DOCUMENT RESUME

ED 229 876 EA 015 663

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TITLE The Effects of Nonpromotion on Elementary and Junior High School Pupils: A Meta-Analysis.
PUB DATE Apr 83
NOTE 26p.; Paper presented at the Annual Meeting of the American Educational Research Association (Montreal, Quebec, Canada, April 11-15, 1983).
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Academic Achievement; *Academic Failure; Aptitude Treatment Interaction; Comparative Analysis; Correlation; *Elementary School Students; Elementary Secondary Education; *Junior High School Students; *Student Promotion; Tables (Data)
IDENTIFIERS Meta Analysis

ABSTRACT

Because studies have variously analyzed the effects of nonpromotion on elementary and junior high school students--with some studies selecting control groups from within the same school and others without, some from age-peers and others from grade-peers--this meta-analysis mathematically integrates the research findings to coordinate their results. Using 44 studies that met the topic criteria, the authors measured the "effect sizes" in grand means. When each effect size was treated equally, the grand mean effect size was -.37, indicating that promoted children scored 0.37 standard deviation units higher than retained children on the outcome measures. When effect sizes within each study were averaged, the grand mean was -.34. In studies in which promoted and nonpromoted students had been compared, the grand mean was -.38. It is noted that the high degree of consistency lends credibility to the validity of the findings. In addition to the grand means, effect sizes were calculated on some dependent variable measures, including academic achievement, personal adjustment, attitude, behavior, and attendance. The cumulative research shows that the potential for negative effects consistently outweighs positive outcomes. The analysis concludes with an extensive list of references. (JW)

The Effects of Nonpromotion on Elementary and Junior High School Pupils: A Meta-Analysis

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Running Head: Effects of Nonpromotion

Printed in U.S.A.

Abstract

In this study data from all studies identified as meeting the selection criteria were mathematically integrated to determine the effect of grade-level retention on elementary and/or junior high school pupils. When each effect size calculated was treated equally, a grand mean effect size of -.37 was obtained indicating that, on the average, promoted children scored .37 standard deviation units higher than retained children on the various outcome measures. When the effect sizes within each study were first averaged, so that each study could be given equal weight, a grand mean of -.34 was obtained. By using the effect sizes from only those studies in which the promoted and nonpromoted pupils had been matched, a grand mean of -.38 was calculated. The high degree of consistency in these measures lends credibility to the validity of these findings.

In addition to the grand means, effects sizes were calculated on various dependent variable measures. These measures include academic achievement (further sub-divided into various areas), personal adjustment (which included subareas self-concept, social adjustment, and emotional adjustment), attitude toward school, behavior, and attendance. In all cases, the outcomes for promoted pupils were more positive than for retained pupils.

The Effects of Nonpromotion on Elementary and Junior High School Pupils: A Meta-Analysis

The rate of nonpromotion had declined over the last few decades, but with the current emphasis on "competency-based education," it is now increasing. Hubbell (1980) found that the percentage of children retained in the 124 schools she surveyed had risen steadily each year over the last five years. Greensville County (Virginia) Schools retained 1,300 of their 3,750 students as a result of a move to promotion based exclusively on student mastery of skills (Owens & Ranick, 1977). Approximately half of the first-, second-, and third-grade pupils in the Washington, D.C., School System failed to meet the new math and reading standards each of the last two years and were retained in grade (CBS, Note 1). With this reassessment of retention policies by school districts, a look at the existing research seems appropriate.

Reiter (1973), after reviewing the research on promotion/retention for the Philadelphia School District, concluded that the research tells us that "how the pupil is promoted or retained is more important than whether he is" (p. 20). He reported that the research indicated both nonpromotion and social promotion have negative effects. Hess (1978) also concluded that the available research on this question "produces a varied range of conclusions" (p. 155).

The Best of ERIC (1979) stated that Jackson had provided the only critical review of the research on grade retention. He (Jackson, 1975), after concluding that the available research was generally of poor quality and contained major flaws, stated it provided only mixed results. In conclusion Jackson wrote, **"Thus those educators who retain pupils in a grade do so without valid research evidence that such treatment will provide greater benefits to students with academic or adjustment difficulties than will promotion to the next grade"** (p. 627).

