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ABSTRACT

The stated purpose of this study is to determine what pupil, teacher, and school district characteristics relate to young children's expressed attitudes as measured by the School Sentiment Index and to determine the usefulness of this measurement instrument. The subjects of the study were kindergarten through grade two children who received compensatory education during the 1972-73 school year. Three questions are addressed: (1) What are the interrelationships of pupil attitudes toward school at the end of the school year and selected other pupil, program, teacher, and school district factors? (2) Does attitude toward school, pre-test reading level, reading test gain, extent of school district disadvantagement, and cost of the compensatory program vary when the data are grouped according to the grade promotion status of the pupil, the emphasis of the compensatory instruction provided, the size of the group in which the pupil received compensatory instruction, or the specialized background of his compensatory teacher? and, (3) What is the value of using the School Sentiment Index on a year-end basis for pupil, school district, and statewide evaluation purposes? It was concluded that one major value of the School Sentiment Index lies in using it to interpret group scores of young children for compensatory education evaluation purposes. Several limitations of the study, along with definitions of terms, are provided. Results for each question are described in detail. (Author/AM)

ATTITUDES TOWARD SCHOOL OF CONNECTICUT COMPENSATORY EDUCATION CHILDREN

Programs Supported by Connecticut State Act for Disadvantaged Children Title 1 of The Elementary and Secondary Education Act

CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF INSTRUCTIONAL SERVICES
BUREAU OF EVALUATION AND EDUCATIONAL SERVICES

SEPTEMBER 1973

ATTITUDES TOWARD SCHOOL

OF

CONNECTICUT COMPENSATORY EDUCATION CHILDREN

Programs Supported by:

Connecticut State Act for Disadvantaged Children
and
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Connecticut State Department of Education
Division of Instructional Services
Bureau of Evaluation and Educational Services
Box 2219
Hartford, Connecticut 06115

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Charles Clock, Coordinator of Research for the West Hartford Public Schools did an item analysis of the School Sentiment Index responses.

Mary Brewer, Instructional Supervisor for Regional School District #1 presented an interpretation of the School Sentiment Index item analysis.

Russell Capen, Olive Niles, and Wallace Roby of the State Department of Education designed the study, extended invitations to participate, collected, scored and tabulated the data, processed the data working in conjunction with Charles Clock of West Hartford Public Schools, and made the interpretation of results presented in this report.

CONNECTICUT SCHOOL DISTRICTS

PROVIDING DATA FOR THE

ATTITUDE TOWARD SCHOOL STUDY

TABLE OF CONTENTS

INTRODUCTION

In the spring of 1973 eighteen Connecticut school districts and the State Department of Education undertook a study to determine young children's attitudes toward school. The children were recipients of school district compensatory education programs supported by state and federal funds. The programs are to help disadvantaged pupils to be more successful in school.

The area of attitudes was selected for study because it is an often cited objective of compensatory education programs, and at the same time, a very difficult one for which to gather valid and reliable evidence. While some individual school systems have made progress in evaluating school attitudes, no statewide effort has been made to evaluate pupil attitudes where the population, instrument, and time of measurement have been controlled.

The purpose of this study was to find out what pupil, teacher, and school district characteristics related to young children's expressed attitudes toward school and to determine the evaluation usefulness of the School Sentiment Index.

Some Problems of Measurement

In a recent publication, Samuel Ball[1] reviewed the problems of assessing attitudes of young children toward school. Ball stated that

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1. Ball, Samuel. Assessing the Attitudes of Young Children Toward School. Washington, D.C.: Department of Health, Education, and Welfare, Office of Child Development, August 1971. pp 1-11.

it is exceedingly rare to find children who have not developed attitudes toward school by the middle of their first year's experience in schools. But he points out that there are some major problems in trying to assess the attitudes.

First, there is little stability in young children's attitudes. For example, they are more likely to be swayed by momentary considerations than older children.

Secondly, young children lack the skills usually expected in test-taking situations. Many are unable to read or write, and most young children do not have well developed skills of following instructions without helpful supervision.

A third problem is that young children are exceedingly eager to please adults, including adults who administer tests. They will tend to respond in the way they think adults want them to.

As inexact as attitude assessment of young children is, Ball nevertheless supports the practice of evaluation in this area, especially where results are used for groups of children rather than for individuals. It is his contention that young children's attitudes are extremely important as they determine the enthusiasm with which children approach their school experiences. For this reason, he states that attitudes should not be overlooked in program evaluations.

Major Questions

The following questions were developed in relation to the purpose of this study.

1. What are the interrelationships of pupil attitudes toward school at the end of the school year and the following other pupil, program, teacher, and school district factors?

   A. Hours of compensatory instruction provided during the school year.

   B. Days of absence from school for the year.

   C. Number of times over the school year that the teacher has met with a parent of the pupil to discuss his school progress.

   D. Standardized test reading level of the pupil with respect to grade placement at the beginning of the year.

   E. Standardized test reading level of the pupil with respect to grade placement at the end of the year.

   F. Reading rate of gain per year.

   G. Years of teaching experience of the compensatory teacher.

   H. Semester hours of credit in reading and children's literature of compensatory teachers.

   I. Extent of disadvantagement in the school district.

   J. Per pupil expenditure for the compensatory program in individual school districts.

   K. Per pupil expenditure for education in the school district.

2. Does: attitude towards school...pretest reading level... reading test gain...extent of school district disadvantagement...and per pupil cost of the compensatory reading program vary when the data are grouped according to each of the following?

   A. Whether the pupil has been retained, placed in transitional class, or has experienced neither of these practices.

   B. Emphasis in the compensatory instruction provided.

   C. Size of the group in which the pupil received compensatory instruction.

D. Specialized training or other background of the teacher.

3. What is the value of using the School Sentiment Index on a year end basis for each of the following?

A. Individual pupil evaluation.

B. School district compensatory program evaluation.

C. Statewide evaluation of compensatory programs.

Limitations

Evaluation studies often encounter uncontrolled circumstances which make it difficult to interpret results. The reader is especially advised to consider the following uncontrolled circumstances of this study.

1. Accuracy of the information collected.

Information was collected for seventeen variables in this study, but only one check was made to assure the reader that the information collected was in fact that which was defined for the variable. In the case of the "pupil attitudes toward school" variable, a level of validity of pupil responses to the attitude instrument was reported. For other variables such as school district expenditure for education, school district AFDC, and school district enrollment, the sources providing these data include cross checks in their reporting to assure accuracy of this information. However, no checks were made of the validity of most pupil and teacher information that was generated for this study.

Since teachers provided this information, the following circumstances which could have affected their reporting should be considered:

a. The questions asked of teachers in this study can be interpreted differently.

b. Some teachers find it difficult to mark the questions that force them to categorize information.

c. Teachers were asked to provide considerable information about each of 15 pupils at the close of the school year, a time when they already had much reporting and closing of records to do for the school system.

2. Size and representativeness of samples.

Correlational results are reported for only those pupils for whom complete information was forwarded. Of the total 586 participants, complete data were forwarded for only 103.

Results were reported in categories for such information as type of school district, compensatory program emphases, and varying backgrounds of the compensatory teacher. However, it is not known how representative the categorized results are in terms of all possible cases for those categories in the state.

Complete information for pupils in terms of test data was severely limited in this study. Where reading levels and gains are discussed in reporting categories such as type of school district, grade promotion status, and varying sizes of instructional groups in which pupils received compensatory education, the test data seldom exceed twenty percent of the total study sample.

Interpretation of t values is questionable in several instances due to the fact that sample sizes of variables being compared fall far short of the need to be approximately equal in order for t interpretations to be valid.

3. Caution about inferences.

   Correlation methods are used to measure the degree to which different variables are associated. Just because a significant relationship is found between two variables, one cannot necessarily infer that a change in one variable causes a change in the other.

Definition of Terms

The following definitions are offered to clarify some of the important terms used in this study.

1. Absence is the number of days the pupil was absent from school from September 1972 through April 1973.
2. Attitude towards school is the May 1973 responses of the pupil to the 30 item School Sentiment Index.

3. Compensatory cost is the per pupil expenditure for the compensatory education project providing services to the pupil. Because 1972-73 program costs were not available at the time of data processing, 1971-72 program costs have been used in this study.

4. Compensatory program emphasis is the forced choice of one of five emphases which characterizes most closely the kind of compensatory instruction provided to the pupil: (a) basal, (b) phonics, (c) experience approach, (d) perceptual-motor, (e) individualized reading based on library books, or (f) no reading instruction in the program.

5. Equalized compensatory cost is the compensatory cost divided by the town cost of education.

6. Grade level retainment is the practice of retaining a pupil at grade level during any one of the kindergarten through grade two years of schooling.

7. Group size is the typical size of the group in which the pupil most often received compensatory reading instruction: (a) one to one, (b) groups of 2 or 3, (c) groups of 4 or 5, or (d) other size.

8. Instructional hours are the total number of hours of compensatory instruction received by the pupil in the 1972-73 school year.

9. Parent contact is the number of times during the 1972-73 school year that the teacher of the pupil receiving compensatory instruction has met with the parent of that pupil to discuss his school progress.

