dependent measures with SES controlled. There were only minor differences in the educational outcomes between early and later retained students. Late retained students were slightly, but significantly, higher on the educational aspirations measure and on the self-efficacy scale, while early retained students were slightly, but not significantly, higher on the achievement and educational attainment measures.

Discussion

The results suggest that there are some "success stories" for retained students. We have defined "success" as those students who, after being retained at some point, scored in the highest 50 % of the achievement test distribution. Slightly fewer than half of the higher SES students who were retained scored above the median on the sophomore achievement measure, whereas fewer than 20% of the lower SES retained students scored above the median on the achievement composite. The relationship of SES to achievement among non-retained students is positive and is illustrated quite clearly by the results presented in Table 4. This positive relationship between SES and achievement has been well documented in the educational and psychological literature (Shanahan and Walberg, 1985; Walberg and Fowler, 1987; Coladarci and McIntire, 1988; McIntire and Marion, 1989). The fact that students from high SES backgrounds have a better chance of succeeding in school, whether they are retained at some point or not, does not obscure the finding that students from high SES backgrounds who have been retained have a much greater chance for success than retained students from low SES families. The important aspect of this question that remains unanswered, is whether or not these students would have succeeded if they had been promoted instead of retained. A potential strategy for further inquiry would be to statistically control for ability and SES while observing the variation in achievement scores between retained and non-retained students.

The overrepresentation of boys in the retained population leads to speculation about the factors influencing the decision to retain or promote a student. It is clear that retention decisions are not based solely on achievement or ability, but also on factors such as physical and emotional maturity. While these may be valid variables in retention decsions, the subjective nature by which they are assessed may raise questions about the equity of many retention policies.

Although there is a general feeling that if students are to be retained it is better to do so early in their academic lives (Overman, 1986); no real differences in outcomes are found here between early-retained and later-retained students.

Several authors have suggested alternatives to retention that may prove more effective and less costly (Hall and Wallace, 1986; Riffel and Switzer, 1986; Smith and Shepard,1987). The results of this study support Smith and Shepard's (1987) assertion that disproportionate numbers of boys and poor children are retained, and that broad retention policies may in fact be discriminatory. Further research is required to compare the academic and social outcomes of retained students, socially promoted students, and students participating in alternative programs.

There are "success stories", but these successes seem to be due more to underlying factors such as socioeconomic status than they are to retention practices. These analyses support Riffel and Switzer's (1986) assertions that retention outcomes are highly contingent on factors other than retention or promotion. They reported that less than one-half of the American schools surveyed had written policies concerning retention and social promotion. Smith and Shepard (1987) argue that the elaborate decision-making processes that needs to be in place for a retention policy to function properly are likely to be imprecise and costly. With such unpredictable and often biased outcomes for retained students, clear guidelines need to be developed in order to best serve all students.

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Table 1

Means, Standard Deviations, and Intercorrelations.

Variable	Mean	SD	Range	Correlation Coefficients 1	2	3	4	5	6	7
1) Achievement	50.16	8.87	45.74	----						
2) Aspirations	4.02	1.63	6.00	.4702*	----					
3) Efficacy	0.00	0.56	4.50	.1456*	.2208*	----				
4) Educ. Attainment	2.31	0.91	6.00	.2657*	.2609*	.0585*	----			
5) SES	0.04	0.73	4.84	.4236*	.4081*	.1356*	.2103*	----		
6) Repeat	0.87	0.34	1.00	.2262*	.1525*	.0213*	.0807	.1125*	----	
7) Grade Retained	0.39	0.49	1.00	.0001	.0939*	.0763*	-.0536*	.0225	.0000	
8) Sex	0.51	0.5	1	-.0335*	.0501*	-.0894*	.0537*	-.0605*	.0701*	-.0272

* Denotes Pearson Correlation coefficients significant at alpha=0.05.

Notes:

Repeat: 0=student has repeated a grade, 1= never repeated.

Grade Retained: 0=retained in first or second grade,
1=retained in 3rd through 9th grade.

Sex: 0=male, 1=female.

Table 2

A comparison of retained and non-retained students.

Group	Retained	Non-Retained	Chi-sq.
Sex			
Male	853	4604	
Female	642	5254	55.80*
SES			
Q1-lowest	491	1937	
Q2	368	2393	
Q3	284	2610	
Q4	256	2637	184.88*
Achievement			
Q1	539	1629	
Q2	424	2085	
Q3	255	2477	
Q4	142	2975	535.63*
Ed. Aspirations			
H.S. or less	576	2058	
Some College	755	6510	
College Grad	89	1037	254.72*
Ed. Attainment			
H.S. or less	1255	7631	
Some college	152	1308	
College Grad	43	764	
Advanced Deg.	0	6	61.68*

* Denotes statistically significant Chi-square (alpha=.05).

Table 3

A comparison of retained and non-retained students in the lowest 50% of the SES distribution.

Group	Retained	Non-Retained	Chi-sq.
Sex			
Male	492	1876	
Female	368	2454	55.63*
Achievement			
Q1	372	1027	
Q2	243	1152	
Q3	128	1035	
Q4	39	801	218.56*
Ed. Aspirations			
H.S. or less	395	1392	
Some College	390	2555	
College Grad	37	279	69.62*
Ed. Attainment			
H.S. or less	735	3508	
Some college	85	580	
College Grad	11	161	
Advanced Deg.	0	2	21.50*

* Denotes statistically significant Chi-square (alpha=.05).

Table 4

A comparison of retained and non-retained students in the highest 50% of the SES distribution.

Group	Retained	Non-Retained	Chi-sq.
Sex			
Male	312	2591	
Female	229	2656	13.39*
Achievement			
Q1	117	464	
Q2	115	874	
Q3	117	1413	
Q4	101	2149	191.58*
Ed. Aspirations			
H.S. or less	135	581	
Some College	340	3829	
College Grad	48	738	94.43*
Ed. Attainment			
H.S. or less	434	3900	
Some college	60	683	
College Grad	31	596	
Advanced Deg.	0	4	18.08*

* Denotes statistically significant Chi-square (alpha=.05).

Table 5

Percent* of Total Sum of Squares Accounted for by the Covariate, the Main effects, and the Interaction of Gender and Time of Retention. Adjusted means** for Early-Retained (N=550) and Late-Retained (N=350) students are presented.

	Covariate	Main Effects		Interaction	Adjusted Means	
Variable	SES	Grade Retained	Sex	Grade x Sex	Early Retained	Late Retained
Achievement	10.45	0.03	0.68	0.11	44.72	44.50
Aspirations	6.45	0.77	0.34	1.11	3.29	3.57
Efficacy	0.99	0.60	0.01	0.44	-0.09	-0.01
Ed. Attainment	0.69	0.30	0.28	0.00	2.15	2.09

* All percents greater than 0.50 % are statistically significant (alpha=0.05).
** Each mean is adjusted for SES and sex.