McAfee (1981) agreed with Jackson's assessment of the quality of existing research. He, however, dismissed the possibilities of more research employing an experimental design as follows:

> To determine whether or not retention is beneficial, all would agree that implementation of experimental designs would best allow us to answer the question. Unfortunaly (sic), it seems that most school districts will be unwilling to adopt such a strategy because of the political ramifications. (p. 22)

Hopefully the decisions made by school officials to not randomly select students for retention are not only based on possible political ramifications but also on possible consequences to the children in their care.

Jackson (1975) stated that studies comparing groups of regularly promoted students with those retained under normal

school policy, to be biased in favor of promotion. He arrived at this conclusion based on the assumption that the fact that the promoted students were promoted, indicated that they are doing better than those who were retained. While undoubtedly this was sometimes true, it has not always been ignored in the research design. When retained groups are selected from schools with more stringent retention policies than the policies in the schools from which the control groups were selected, his assumption need not hold. With some studies selecting control groups from age-peers and some from grade-peers (the latter may be biased in favor of retention), some selecting control groups from within the same school and some from without, and a couple of studies employing experimental designs, some of the research biases may be compensated for in a meta-analysis.

Cognizant of the danger of a possible bias in advance, as well as, knowing the current concerns educators have about this issue, a meta-analysis of the existing research was undertaken.

Methods

Sources of Data

A systematic search of the literature was conducted to identify studies which were potentially relevant. In the initial phase, **Current Index to Journals in Education** (ERIC), **Research in Education** (ERIC), and **Dissertation Abstracts**

International were computer-searched. In addition, a manual search was conducted of **Education Index** and **Master's Thesis in Education**. In the second phase, each report located in phase one was consulted, when possible, for additional citations. The search produced a bibliography of approximately 650 entries.[1]

The following selection criteria were used to reduce the completed bibliography to the list of 44 studies included in the meta-analysis. To have been included in the final list, the reported study must have: (a) presented the results of original research of the effects on pupils of retention in the elementary or junior high school grades, (b) contained sufficient reported data to allow for the calculation or estimation of an effect size, and (c) compared a group of retained pupils with a group of promoted pupils. The 44 studies consisted of 18 published studies, 14 dissertations, and 12 master's theses.

A total of 11,132 pupils were included in these 44 investigations. There were a total of 4,208 nonpromoted pupils, with 6,924 regularly promoted pupils serving as controls. As few as 30 and as many as 1,929 pupils were involved in the individual studies.

Chronological and Geographical Distribution

Figure 1 (page 7) shows the chronological distribution of the studies included in the meta-analysis. The earliest

publication date among the studies is 1929; the most recent is 1981 with most studies being conducted between 1960 and 1975.

In an attempt to determine whether changes in society and/or the educational setting make it more appropriate to set a specified time range for the inclusion of studies, a Pearson product-moment correlation was computed between the year the study was reported and the mean effect size (ES) for the study. A correlation coefficient near zero would suggest that change taking place over time has no systematic effect on the magnitude of the effect size and would support the decision to include all studies. The coefficient obtained was -.07; therefore, all studies were included in the meta-analysis.

The state in which the study had been conducted was identified for all but two of the studies. Two others had been carried out in public schools in Canada. The remaining 40 studies had been conducted in 26 different states (See Figure 2, page 8). The location of the two studies which were not identified could be placed in a particular region of the United States. One of the investigations was undertaken in the northeastern United States, while the other was conducted in the southeastern United States. Geographically the studies were well distributed over the continental U.S. with the exception of the Mountain States' not being represented.