10. Posttest reading level is the grade level and month at at posttesting in grade equivalent units minus the posttest score in grade equivalent units. A constant of 25 was introduced for data processing purposes which makes a posttest reading level of 250 a value that represents reading at grade level. A value that is greater than 250 represents a posttest reading level that is below grade level.

11. Pretest reading level is the grade level and month at pre-testing in grade equivalent units minus the pretest score in grade equivalent units. A constant was introduced for data processing purposes which makes a pretest reading level of 250 a value that represents reading at grade level. A value that is greater than 250 represents a pretest reading level that is below grade level.

12. Primary grade compensatory instruction is the supplementary help provided to disadvantaged school pupils in programs supported by Connecticut State Act for Disadvantaged Children or Title I of the Federal Education Act.

13. Reading gain is the posttest grade equivalent score minus pretest grade equivalent score the quantity of which was divided by the grade level and month of posttesting in grade equivalent units minus the grade level and month of pretesting in grade equivalent units. A constant was introduced for data processing purposes making a value of 260 equal to a reading rate of gain of a month's progress per month of schooling. A value greater than 260 would mean the reading growth rate exceeded a month's progress per month of schooling.

14. Rural school district is a school district enrolling less than 2000 pupils according to the October 1971 enrollment figures reported by the Bureau of Educational Management and Finance of the Connecticut State Department of Education.

15. Semester hours in children's literature is the number of semester hours of college credit in the teaching of children's literature earned by the person providing the compensatory instruction.

16. Semester hours in reading is the number of semester hours of college credit in the teaching of reading earned by the person who is providing the compensatory instruction.

17. School district disadvantagement is the number of January 1973 cases of ADC in the school district divided by the October 1972 school district enrollment which is a figure that was obtained from school district Title I Application for Grant forms.

18. School district enrollment is the October 1972 school district enrollment.

19. School Sentiment Index is a 30 item test administered orally to English speaking pupils in kindergarten, grade one, or grade two which has been used in this study as a measure of pupil attitudes toward school. The Primary Level of the test that was used is published by the Instructional Objectives Exchange, Box 4095, Los Angeles, California 90024.

20. Suburban school district is any school district which does not fit the urban or rural school district definitions stated.

21. Teacher background is the area(s) of specialization or general experience of the person providing the compensatory instruction.

22. Teaching years is the number of years of teaching experience, including the current year, of the person providing the compensatory instruction.

23. Transitional class placement is the grouping of children who have not achieved certain competencies or behaviors in a separate class to avoid the practice of nonpromotion.

24. Town cost of education is the 1971-72 per pupil expenditure for education in the school district minus the cost of transportation.

25. Urban school district is a school district having over 1000 pupils up to 19 years of age who received Aid for Dependent Children according to January 1971 Welfare cases.

PROCEDURE

Design

The following procedures were employed to evaluate the stated questions of this study.

Question One. A product-moment correlation statistic was used to determine the correlation coefficient between each of fifteen variables for the 103 pupils for whom complete study information was available. Significance of correlation coefficients was established at the .05 level using a two-tailed test.

Question Two. A standard t test formula was used to determine whether or not there was a significant difference in School Sentiment Index scores and other variables when data for the variables were grouped in categories of grade promotion status, compensatory program emphasis, size of group in which the pupil received compensatory instruction, and specialized training or general experience of the teacher.

Question Three. Means and standard deviations of attitude responses grouped according to grade levels and urban-suburban-rural school district categories plus other information obtained in the analysis of data for questions one and two above were used to evaluate the value of using the School Sentiment Index for pupil, program, and statewide evaluation purposes.

Population

Invitations to participate in the attitude toward school study were extended to sixty Connecticut school districts where kindergarten, grade one, or grade two children were provided compensatory education services during the 1971-72 school year.

Compensatory education teachers in twenty-two towns accepted and provided data for the study. Four urban towns were represented providing data for 338 children; ten suburban towns provided data for 183 children; and eight rural towns were represented providing data for 65 children. The number of children for whom complete information was obtained was 103.

The method of pupil selection is described in detail in Attachment A. Teachers who accepted the invitation to participate in the study administered an attitude instrument and provided other information for not more than 15 of their pupils selected in a prescribed way. Stated simply, the procedure led to the designation of every third child from an alphabetical listing of all children who were receiving compensatory help from the participating teacher during the 1972-73 school year. Table 1 shows that 556 pupils selected for participation were from an estimated population of 5,947 K-2 pupils receiving the services of the same programs in the twenty-two towns. In turn the 5,947 children were from an estimated population of 19,442 K-2 pupils receiving compensatory education services in Connecticut during the 1972-73 school year. While the foregoing procedure does not necessarily obtain a sample that is representative of all Connecticut K-2 pupils receiving compensatory services, it does have the effect of making the results representative of more children than the "number of cases" stated in the following sections of this evaluation.

Table 1

Comparison of the Number of Study Participants with the Number of Kindergarten through Grade 2 Compensatory Pupils in the State

Category of School District	Number of K-2 Children Participating In This Study	Population of K-2 Children in Programs from Which Pupils Were Selected	Population of K-2 Children in the Compensatory Education Programs in the State
Urban	338	5,156	
Suburban	183	711	
Rural	65	80	
All Districts	586	5,947	19,442

Non-Compensatory Control Children

A representative sample of kindergarten through grade two children not receiving the direct services of compensatory education also responded in May to the attitude instrument used in this study. The sample totaled 187 children from five West Hartford Title I schools.

Data Collection

Invitations to participate in the attitude toward school study were extended in personally typed letters to compensatory education liaisons in Connecticut school districts in April 1973. All of the materials needed to participate in the study were forwarded immediately to those accepting the invitations.

Each participating teacher was asked to complete a pupil information sheet and a teacher information sheet as well as administer the attitude instrument as instructed during the month of May. A copy of all materials furnished to each teacher are included as Attachment A of this evaluation. The completed information was to be returned to the State Department of Education by June 1, 1973.

The State Department of Education received the completed information, scored the School Sentiment Index responses of each participating pupil, and tabulated the data. An analysis of the data was made by personnel from the State Department of Education and the West Hartford Public Schools.

The Attitude Instrument

The School Sentiment Index is published by the Instructional Objectives Exchange of Los Angeles, California.[1] Initial development of the measure was begun in 1970 by the Instructional Objectives Exchange staff financed by Title III ESEA funds.

Following its initial testing and release for school system use, it underwent further field trials. In all 1,229 pupils of eleven schools in California were involved in the revision field tests. In summary, the revision of the School Sentiment Index resulted in a revised instrument which was more defensibly based on field test data from a more representative learner population.

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1 Instructional Objectives Exchange. Self Concept Objectives Collection, Box 24095, Los Angeles, California 90024.

A complete analysis of the results are available from the publishers.[2] In brief, an internal consistency estimate based on Kuder-Richardson 20 was found to be r = .72 (N = 108) and a test-retest (two week interval) reliability index of r = .87 (N = 151) was obtained for the Primary Level of the School Sentiment Index. This is judged to be good reliability for an affective measure.

The pupil response sheets provided by the Instructional Objectives Exchange for use with the Primary Level of School Sentiment Index were condensed into a single page for use in the Connecticut testing of this instrument. A copy of the 30-item Index and the answer sheet are included in Attachment A.

Validity of the Instrument in Connecticut

Three New Haven Focus Program staff judged pupil's attitudes toward school a few days before administering the School Sentiment Index. The purpose of the rating was to determine a level of validity for the instrument, the assumption being that teachers who work closely with pupils over the period of the school year can make reasonably accurate judgments of the attitudes pupils have toward school.

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2 Popham, W.James. Empirical Based Revision of Affective Measuring Instruments. A paper presented to the California Educational Research Association, November-1972, San Jose, California.

The teachers used a paired comparison method to rate each pupil with every other pupil according to whether or not he had a better attitude toward school. Each teacher rated 15 pupils selected in the prescribed representative procedure. A rank-difference correlation statistic was computed for teacher ratings and five other program variables. Rho coefficients are presented in Table 2.

Table 2

Rho Correlation Coefficients for New Haven Attitude Study Data

Variables Correlated	School #1	School #2	School #3
Teacher rated attitude and:			
1. Pupil attitude response	.35	.20	.47
2. Pupil school absence	-.28	.50	-.32
3. Reading pretest raw score	.38	.87*	-
4. Reading posttest raw score	.70*	-	.16
5. Teacher-parent contact	-	-	.24

* Significant .05

The table above shows the variation in teacher prejudgment of pupil attitudes toward school. When all teacher ratings were combined and compared with pupil School Sentiment Index scores, a product-moment correlation coefficient of r = .31 was found. This value was a significant correlation at the .05 level of confidence.

These results are interpreted as giving a low but statistically significant level of validity for the Primary level of the School Sentiment Index as can be determined by teacher estimation of pupil attitudes toward school.

RESULTS

This section presents the evidence gathered in the study in terms of the three questions that have been stated.

Question One

The first question sought the relationship of pupil attitudes toward school and other study variables. Table 4 presents the product-moment correlations found between pupil attitudes toward school and thirteen other pupil, teacher, program, and school district factors.