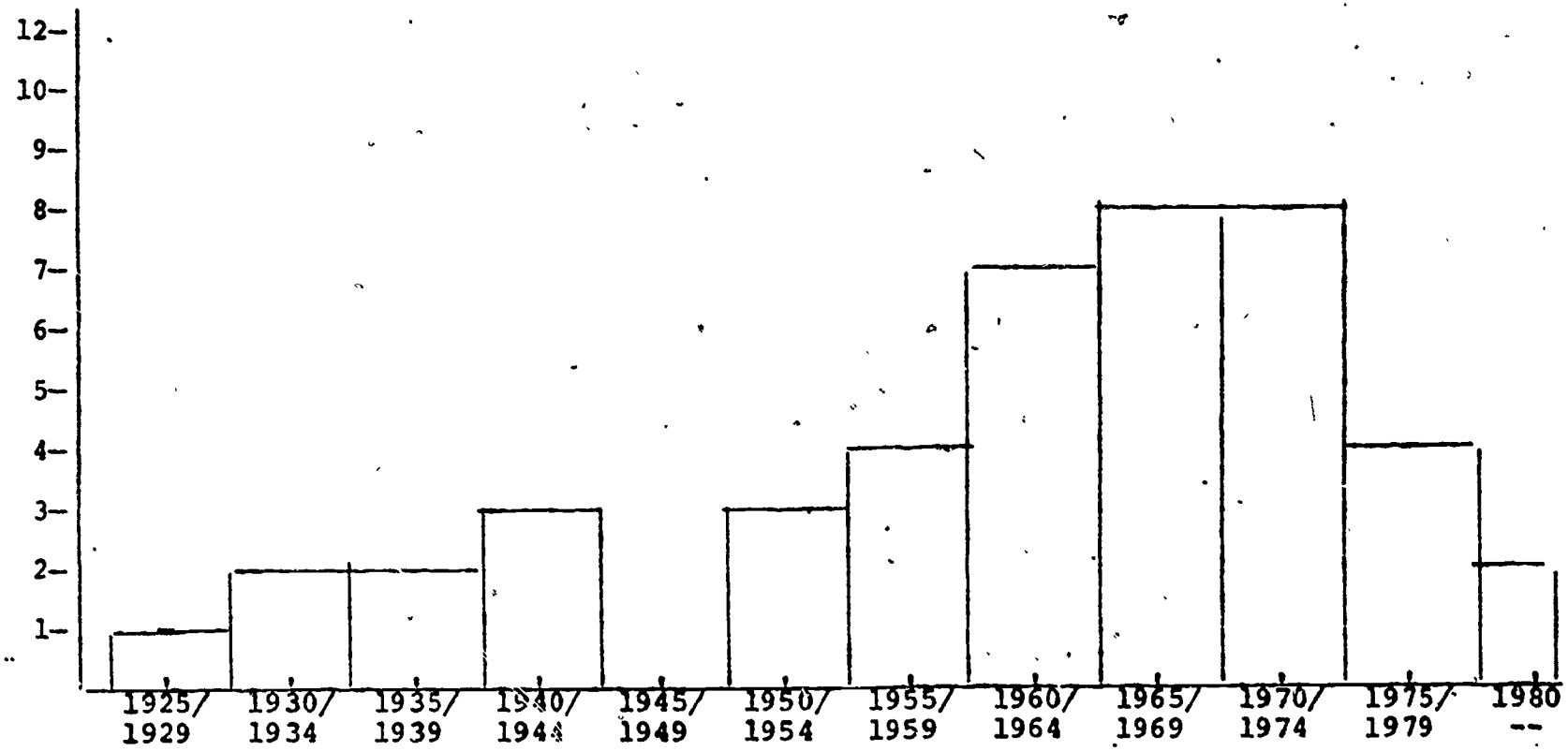
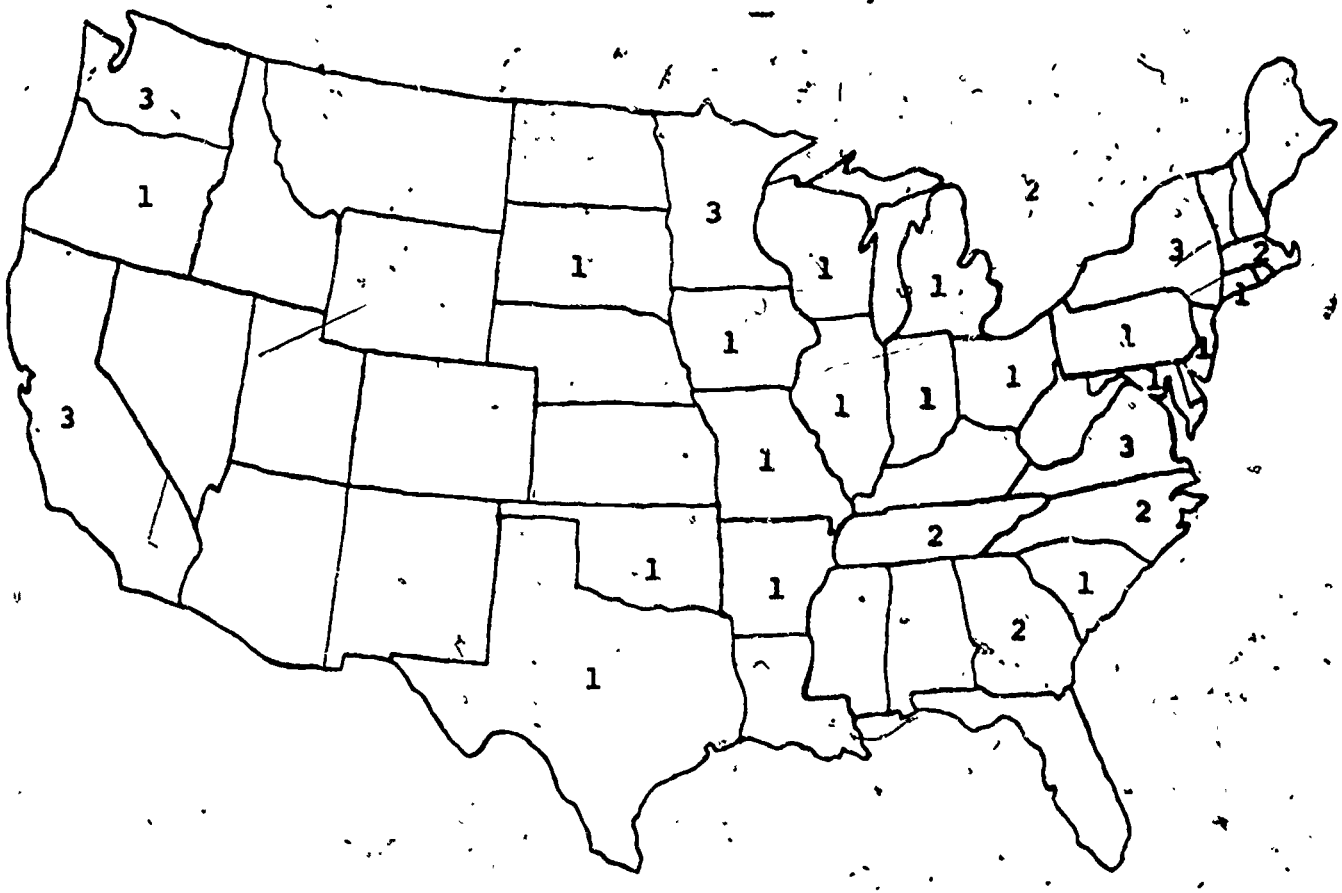