Table 4

Correlations for Pupil Attitudes Toward School and Other Variables

(N = 103)

Pupil Attitudes Toward School Compared to:	r*
A. Other pupil variables	
1. Days of school absence	.14
2. Reading pretest level	.12
3. Reading posttest level	.11
4. Reading rate of gain	.02
B. Teacher variables	
5. Years of teaching experience	-.05
6. Semester hours of reading credits	.00
7. Semester hours of children's literature	-.01
C. Program variables	
8. Number of hours of supplementary instruction	.27**
9. Number of teacher-parent contacts	.13
10. Compensatory program per pupil cost	.00
11. Equalized compensatory program per pupil cost	-.02
D. School district variables	
12. Percentage of AFDC cases per school district	.04
13. Per Pupil expenditure for education	.06

*An r of .195 is needed for significance < .05

**Significant < .01

Number of hours of supplementary instruction was the only variable that was related significantly to attitudes toward school. In other words, highest attitudes toward school were associated with pupils receiving the greatest amount of compensatory education instruction.

Question Two

The second question sought to find out whether some other aspects of schooling and school practices had some bearing on pupil attitudes toward school and other study factors. The four areas of concern were: grade promotion status, emphasis of the compensatory instruction, size of the instructional group in which the pupil received compensatory instruction, and the background or training of the teacher providing the compensatory instruction. The results and an interpretation of the results follow for each of these areas of concern:

1. Grade promotion data grouped according to:

A. Pupil attitudes toward school

	N	M	SD	t statistic
Pupils promoted	444	20.4	4.73	$t_{p,r}$=0.49
Pupils retained	78	20.1	5.10	$t_{p,t}$=1.30
Transition Class	34	19.3	4.80	$t_{r,t}$=0.80

Interpretation: Pupils placed in transitional classes or retained at grade level expressed attitudes toward school similar to those of pupils who were promoted every year.

(1. Grade promotion continued)

B. Pretest reading level

	N	M	SD	t statistic
Pupils promoted	67	301.3	55.78	$t_{p,r}$=2.42*
Pupils retained	31	273.9	50.64	
Transitional class (inadequate sample size)				

*Significant < .05

Interpretation: Pretest reading level of pupils who had always been promoted was significantly lower than that of pupils who had been retained in kindergarten, grade one, or grade two.

C. Posttest reading level

	N	M	SD	t statistic
Pupils promoted	27	286.7	76.50	$t_{p,r}$=1.15
Pupils retained	31	262.6	105.26	
Transitional class				

Interpretation: Posttest reading levels did not differ for pupils who had always been promoted compared to pupils who had been retained in kindergarten, grade one, or grade two.

(1. Grade promotion continued)

D. Pre to posttest reading gain

	N	M	SD	t statistic
Pupils promoted	67	262.3	11.26	$t_{p,r}=0.52$
Pupils retained	31	261.1	10.32	
Transitional class (inadequate sample size)				

Interpretation: Reading gain for promoted pupils was not significantly different from that of pupils who had been retained. Each group exceeded a month per month growth in reading from pre to posttesting.

E. Pupil school absences

	N	M	SD	t statistic
Pupils promoted	444	9.9	8.89	$t_{p,r}=0.98$
Pupils retained	78	11.5	13.89	$t_{p,t}=0.74$
Transitional class	34	10.1	10.74	$t_{r,t}=0.08$

Interpretation: Absences from school did not differ significantly among children regardless of whether they were promoted, retained, or placed in transitional classes.

(Grade promotion continued)

F. Supplementary hours of compensatory instruction

	N	M	SD	t statistic
Pupils promoted	444	94.0	61.42	$t_{p,r}=3.02^{**}$
Pupils retained	78	79.6	33.37	$t_{p,t}=0.09$
Transitional class	34	92.6	132.70	$t_{r,t}=0.80$

** Significant < .01

Interpretation: Significantly more hours of compensatory education instruction were directed toward promoted pupils than pupils retained at grade level.

G. Compensatory program cost

	N	M	SD	t statistic
Pupils promoted	444	$408	174	$t_{p,r}=1.39$
Pupils retained	78	$380	162	$t_{p,t}=1.05$
Transitional class	34	$371	200	$t_{r,t}=0.23$

Interpretation: Compensatory program dollar expenditure per pupil did not differ significantly for pupils whether they were promoted, retained, or placed in a transitonal class.

(Grade promotion continued)

H. Teacher-parent contact

	N	M	SD	t statistic
Pupils promoted	444	1.2	1.84	$t_{p,r}=2.86^{**}$
Pupils retained	78	.6	1.65	$t_{p,t}=1.42$
Transition class	34	.9	1.12	$t_{r,t}=1.11$

*Significant < .01

Interpretation: A significantly greater number of teacher-parent contacts were made for children who had always been promoted than for pupils who had been retained at grade level.

I. School district enrollment

	N	M	SD	t statistic
Pupils promoted	444	17841	8872	$t_{p,r}=4.33^{**}$
Pupils retained	78	12886	9407	$t_{p,t}=0.23$
Transition class	34	17558	6613	$t_{r,t}=3.00^{**}$

**Significant < .01

Interpretation: Smaller school districts tended to retain more pupils.

(Grade Promotion continued)

J. School district expenditure per pupil

	N	M	SD	t statistic
Pupils promoted	444	$1050	180	$t_{p,r}=3.64^{**}$
Pupils retained	78	$ 971	176	$t_{p,t}=1.08$
Transition class	34	$1012	200	$t_{r,t}=1.03$

**Significant .01

Interpretation: Towns that paid less for education tended to retain more pupils.

K. School district disadvantagement

	N	M	SD	t statistic
Pupils promoted	444	28.2	20.62	$t_{p,r}=3.09^{**}$
Pupils retained	78	20.3	20.92	$t_{p,t}=1.41$
Transition class	34	34.1	23.69	$t_{r,t}=2.93^{**}$

** Significant .01

Interpretation: Grade retention of pupils was more often a practice in school districts where school disadvantagement (AFDC)was lower.

2. Compensatory instruction emphasis:

A. Pupil attitudes toward school

	N	M	SD	t statistic	
Basal	105	18.9	4.39	$t_{b,p}=3.40^{**}$	$t_{p,m}=1.20$
Phonics	365	20.6	4.88	$t_{b,e}=3.64^{**}$	$t_{p,t}=1.13$
Experience	59	21.3	3.81	$t_{b,m}=0.62$	$t_{e,m}=1.78$
Perceptual-motor	35	19.5	5.18	$t_{b,t}=0.15$	$t_{e,t}=1.58$
Trade books	14	19.1	4.86	$t_{p,e}=1.22$	$t_{m,t}=0.25$

**Significant < .01

Interpretation: Pupils who received phonics and experience emphases in their reading instruction expressed higher attitudes toward school than pupils who received a basal reading emphasis.

B. Pretest reading level

	N	M	SD	t statistic
Basal	17	270.6	42.35	$t_{b,p}=2.82^{**}$
Phonics	64	305.8	56.73	$t_{b,e}=0.70$
Experience	17	260.0	46.10	$t_{p,e}=3.46^{**}$

**Significant < .01

Interpretation: Pupils who received reading help emphasizing phonics had significantly lower pretest reading levels than pupils receiving reading help emphasizing basal or the experience approach.

(Compensatory emphasis continued)

C. Pre-post reading test gain

	N	M	SD	t statistic
Basal	17	255	3.24	$t_{b,p}=4.63^{**}$
Phonics	64	262	11.24	$t_{b,e}=4.01^{**}$
Experience	17	267	12.22	$t_{p,e}=1.50$

**Significant < .01

Interpretation: Pupils receiving reading help emphasizing phonics and the experience approach made significantly greater reading gains over the school year than pupils who received a basal emphasis in their reading.

D. School district disadvantagement

	N	M	SD	t statistic	
Basal	105	23.1	25.37	$t_{b,p}=2.75^{**}$	$t_{p,m}=1.95$
Phonics	365	30.5	19.88	$t_{b,e}=3.86^{**}$	$t_{e,m}=3.42^{**}$
Experience	59	12.4	9.61	$t_{b,m}=0.00$	
Perceptual-Motor	35	23.1	16.97	$t_{p,e}=6.53^{**}$	

**Significant < .01

Interpretation: Phonics was the emphasis more often selected to help pupils in reading in school districts having high disadvantagement. The experience approach was more often selected where disadvantagement in the school district was low.

(Compensatory emphasis continued)

E. Compensatory program cost

	N	M	SD	t statistic
Basal	105	$324	100	$t_{b,p}=7.66^{**}$ $t_{p,m}=2.48^{*}$
Phonics	365	$429	183	$t_{b,e}=7.75^{**}$ $t_{e,m}=0.32$
Experience	59	$456	107	$t_{b,m}=0.96$
Perceptual-motor	35	$353	171	$t_{p,e}=1.60$

*Significant < .05 **Significant .01

Interpretation: Compensatory program cost per pupil was highest where the experience and phonic approaches to reading were emphasized.