Figure 1 Distribution by year of publication.

Figure 2 Geographic distribution of studies.



Results

In all, 575 individual effect sizes were calculated. This represents a mean of 13 effect sizes per study. In actuality, however, as many as 160 effect sizes and as few as one effect size were obtained from individual studies. As indicated in Table 1 (page 10), the mean ES obtained from averaging the 575 effect sizes was -.37. This value indicates that on the average, the groups of nonpromoted pupils scored .37 standard deviation units lower on the various outcome measures than did the promoted group.

The overall effect size includes ESs that were calculated with data measuring several different dependent variables and represents the overall effect of nonpromotion on pupils retained in elementary or junior high school grades. These 575 ESs were then grouped into five major areas of dependent variables: (a) academic achievement, (b) personal adjustment, (c) self-concept, (d) attitude toward school, and (e) attendance. The first two of these areas were further subdivided.

Academic Achievement

The effect of nonpromotion on the academic achievement of pupils was measured in 31 of the 44 studies. From those studies, 367 effect sizes were calculated. When the mean of these 367 ESs was calculated, a value of -.44 was obtained

Table 1

Mean Effect Sizes

Overall and By Area

	#ESs	ES
Overall Effect Size	575	-.37
Academic Achievement	367	-.44
Language Arts	85	-.40
Reading	75	-.48
Mathematics	77	-.33
Work-Study Skills	32	-.41
Social Studies	7	-.35
Grade Point Average	4	-.58
Personal Adjustment	142	-.27
Social Adjustment	60	-.27
Emotional Adjustment	9	-.20
Behavior	13	-.31
Self-Concept	34	-.31
Attitude Toward School	26	-.16
Attendance	6	-.12

indicating the promoted group, on the average, had achieved .44 standard deviation units higher than the retained group. Each of the sub-areas produced negative effect size values, indicating that nonpromotion had a negative effect on the pupils: language arts, -.40; reading, -.48; mathematics, -.33; work-study skills, -.41; social studies, -.35; grade point average, -.58.

Personal Adjustment

Of the 575 individual ESs calculated, 142 were measures of what has been labeled personal adjustment. These 142 effect sizes were obtained from 21 studies and yielded an average ES of -.27. The retained students, in the time following retention, scored .27 standard deviation units below that of promoted students in measures of personal adjustment. Three sub-areas were indentified: (a) social adjustment, (b) emotional adjustment, and (c) behavior. Once again all sub-areas produced negative effect sizes (social adjustment, -.27; emotional adjustment, -.20; behavior, -.31).

Self-Concept

Nine studies measured the effect of retention on the self-concepts of pupils who had been retained in either elementary or junior high school. With data from these studies, 34 effect sizes were calculated. These 34 ESs produced a mean of -.19. On self-concept measures, the

promoted pupils outscored the retained pupils by .19 standard deviation units.

Attitude Toward School

Eight studies measured pupil attitudes toward school. These studies yielded 26 ES's with a mean effect size of -.16. Although this does not indicate large differences in attitudes toward school between the groups, the difference that was measured indicated that retained students held school in less favor than the promoted students.

Re-Examination of the Data

Since some of the studies yielded large numbers of individual effect sizes while others produced but one ES, a decision was made to re-examine the data to see if any one study had produced substantial distortions in the mean effect sizes.

All individual ESs obtained from a single study which measured the same general area were averaged and then the mean of the averages was taken. In this way, all studies which measured an effect contributed equally to the grand mean effect size. As can be seen from Table 2 (page 14), the differences obtained from the original calculations were small. Ten of the 15 mean effect sizes calculated were within .Ø4 standard deviation units of those in Table 1. A noticeable difference was observed in the self-concept mean effect size, as the

difference between the promoted and nonpromoted groups almost vanished going from -.31 to -.Ø2 standard deviations.

Eighteen of the 44 studies had matched subjects. All but one of these had included IQ and/or achievement test scores as matching criteria. Table 3 (page 15) indicates the criteria used in the 18 studies with matched subjects. A mean effect size was calculated with these studies to see if the matching of the groups produced different results from the overall effect sizes previously calculated. A grand mean ES of -.38 was obtained which is very similar to the -.37 in Table 1 and the -.34 in Table 2. The high degree of consistency between these measures lends credibility to the validity of the findings.

Conclusion

Those who continue to retain pupils at grade level do so in spite of cumulative research evidence showing the potential for negative effects consistently outweighs positive outcomes. Since this cumulating research evidence consistently points to possibilities for negative effects to be produced by nonpromotion, the burden of proof should fall on proponents of retention plans to show there is compelling logic indicating success of their plans, when so many other plans have failed.

Table 2

Mean Effect Sizes

When Averaged by Study

	#Studies	ES
Overall Effect Size	44	-.34
Academic Achievement	31	-.43
Language Arts	14	-.54
Reading	24	-.50
Mathematics	20	-.45
Work-Study Skills	1	-.41
Social Studies	3	-.37
Grade Point Average	3	-.78
Personal Adjustment	21	-.38
Social Adjustment	13	-.24
Emotional Adjustment	5	-.20
Behavior	7	-.35
Self-Concept	9	-.02
Attitude Toward School	8	-.17
Attendance	4	-.14

Table 3

Studies With Matched Subjects

	Matched On						
Study	IQ	Ach.Test	SES	Sex	Grades	Other	ES
1	x		x	x		x	-.23
2	x		x	x			-.39
3	x			x		x	-.96
4				x	x	x	-.66
5		x					-.39
6	x	x	x	x		x	-.63
7	x	x				x	-.Ø6
8		x		x		x	-.4Ø
9	x			x		x	+.2Ø
1Ø	x			x		x	-.41
11		x				x	-.Ø5
12		x					-.Ø4
13		x		x			-.42
14	x	x		x		x	-.48
15	x	x				x	-.65
16	x			x		x	-.59
17	x						-.51
18	x	x		x		x	-.16
					Mean Effect Size		-.38

Note

[1]The complete bibliography is available on request from the authors.

Reference Note

[1]CBS Evening News with Bob Schieffer. December 26, 1981.

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