3. Size of Instructional Group:

A. Pupil attitude toward school

	N	M	SD	t statistic
A. One to one	47	18.9	4.18	$t_{A,B}=1.13$ $t_{B,D}=0.88$
B. Groups of 2-3	199	19.7	5.08	$t_{A,C}=3.18^{**}$ $t_{C,D}=0.79$
C. Groups of 4-5	295	21.0	4.49	$t_{A,D}=1.60$
D. Other	43	20.4	4.70	$t_{B,C}=2.89^{**}$

**Significant < .01

Interpretation: Pupils who received compensatory instruction in large groups (4 to 5 children) expressed a higher attitude toward school than pupils getting help in smaller groups.

(Size of instructional group continued)

B. Pretest reading level

	N	M	SD	t statistic
A. One to one	15	272.7	47.28	$t_{A,B}$=1.36
B. Groups of 2-3	52	292.7	60.04	$t_{A,C}$=1.04
C. Groups of 4-5	28	287.9	42.28	$t_{B,C}$=0.42

Interpretation: There were no significant differences in pretest reading levels of pupils regardless of the size of groups in which they received compensatory services.

C. Pre-post reading test gain

	N	M	SD	t statistic
A. One to one	15	257.5	9.31	$t_{A,B}$=1.89
B. Groups of 2-3	52	263.1	12.33	$t_{A,C}$=1.62
C. Groups of 4-5	28	262.4	9.79	$t_{B,C}$=0.28

Interpretation: There were no significant differences in reading gains of pupils regardless of the grouping arrangements of pupils receiving compensatory instruction.

(Size of instructional group continued)

D. School district disadvantagement

	N	M	SD	t statistic	
A. One to one	47	19.9	14.91	$t_{A,B}=1.23$	$t_{B,D}=4.86^{**}$
B. Groups of 2-3	199	23.3	24.11	$t_{A,C}=3.11^{**}$	$t_{C,D}=4.15^{**}$
C. Groups of 4-5	295	27.3	16.93	$t_{A,D}=5.39^{**}$	
D. Other	43	44.3	26.05	$t_{B,C}=2.03^{*}$	

*Significant < .05 **Significant < .01

Interpretation: As school district disadvantagement increased, the size of instructional groups also tended to increase.

E. Compensatory program cost

	N	M	SD	t statistic	
A. One to one	47	$608	194	$t_{A,B}=6.60^{**}$	$t_{B,D}=3.11^{**}$
B. Groups of 2-3	199	$402	182	$t_{A,C}=2.84^{**}$	$t_{C,D}=2.66^{**}$
C. Groups of 4-5	295	$386	139	$t_{A,D}=8.01^{**}$	
D. Other	43	$326	136	$t_{B,C}=1.09$	

**Significant < .01

Interpretation: Per pupil cost of compensatory service decreased as the size of group increased. Providing instruction on a one to one basis was the most costly, $608 per pupil. Providing compensatory instruction in groups of 4 or 5 cost $386 per pupil.

4. Teacher background or training

A. Pupil attitudes toward school

	N	M	SD	t statistic
Reading	307	19.9	4.68	$t_{r,e}=1.06$
Elementary	162	20.4	4.87	$t_{r,s}=1.22$
Special education	29	21.0	4.66	$t_{e,s}=0.64$

Interpretation: There was no significant difference in pupil attitudes toward school regardless of whether his compensatory teacher had a background in reading, elementary education, or special education.

B. Pretest reading level

	N	M	SD	t statistic
Reading	59	279.5	64.18	
Elementary	23	323.0	41.39	$t_{r,e}=3.62^{**}$

**Significant < .01

Interpretation: Compensatory teachers with elementary education backgrounds were more often found providing the instruction to pupils having the lowest pretest reading levels.

(Teacher background continued)

C. Pre-post reading test gain

	N	M	SD	t statistic
Reading	59	262.7	11.96	$t_{r,e} = 2.10^{*}$
Elementary	23	258.6	5.62	

*Significant < .05

Interpretation: Pupils who were provided compensatory instruction by reading teachers tended to make greater reading gains over the school year than pupils provided compensatory instruction by elementary background teachers.

D. School district disadvantagement

	N	M	SD	t statistic
Reading	307	28.6	22.02	$t_{r,e}=3.71^{**}$
Elementary	162	20.7	21.91	$t_{r,s}=5.21^{**}$
Special education	29	17.2	9.66	$t_{e,s}=1.41$

**Significant < .01

Interpretation: Reading teachers were more often in school districts having higher disadvantagement.

(Teacher background continued)

E. Compensatory program cost

	N	M	SD	t statistic
Reading	307	$382	197	$t_{r,e} = 0.20$
Elementary	162	$385	143	
Special Education (Sample was from a single program)				

Interpretation: Compensatory program costs per pupil were the same regardless of whether reading or elementary teachers were providing the instruction.

Question Three

The third question sought the value of using the School Sentiment Index on a year end basis for individual pupil, program, and statewide evaluation purposes. Evidence gathered in this study are presented below.

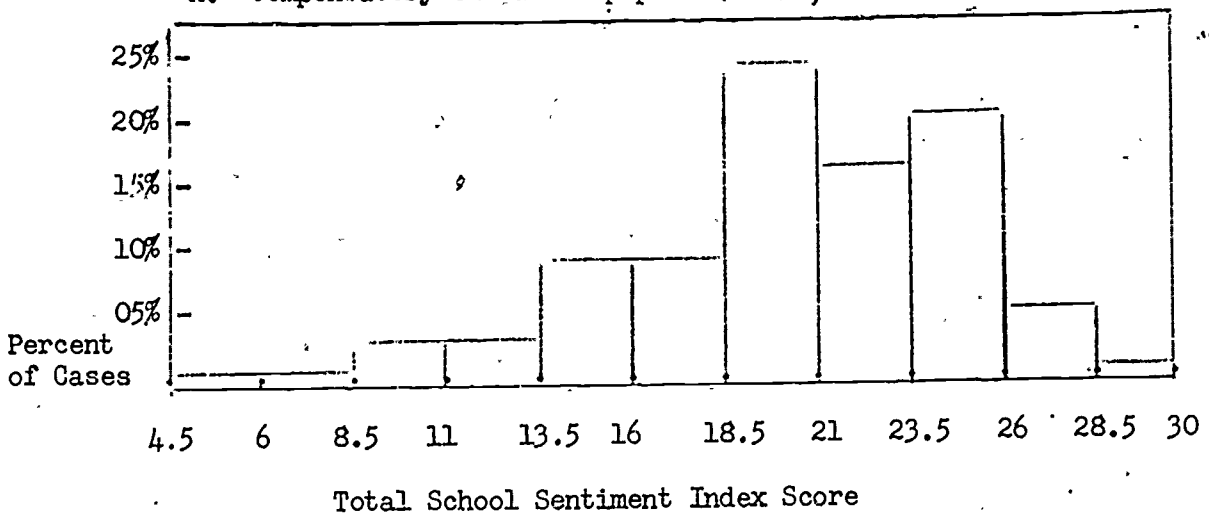
1. Validity of the instrument

Teacher prejudgment of pupil attitudes toward school established a low level of validity for the School Sentiment Index in Connecticut. The product-moment correlation coefficient for teacher judgment and pupil responses to the instrument (N=45) was r =.31, a statistically significant correlation. See pages 15 and 16 for further details.

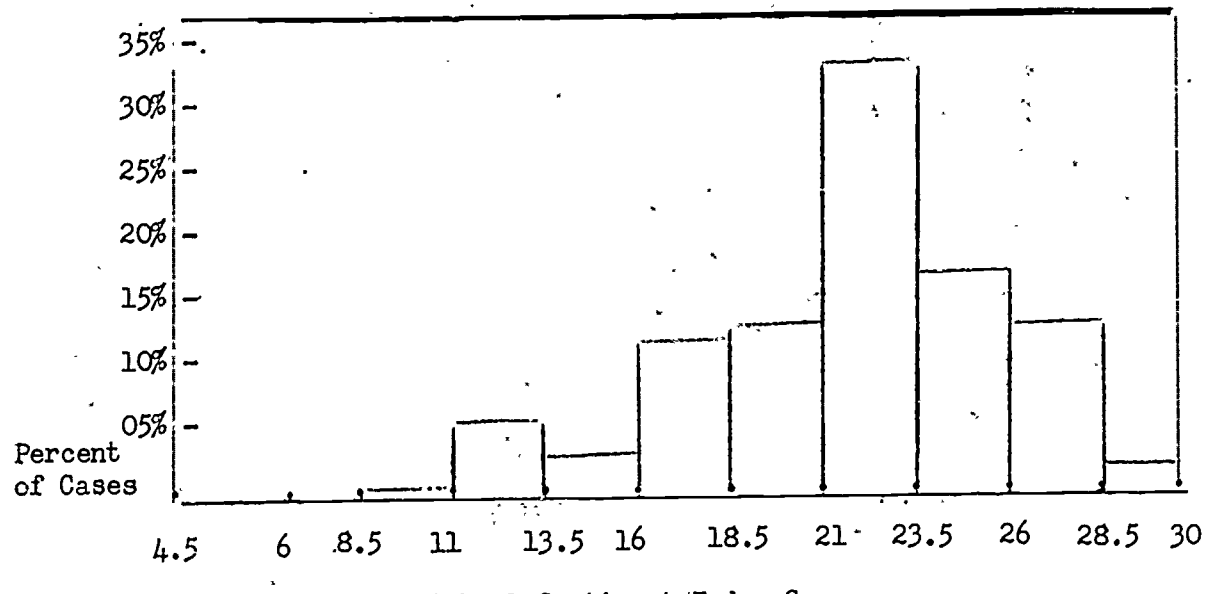
(Question Three continued)

2. Total score distribution

A. Compensatory education pupils (N=595)



B. Non-Compensatory education pupils (N=186)



Pupils' total scores were widely distributed in a fairly normal pattern. Distribution of scores for compensatory pupils was similar to that of pupils not receiving compensatory services.

2. Distribution of scores by grade level of pupils

A. Compensatory education pupils

	N	M	SD	t statistic
Kindergarten	112	21.0	3.42	$t_{k,1}=2.97^{**}$
Grade One	160	19.4	5.04	$t_{k,2}=1.09$
Grade two	314	20.5	4.82	$t_{1,2}=2.30^{*}$
All grades	586	20.3	4.75	

*Significant < .05 **Significant .01

Interpretation: Kindergarten and grade 2 children expressed more positive attitudes toward school than grade 1 children.

B. Non-Compensatory education pupils

	N	M	SD	t statistic
Kindergarten	58	21.4	4.2	$t_{k,1}=0.65$
Grade one	60	20.9	4.3	$t_{k,2}=0.39$
Grade two	68	21.7	4.5	$t_{1,2}=1.04$
All grades	186	21.3	4.3	

Interpretation: There were no significant differences between total scores when the attitude toward school data were grouped by grade level.

3. Distribution of scores by type of school district

A. Compensatory education pupils

	N	M	SD	t statistic
Urban	338	20.6	4.50	$t_{u,s}=0.47$
Suburban	183	20.4	4.78	$t_{u,r}=3.06^{**}$
Rural	65	18.4	5.51	$t_{s,r}=2.60^{**}$

*Significant < .01

Interpretation: Urban and suburban pupils expressed more positive attitudes toward school than rural pupils.

OTHER RESULTS

Some important results of the study not directly related to the stated questions are presented in this section.

Item Analysis

An analysis was made of each item of the School Sentiment Index for both compensatory and noncompensatory pupils. The results are presented in Table 4.

Table 4

Item Analysis of the School Sentiment Index

Items	Compensatory Pupils N=597 %Yes	%No	Non-Compensatory Pupils N=187 %Yes	%No
1. Is your teacher interested in the things you do at home?	59	41	65	35
2. When you are trying to do your school-work do the other children bother you?	60	40	54	46
3. Does your teacher give you work that is too hard?	39	61	26	74
4. Do you like to tell stories in front of your class?	57	43	54	46
5. Do other children get you into trouble at school?	64	36	50	50
6. Is school a happy place for you to be?	84	16	86	14
7. Do you often get sick at school?	40	60	17	83
8. Does your teacher give you enough time to finish your work?	72	28	70	30
9. Is your school principal friendly toward the children?	86	14	96	4
10. Do you like to read in school?	82	18	81	19

Table 4 (Continued)

Items	Compensatory Pupils N = 597 %Yes	%No	Non-Compensatory Pupils N = 187 %Yes	%No
11. When you don't understand something, are you afraid to ask your teacher a question?	18	82	11	89
12. Are the other children in your class friendly toward you?	80	20	84	16
13. Are you scared to go to the office at school?	25	75	17	83
14. Do you like to paint pictures at school?	90	10	85	15
15. Do you like to stay home from school?	41	59	44	56
16. Do you like to write stories in school?	73	27	65	35
17. Do you like school better than your friends do?	74	26	66	34
18. Does your teacher help you with your work when you need help?	86	14	88	12
19. Do you like arithmetic problems at school?	54	46	50	50
20. Do you wish you were in a different class at school?	41	59	41	59
21. Do you like to learn about science?	81	19	81	19
22. Do you like to sing songs with your class?	78	22	70	30
23. Does your school have too many rules?	49	51	39	61
24. Do you always have to do what the other children want to do?	17	83	8	92
25. Do you like the other children in class?	84	16	88	12
26. Are you always in a hurry to get to school?	50	50	47	53

Table 4 (Continued)

Items	Compensatory Pupils N = 597 %Yes	%No	Non-Compensatory Pupils N = 187 %Yes	%No
27. Does your teacher like some children better than others?	57	43	43	57
28. Do other people at school really care about you?	60	40	67	33
29. Does your teacher yell at the children too much?	44	56	29	71
30. Do you like to come to school every day?	71	29	62	38

Interpretation of Item Analysis Responses

Attitude toward school responses of both pupils receiving compensatory services and pupils not receiving these services reflect a positive attitude toward school and reading at the primary level.

Both the compensatory group and the other children are generally in agreement on responses to all items 29, 24, 7 and 3. However some comparisons are hereby noted.

Both groups strongly perceive the principal of the school as a friendly member of the school community and not the stern disciplinarian of the past. Another strong response indicated no fear of asking the teacher a question, a continuing change from the sterotype of the non-approachable teacher. A third strong positive response indicated that other children in the class were viewed as friendly. Also, painting in the classroom continues to receive enthusiastic support of children in the early grades of school.

The strong no response from both groups (83% compensatory, 92% other) "Do you always have to do what other children want you to do" gave encouraging evidence that efforts toward individualizing instruction have begun to be effective and that these primary students in both groups are in situations in which they can and do make choices.

There were two questions in which the differences in response were noteworthy. "Do you often get sick at school?" (60% compensatory no, other children 83% no.) This should be a consideration for educators to press for continued improvements in the health and nutritional services offered to children receiving compensatory help.

The other question in which there was a wide difference in response between groups was "Does your teacher yell at children too much?" (Compensatory 56% no, other children 71% no.) If further investigation proved this to be a valid response, it would indicate a need for those teachers to be made aware of alternate methods of disciplining which would effect behavior modification among students.

Another interesting observation from the results was the eleven questions in which a no answer indicated a positive attitude toward the subject, for example #3, "Does your teacher give you work that is too hard?" (Compensatory 61% no, other children 74% no); in all but one, the non-compensatory students had a higher percentage of no votes than the compensatory students. This would suggest a feeling of self-confidence and assurance on the part of non-compensatory students. It would also indicate the need for continued stress by teachers of compensatory students to continue to develop programs which will strengthen self-image and self-confidence of disadvantaged students.

Additional study and interpretation of the results by the administrators and teachers involved, would give direction for restating objectives and priorities if further in-depth evaluation of the program suggested such a need.

Correlation Matrix

A correlation matrix for fourteen variables of this study is presented in Table 5. It is difficult to get a complete picture of associations among variables from this matrix by itself. However, three determinations can be made by studying the matrix: (1) The identification of the variable that shows the highest relationship with each of the fourteen variables studied, (2) Whether the relatioship is statistically significant or a chance variation, and (3) An estimate of the magnitude of the relationship. An example of how these determinations can be made for two of the variables is explained below.

For example, the variable "number of hours of compensatory services" showed the highest relationship to pupil attitudes toward school in this study. It should be kept in mind that had we collected the variables in a different way than that decided upon for this study, or had we collected information about additional variables we might well have come up with decidedly different results.

A correlation coefficient of r = .27 was found for the variables "hours" and attitudes." By using a table to determine the statistical significance of a correlation coefficient of .27, we find the relationship to be a strongly significant one for the number of cases involved.

Table 5

Correlation Matrix for Attitude Toward School Study Variables
N=103

	Instr Hrs	School Abs	Tchr Parent Cont	Yrs Exp	Sem Hrs Rdg	Sem Hrs Cl	CE $	Town $	AFDC	Pre Test Level	Post Test Level	Rdg Gain	Sem Hrs Rdg & CL	Equal CE Index
Sch Att	.27**	.14	.13	-.05	.00	-.01	.00	.06	.04	.12	.11	.02	.06	.02
Instr Hrs		.00	.48**	-.15	-.11	-.01	.01	-.19	-.13	-.23*	-.11	.02	.23*	.05
School Abs			.06	.03	.31**	-.09	-.24*	.21*	.33**	.33**	.27**	-.04	.23*	-.29**
Tchr/Parent Contact				-.11	-.07	-.02	-.10	.00	.07	-.14	-.17	.11	.70**	-.11
Years Experience					.24*	.27**	-.26**	.11	.07	-.06	-.32**	.27**	.09	-.31**
Semester Hours Reading						.22*	-.69**	.27**	.64**	.35**	.18	.05	.54**	-.71**
Semester Hrs Child Lit							.37**	-.01	.19	.02	-.10	.14	.16	-.36**
CE $								.06	-.43**	-.14	.01	-.16	-.48**	.86**
Town $									.70**	.49**	.13	.19	.10	-.42**
AFDC										.58**	.26**	.14	.37**	-.66**
Pre-test Level											.47**	.22*	.06	-.29**
Post-test Level												-.70**	.02	.00
Reading Gain													.02	-.25*
Semester Hrs Reading & Child Lit														-.48**

* Significant < .05
** Significant < .01

Hence, the coefficient is followed by two asterisks. This tells us that the correlation eoefficient can be considered more than "a chance variation 99 out of 100 times."

A third determination concerning this association can be made which indicates the magnitude of the relationship. By squaring the correlation coefficient, we find that "hours" accounts for only seven percent of the variance in "attitudes." Ninety-three percent of that which constitutes" pupil attitudes toward school" is not accounted for. From this we discern that none of the variables for which information was collected accounted for very much of "pupil attitudes toward school."

In summary, the correlation matrix permits one to find the single most important other variable related to the first variable and the extent of their association. To interpret beyond this point requires additional statistical analyses or other sources of information. The next section relates to a statistical technique which helps clarify results of a correlation matrix.

Multiple Regression Analysis

A multiple regression analysis is a valuable aid to use in conjunction with a correlation matrix such as has been presented in the preceding section of this report. It permits one to determine important combinations of variables which do not "overlap one another" in their association and which most accurately predict a single variable such as "pupil attitudes toward school."

For example, a multiple regression analysis of the fourteen study variables selects the variable that correlates the highest with attitudes and then, in order, picks significant other variables that combine with the first variable to most accurately predict attitudes. In the process it steps by some variables that overlap in their association with "attitudes". In this way, it presents a clearer interpretation than a matrix table by itself. Table 6 presents the results of stepwise multiple regressions performed to ascertain significant other variables for four dependent variables: attitude toward school, pretest reading level, posttest reading level, and reading test gain rate.

Table 6

Stepwise Multiple Regression for Four Study Variables

Dependent Variable	Significant Independent Variables Selected In Order
Attitude toward school	Instructional hours Pretest reading level
Pretest reading level	School AFDC Posttest reading level Reading gain rate Instructional hours Compensatory program cost Semester hours of reading of the teacher.
Posttest reading level	Reading gain rate Pretest reading level Instructional hours
Reading gain rate	Posttest reading level Pretest reading level Instructional hours

School year Absences

The results presented below indicate absences from school by type of school district and by grade level for pupils receiving compensatory education services.

A. School absences by type of school district

	N	M	SD
Urban	338	10.9	8.91
Suburban	183	9.7	11.37
Rural	65	7.5	8.21

Interpretation: Absences converted to percentage of school year attendance for the 150 days up through April 30 show urban pupils having 93.4 percent attendance, suburban with 94.2 percent attendance, and rural children with 95 percent attendance.

B. School absences by grade level

	N	M	SD
Kindergarten	112	13.1 days	10.97
Grade 1	160	11.0 days	11.00
Grade 2	314	8.7	8.19

Interpretation: The pattern of school absences decreases as grade level increases. Converted to percentage of school year attendance, kindergarten children were in attendance 91.9 percent, grade 1 children 93.3 percent, and grade 2 children 94.9 percent of all school days up through the month of April.

Urban-Suburban-Rural Differences

In order to distinguish the more rural from the more suburban school districts in Connecticut, it was decided to classify regional school districts in this study under their original individual town designations.

Under the above circumstances, information for this study was obtained from school children in four urban, ten suburban, and eight rural towns. It is not known how representative these towns are of the 11 urban, 76 suburban, and 82 rural towns in the state as they have been defined. However, the following tables provide some estimate of the different results obtained when the information about children in this study were grouped according to urban, suburban, and rural classifications.

A. Combined school enrollment by town classification

	N	M	SD
	# of Schools	# of Pupils	
Urban	338	22,833	5,121
Suburban	183	10,582	4,715
Rural	65	1,012	517

Interpretation: Urban towns participating in the study averaged 22,833 children enrolled in their combined schools, suburban averaged 10,582, and rural towns averaged 1,012 school children in their town.

B. Concentration of AFDC children by town classification

	N	M	SD
Urban	338	38%	19
Suburban	183	15%	13
Rural	65	2%	1

Interpretation: Urban towns participating in the study averaged an "Aid for Dependent Children" concentration of 38 percent per town school enrollment, suburban 15 percent, while rural towns averaged a 2 percent AFDC concentration per town school enrollment.

C. Expenditure for education by town classification

	N	M	SD
Urban	338	$1,071	$128
Suburban	183	$1,036	$219
Rural	65	$ 791	$122

Interpretation: Urban towns spent $1,071 per pupil for the education of their children, suburban towns $1,036 and rural towns $791 per pupil.

D. Expenditure for compensatory education programs

	N	M	SD
Urban	338	$ 368	$179
Suburban	183	$ 472	$157
Rural	65	$ 407	$ 82

Interpretation: Urban towns spent $368 per pupil for their compensatory education programs, suburban $472, while rural towns averaged an expenditure of $407 per pupil for their compensatory education programs.

E. Concentration of compensatory services by towns

	N	M(hours/year)	SD
Urban	338	108	68
Suburban	183	79	69
Rural	65	79	80

Interpretation: Urban towns provided an average of 108 hours of compensatory service per pupil per year while suburban and rural towns provided an average of 79 hours of compensatory services per pupil per year.

F. Compensatory teacher-parent contact by towns

	N	M	SD
Urban	338	1.3	2.01
Suburban	183	1.5	2.83
Rural	65	.4	.89

Interpretation: In a comparison of the number of times over an eight month period that the compensatory teacher met with the parent of the pupil to discuss the pupil's school progress, urban and suburban systems averaged more than one teacher-parent meeting while rural systems averaged less than one meeting between the parent and the teacher.

G. Pretest reading level by town classification

	N	M	SD
Urban	37	328.1	57.87
Suburban	36	276.4	39.94
Rural	30	265.7	47.97

Interpretation: Extremely small sample sizes limit the interpretation of reading test data in this study. Results were for grade two pupils only. Results were from different tests. Grade equivalence was the unit of measure used to which a constant was introduced for purposes of processing the information.

To interpret the above means and standard deviations consider a value of 350 to be reading approximately one year below grade and a value of 250 to be reading approximately at grade level.

The above results suggest that children from each of the town classifications were not averaging grade level reading to start the school year. This finding would be expected as compensatory programs are directed toward children who are not achieving in school as well as they might.

H. Reading gain rate by town classification

	N	M	SD
Urban	37	264.3	12.00
Suburban	36	263.7	12.15
Rural	30	256.6	4.51

Interpretation: The same limitations described for the reading pretest results described above apply to the reading gain results.

To interpret the reading gain results above, consider learning in reading at the rate of a month's progress in a month's time to equal the table value of 260. A value higher than 260 would be faster progress in reading and a value lower than 260 would be a slower pace.

The results of the reading gain tables above suggest that urban and suburban children progressed in reading at a rate exceeding a month's progress per month during the 1972-73 school year while rural children progressed at a rate less than a month's progress per month during the 1972-73 school year.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study is the first of a series of studies aimed at assessing attitudes of school children. Attitude toward school was the specific category of attitudes surveyed in this first evaluation. The children studied were kindergarten through grade two children who received compensatory education programs during the 1972-73 school year.

The purpose of the study was to find out what pupil, teacher and school district characteristics related to young childrens expressed attitudes toward school as measured by the School Sentiment Index, and to determine the evaluation usefulness of the measuring instrument.

The results obtained from the study have been described in detail in the two preceding sections. In this closing section, conclusions, and recommendations are presented related to the stated purposes and major questions of the evaluation.

Restatement of Question One

> What are the interrelationships of pupil attitudes toward school at the end of the school year and selected other, pupil, program, teacher, and school district factors?

Information was requested for thirteen factors thought to have an important bearing on the way a pupil might respond to the statements of the attitude toward school instrument.

The concentration of compensatory education instruction and the pretest reading level of the pupil were found slightly important in terms of how the child did respond to the attitude instrument.

Other data collected such as: school absence, reading posttest level, reading gain, years of teaching experience, semester credits of the teacher

in reading or children's literature, teacher-parent contact, compensatory program cost, town expenditure for education, or concentration of children of the poor in the school district had relatively little or no relationship to expressions of pupil's attitudes toward school.

By far the most important finding was that none of the variables for which informatio. was collected accounted for very much of pupil attitudes toward school.

Conclusion. The information we have generally obtained about the school child, his teacher, the compensatory program, or the school district does not tell us very much about pupil's attitudes toward school as expressed in the School Sentiment Index.

Recommendation. If attitudes toward school really express the enthusiasm with which children approach school experiences, and if this a major concern in a school district, then attitudinal measures must be introduced to assess it.

Restatement of Question Two

> Does (attitude toward school, pretest reading level, reading test gain, extent of school district disadvantagement, and cost of the compensatory reading program) vary when the data are grouped according to: the grade promotion status of the pupil, the emphasis of the compensatory instruction provided, the size of the group in which the pupil received compensatory instruction, or the specialized background or other training of his compensatory teacher?

Promoted vs the nonpromoted. While attitudes toward school, absences from school, and reading test results did not differ very much between the promoted and the nonpromoted child, the study did suggest that nonpromotion was more often practiced in smaller school districts where the expenditure for education and the disadvantagement per school district enrollment was less.

Approach to compensatory instruction. Three-quarters of all compensatory help emphasized a phonics approach to reading. Pupils receiving phonics or an experience approach expressed higher attitudes toward school and progressed at a faster reading rate than pupils receiving a basal approach to reading. Phonics was used more often in school districts with the highest disadvantagement and was among the most costly in terms of per pupil expenditure.

Instructional group size. One-to-one tutoring for children was the most expensive of all grouping arrangements used to provide compensatory instruction to children, but it did not yield better test results or more positive attitudes toward school. Instructional group sizes of 4 to 5 children were most commonly used to provide compensatory help and children who received instruction under this arrangement expressed higher attitudes toward school than children receiving instruction in smaller group sizes.

Teacher background. Attitudes toward school were very similar regardless of whether the compensatory teacher of the pupil had a reading, elementary, or special education background. Teachers with reading backgrounds were most often employed to provide compensatory services. Reading background was also the dominant choice in school districts having the highest disadvantagement.

Summarizing the results for question two, it can be stated that both the approaches used in instruction and the grouping arrangements for providing compensatory instruction affected pupils expressed attitudes toward school. Whether a pupil was promoted or retained or whether his teacher had a reading, elementary, or special education background had little effect on his expressed attitude toward school.

Conclusion: The Phonics approach to compensatory reading instruction and the compensatory instructional group arrangements of 4 to 5 pupils at a time are not only the most widely practiced programming techniques in Connecticut but associate importantly with circumstances that promote pupils to express higher than typical attitudes toward school.

One should not infer from the above conclusion that compensatory programming across the state should adopt these program characteristics to encourage more positive attitudes toward school. The evidence is not adequately strong to support this.

The evidence of diagnostic instruments, the observations of classroom teachers, the learning style and behavior patterns of each child selected for compensatory help as well as the financial and staffing possibilities available to the school system must be the major considerations in deciding the nature of each child's compensatory program needs.

Recommendation: School staff should evaluate their compensatory programming continuously to ascertain the most appropriate conditions, methods, and procedures to best promote children's school attitudes and learnings.

While the phonics approach and the four to five pupil grouping arrangement show promise of encouraging more positive attitudes toward school, this result should be substantiated in further studies.

Restatement of Question Three

> What is the value of using the School Sentiment Index on an end-of-the-year basis for pupil, school district compensatory program, and statewide compensatory education evaluation purposes?

Instrument characteristics. The value of an evaluation measure can be determined by how valid and reliable the instrument is, whether it discriminates adequately among subjects, and whether there is a need for it.

Teacher prejudgment of pupil attitudes toward school established a

low but significant level of validity (r =.31) for the School Sentiment Index based on its spring 1973 administration in New Haven, Connecticut.

Being an instrument that solicits the learner's opinions in a straight forward, question and answer fashion classifies the measure as a type that possesses high content validity. Most persons would expect that a child who responded truthfully to the Index would manifest the attitude toward school so expressed. Unfortunately, responses to this type of instrument are easy to fake. In the case of young children, one cannot be sure whether or not they are responding as they truly feel or the way they think adults want them to respond.

The School Sentiment Index underwent extensive field trials in California. Items were kept in the revised instrument (the one used in Connecticut) that showed variability in responses from a representative learner population. Correlations were also performed for individual items and the total score to be sure each individual item was sufficiently well correlated with the pool of items of which it was a part. Another analysis assured that each item of the index behaved in a stable fashion over time. A two week interval between administrations of the primary level of the instrument yielded a reliability index of r =.87 and a KuderRichardson 20 showed an internal consistency estimate of r =.72 for the primary level of the School Sentiment Index.

The Connecticut administration of the School Sentiment Index to compensatory education pupils and also to other children not receiving compensatory services indicated that total score responses were distributed in an approximately normal fashion over a wide range for both groups tested.

The need for attitude toward school instruments is supported from two standpoints. First, improving pupil's attitudes toward school is an often cited objective in compensatory education program proposals. Since objectives are based on needs analyses of children in the program, it seems clear that attitude toward school is one area of importance needing evaluation attention.

Secondly, the wide acceptance of many school district staff to test attitude instruments in the Spring of 1973, and the comments they made favoring such studies, clearly indicates their support.

Interpreting an individual score. In a publication directed at assessing attitudes of young children toward school, discussed in the first section of this report, Samuel Ball claims that there is little stability in an individual attitude response for a young child. Lacking a large experiential background, he states, they are more likely to be swayed by specific, momentary considerations than older children or adults. This inconsistency over time reduces the reliability of attitude assessment in young children and therefore limits severely the possibilities of accurately interpreting a single score. Interpretation of an individual score for a young child is not therefore encouraged.

Interpreting scores for a group of children. Assessing the total score for a group of children compared to other children is encouraged. This is because individual errors tend to be random for a group of children and the group scores will be therefore more stable and accurate than the score would be for any one child alone. Similarly, assessing a group of children's responses to a single item of an attitude compared to other children's responses to that same item is also encouraged.

Applying the above to compensatory program evaluation, compensatory pupils' total score, or item score, could be compared to the score of other children in the school in the same grade levels to ascertain whether compensatory pupils attitudes are more positive, more negative, or about equal to that of other children in the school in the same grade levels.

Where other children in the same school cannot be used for comparison purposes, the data reported in this study could be used for comparison purposes if the children were from kindergarten grade one, grade two, or any combination of the three grade levels. Tables on page 33 of this report indicate typical total score responses for the School Sentiment Index for compensatory education program pupils by grade level, and also total scores for noncompensatory children by grade level. Another table of information on page 34 of this report indicates typical scores for combined kindergarten through grade two children by urban, suburban, and rural school district designations.

The item analysis presented on pages 35 through 37 of this report could likewise be used to compare item by item responses obtained from compensatory education program children for program evaluation purposes.

Use in a statewide evaluation. The Connecticut State Department of Education examines primary grade (K-2) compensatory education results separately of preschool, elementary, language, and high school program results. To-date, programs have been singled out as being more or less successful on the basis of receptive vocabulary and reading test results only.

The School Sentiment Index offers an additional area of measurement important to the school success of disadvantaged children and should be included among the measures used to determine the relative success of primary grade programs carried out in the state.

Conclusions: The School Sentiment Index is a valuable instrument to determine pupil attitudes towards school. One major value lies in using it to interpret group scores of young children for compensatory education evaluation purposes.

Recommendations. It is recommended that school districts of Connecticut administer the School Sentiment Index to kindergarten through grade two pupils receiving compensatory education services during the month of May 1974.

Results of the May administration of the instrument should be included in the 1973-74 compensatory program year end evaluation. Pupil responses to the attitude instrument compared to some other group of children should be discussed in the evaluation. The Procedures for administering the instrument and the selection of a representative sample of children should be undertaken as explained in Attachment A to this report. Single copies of the Primary Level of the School Sentiment Index are available on request from the Connecticut State Department of Education for this purpose.

It is recommended further that the State Department of Education use the School Sentiment Index measure of pupil attitudes toward school as one indication of the success of primary level compensatory education programs being carried out in Connecticut School districts.

Still another recommendation is that school districts investigate the usefulness of the Intermediate Level and the Secondary Level of the School Sentiment Index which are available in the Attitude Toward School Objectives Collection, Instructional Objectives Exchange, Box 24095, Los Angeles, California 90024.

ATTACHMENT A

INSTRUCTIONS TO THE PARTICIPATING TEACHER

INSTRUCTIONS TO THE PARTICIPATING TEACHER

How and When the School Sentiment Index is to be Used

Please administer the School Sentiment Index in May 1973 to pupils of kindergarten age through grade 2 who get compensatory help from you. The results can give you an objective measure of pupils' attitudes toward school.

This index attempts to get a pupil's responses to questions which pertain to five aspects of attitude toward school: teacher, school subjects, school social structure and climate, peer, and general. If you look over the questions that the SADC or Title I supported teacher must read aloud to her children, you will see that a child can be influenced by the way the Index is administered. It is therefore important that the directions for administering the Index be studied thoroughly and followed as closely as possible.

The State Department of Education requests that each SADC-Title I supported teacher administer the Index <u>just as it is</u> for not more than 15 of their pupils each selected in the manner outlined on the next page and return the completed answer sheets along with the other information requested to the State Department of Education by June 1, 1973. If you wish to administer the Index to other pupils, you may reproduce and modify it in any way you choose, but mail to us only those sheets selected according to the process described on the next page.

Procedure for the Selection of Fifteen Pupils Per Teacher

If the number of K, 1st, and 2nd grade pupils to whom you provide compensatory instruction is equal to or less than 15, administer the Scale to all these pupils.

If the number of K, 1st and 2nd grade pupils to whom you provide compensatory instruction exceeds 15, use the following procedure:

a. Make one alphabetical ist of the names of all pupils.

b. Number the names: 1, 2, 3, etc.

c. Check numbers 3, 6, 9, 12 etc. (every third name)

d. If you do not have 15 names by this process, go back to the beginning of your list and check 2, 5, 8, 11, etc.,...and if necessary, 1, 4, 7, 10, etc. until you have 15.

e. Administer the Scale to pupils whose names are checked and forward these results along with the other pupil and teacher information to the State Department of Education.

Administering the School Sentiment Index

Before administering

Read over the questions making up the Index beforehand. Have pencils or crayons on hand for marking answers. Decide whether special seating arrangements may be helpful. Plan to administer the instrument in small groups. Prefold answer sheets along rows for kindergarten children if you think this will be helpful. Have practice exercises drawn on the chalkboard before the instrument administration session begins.

Introducing the Index

Tell the children you want to find out their answers to some questions about school you are going to ask them. Tell them you are going to read the questions aloud and that you want them to mark their answers to the questions on a paper you will give them. But that before you give them the paper, you want them to practice the way they will have to mark answers using the chalkboard examples.

Turning to the chalkboard examples, tell the children that when you read each question, each child should underline either yes or no, whichever shows how he or she feels about that question. That they should underline only one of these answers for each question, and that they should not leave any out.

The teacher should then ask as many different pupils to come to the board and answer practice items as she deems necessary. With children who can already discriminate between yes and no, few if any of these practice exercises may be needed.

Practice questions like the following may be used:

a. Are you a child?

b. Are you a train?

c. Do you have a brother?

d. Do you like to eat spinach?

When the teacher feels the children are ready to respond to the Index, she shoud say the following before giving each child a paper on which to mark ansers:

"After I ask a question, some of you may underline yes, and others may underline no. The right way to choose is according to how you really feel...not how somebody else feels about it. So ask yourself before answering, how do I feel about this question and be sure to mark it that way."

Asking the questions

Give children the papers on which they will mark their responses and be sure each has a pencil or crayon.

Two methods of identifying the response boxes are provided. The pictures in each box may be used with children who are unable to identify the numerals 1-30. If the pictures are used, they should be identified before beginning the truemt. When administering the instrument, the administrator should check on each item to make sure children are responding "in the box with the .. .." Children who are able to read numerals may prefer to use these rather than the pictures. The administrator should identify the correct numeral before and after reading each question.

Tell the children not to talk about their answers until their papers are finished.

Scoring the Index Responses

1. Notice that some items are positive statements and some are negative. Responses to these items will differ in value. (To "agree" to a positive statement is to reflect a positive attitude, whereas to "agree" to a negative statement is to reflect a negative attitude). The following table should therefore be referred to in scoring:

Items	YES	NO
The negative items: Nos. 2,3,5,7,11,13,15,20,24,27,29	0	1
The positive items: Nos. 1,4,6,8,9,10,12,14,16,17,18, 19,21,22,23,25,26,28,30	1	0

2. With practice, the scorer can mark the positive items just prior to scoring and assign the proper value to each item at a glance.

3. The child's total score is a quantitative reflection of his attitude toward school. The theoretical range of scores is from 0 to 30.

About the SCHOOL SENTIMENT INDEX

The SCHOOL SENTIMENT INDEX is published by the Instructional Objectives Exchange of Los Angeles, California.[1] Initial development of the measure was begun in 1970 by the Instructional Objectives Exchange staff financed by Title III ESEA funds.

Following its initial testing and release for school system use, it underwent further field trials. In all, 1,229 pupils of eleven schools in California were involved in the revision field tests. In summary, the revision of the SCHOOL SENTIMENT INDEX resulted in a revised instrument which was more defensibly based on field test data from a more representative learner population. A complete analysis of the results are available from the publishers.[2] In brief, an internal consistency estimate based on Kuder-Richardson 20 was found to be $r = .72$ ($N = 108$) and a test-retest (two week interval) reliability index of $r = .87$ ($N = 151$) was obtained for the Primary Level of the SCHOOL SENTIMENT INDEX. This is judged to be good reliability for an affective measure.

The pupil response sheets provided by the Instructional Objectives Exchange for use with the Primary Level of SCHOOL SENTIMENT INDEX have been condensed into a single page for use in the Connecticut testing of this instrument.

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1 Instructional Objectives Exchange. Self Concept Objectives Collection, Box 24095, Los Angeles, California 90024.

2 Popham, W. James. Empirical Based Revision of Affective Measuring Instruments. A paper presented to the California Educational Research Association, November 1972, San Jose, California.

SCHOOL SENTIMENT INDEX

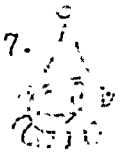
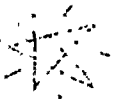
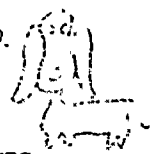
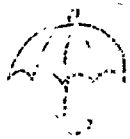
Primary Level

(face)	1. Is your teacher interested in the things you do at home?
(star)	2. When you are trying to do your schoolwork, do the other children bother you?
(bell)	3. Does your teacher give you work that is too hard?
(cat)	4. Do you like to tell stories in front of your class?
(phone)	5. Do other children get you into trouble at school?
(flower)	6. Is school a happy place for you to be?
(clown)	7. Do you often get sick at school?
(house)	8. Does your teacher give you enough time to finish your work?
(dog)	9. Is your school principal friendly toward the children?
(umbrella)	10. Do you like to read in school?
(face)	11. When you don't understand something, are you afraid to ask your teacher a question?
(star)	12. Are the other children in your class friendly toward you?
(bell)	13. Are you scared to go to the office at school?
(cat)	14. Do you like to paint pictures at school?
(phone)	15. Do you like to stay home from school?
(flower)	16. Do you like to write stories in school?
(clown)	17. Do you like school better than your friends do?
(house)	18. Does your teacher help you with your work when you need help?
(dog)	19. Do you like arithmetic problems at school?
(umbrella)	20. Do you wish you were in a different class at school?
(face)	21. Do you like to learn about science?
(star)	22. Do you like to sing songs with your class?
(bell)	23. Does your school have too many rules?
(cat)	24. Do you always have to do what the other children want to do?
(phone)	25. Do you like the other children in your class?
(flower)	26. Are you always in a hurry to get to school?
(clown)	27. Does your teacher like some children better than others?
(house)	28. Do other people at school really care about you?
(dog)	29. Does your teacher yell at the children too much?
(umbrella)	30. Do you like to come to school every day?

Name of Pupil _____ Grade Level _____ Teacher _____

I: PUPIL RESPONSES TO SCHOOL SENTIMENT INDEX (Primary Level)

Directions: Underline either YES or NO whichever way you feel about some questions that the teacher will read to you.

1.  YES NO	2.  YES NO	3.  YES NO	4.  YES NO	5.  YES NO	6.  YES NO
7.  YES NO	8.  YES NO	9.  YES NO	10.  YES NO	11.  YES NO	12.  YES NO
13.  YES NO	14.  YES NO	15.  YES NO	16.  YES NO	17.  YES NO	18.  YES NO
19.  YES NO	20.  YES NO	21.  YES NO	22.  YES NO	23.  YES NO	24.  YES NO
25.  YES NO	26.  YES NO	27.  YES NO	28.  YES NO	29.  YES NO	30.  YES NO

Name of Pupil _____ Gr Lvl ____ Teacher _____

II: PUPIL INFORMATION TO BE PROVIDED BY THE COMPENSATORY PROGRAM TEACHER

1a. What is the average number of hours per week of compensatory instruction in readiness skills and/or reading this pupil receives? ____

1b. What total number of school weeks of compensatory instruction in readiness skills and/or reading are intended for this pupil by the end of the 1972-73 school year? ____

2. How many school days was this pupil absent as of the end of April of the 1972-73 school year? ____

3. How many times as of the end of April have you met with a parent of this child and discussed the school progress of the pupil? ____

4. Has this pupil been retained at grade level any school year? ____

5. Has this pupil been placed in a transitional class any school year including the current year? ____

6. Which one of the following characterizes most closely the emphasis in compensatory reading instruction provided to this pupil: (Check only one)

___ basal	___ phonics	___ experience approach	___ no reading instruction in the program
___ perceptual-motor	___ individualized reading based on library books		

7. Which one of the following characterizes most closely how compensatory instruction is provided to this pupil: (Check only one)

___ one to one	___ groups of 2 or 3	___ groups of 4 or 5	_____ (other: specify)

8. Provide the following standardized reading test* information for this pupil:

Name of Test-yr pub	Pre Form	Post Form	Time of Pretest**	Raw Score	G E Score	Time of Posttest**	Raw Score	G E Score

Subtest: _____

* Where possible, please provide test information for one of the following tests and forms:

1971 MAT: Reading subsection; Forms F,G,H; begins at grade K.7
1965 Gts-McG: Comprehension subsection or Vocabulary plus Comprehension subsections combined; Forms 1,2,3; begins at grade 1
1970 CAT: Reading subsection; Forms A and B; begins at grade 1.5
1964 SAT: Paragraph Meaning subsection; Forms W,X,Y; begins at grade 1.5

** Record date of testing in grade equivalent units. If the pretest is between September 15 and October 14 for fourth graders, record it as 4.1, for example. If the posttest is between May 15 and June 14, record it as 4.9. If during other months, use the same rationale.

III: TEACHER INFORMATION TO BE PROVIDED BY THE COMPENSATORY PROGRAM TEACHER

1. Teacher's Name

2. Teacher's School Address

3. Town

4. Years of teaching experience including the present year

5. Area(s) of specialized training or background

6. The number of undergraduate and graduate semester hours in the teaching of reading

7. The number of undergraduate and graduate semester hours in children's literature

IV: COMPENSATORY EDUCATION (SADC-Title I ESEA) INFORMATION

1. State the title of your compensatory education program as described in the proposal or end-of-year program evaluation:

2. State the number assigned to your compensatory education program in the grant approval letter from the State Department of Education