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## ABSTRACT

THE EVALUATION IN THIS REPORT WAS CARRIED OUT USING OFFICE OF EDUCATION NATIONAL SURVEY INSTRUMENTS FOR COLLECTION AND ANALYSIS OF STATISTICAL DATA. THE SURVEY INSTRUMENTS CONSISTED OF OPTICAL SCANNING (OP-SCAN) PRINCIPAL, TEACHERS, AND PUPIL FORMS. THE CONTENTS OF THE REPORT INCLUDE: (1) CHARACTERISTICS OF ELEMENTARY AND SECONDARY EDUCATION ACT TITLE I AID RECEIVING SCHOOLS AND TEACHING STAFF; (2) CROSS TABULATIONS AND ANALYSES OF DATA ON PUPILS IN TITLE I SCHOOLS--INCLUDING CHARACTERISTICS OF TITLE I AND NON-TITLE I PUPILS, THE TITLE INSTRUCTIONAL PROGRAM AND THE TITLE I PUPIL, LEARNING EXPERIENCES OF THE TITLE I AND NON-TITLE I PUPILS OTHER THAN IN REGULAR SCHOOL YEAR PROGRAMS, ADDITIONAL FACTORS RELATED TO PUPIL'S SELF-CONCEPT AND SCHOOL ACHIEVEMENT, AND FAMILY CHARACTERISTICS OF TITLE I AND NON-TITLE I PUPILS; AND, (3) RATE OF LEARNING STUDY--ACHIEVEMENT DATA ON TITLE I AND NON-TITLE I PUPILS. THREE APPENDIXES PROVIDE SAMPLES OF THE OFFICE OF EDUCATION SURVEY INSTRUMENT PRINCIPAL INFORMATION FORM, TEACHER INFORMATION FORM, AND PUPIL INFORMATION FORM. SEE UD 009 599 FOR SECTION I OF EVALUATION.

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STATE OF WISCONSIN

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TITLE I  
Elementary and Secondary  
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## INTRODUCTION

In the current 1967-1968 Title I evaluation, the Wisconsin Department of Public Instruction Title I unit has elected to use the U. S. Office of Education national survey instruments for collection and analysis of statistical data on Wisconsin schools. These survey instruments consist of optical scanning (op-scan) principal, teacher and pupil forms.

All elementary schools receiving Title I funds were required to respond. The principal form provided budgetary and enrollment data as well as information on school facilities, personnel and socio-economic status of the student body. All homeroom teachers of second, fourth and sixth grade pupils reported on their educational background, teaching experience and composition and organization of their class. The teachers also selected a 20% systematic random sample of pupils. Demographic information, achievement data and behavioral observations established a profile of the individual student on the pupil form.

A total of 554 principal forms, 2,823 teacher forms and 14,059 pupil forms were received in the state Title I office. A stratified random sampling from this population provided data for the descriptive and inferential statistics in this report and represent a population of approximately 50% of all schools and 97% of all school districts in the state of Wisconsin. The size of sample varied among principal, teacher and pupil forms and was determined by choice of data analysis and number of complete, accurate respondent forms in each of the above categories. Sampling number (N) for pupil forms was 15%, teacher forms, 20%, and principal forms, 40% of the respective populations.

As the general purpose of these data analyses is estimation as well as statistical inference, the N of each subgroup or stratum in the sample is proportional to that existing in the population.

Stratification was necessary for several reasons. It assured representation of all school districts by size and thus homogeneous data within the stratum. It also allowed a comparison of Title I schools, pupils and services across a broad continuum of socio-economic levels ranging from isolated rural communities to major cities. Stratification of school districts is shown in Table 1.

Table 1

Stratification of Schools by Size of District

Strata	Number of students in school district
1	0-699
2	700-1399
3	1400-2099
4	2100-4999
5	5000-9999
6	10,000-24,999
7	25,000-49,999
8*	50,000-99,999
9	100,000 & over

\*No school districts are identified in this stratum.

Generally, stratified sampling presupposes some knowledge of population characteristics included in the stratification. As shown in Table 2, school district size or stratum corresponds with geographical location; the small school districts reveal a high concentration of pupils in isolated rural areas and small cities or towns; the larger districts are represented in middle-size and large cities. Primary and secondary areas of concentration of school populations within each stratum are also identified.

Table 2

The Percentage of Title I Schools in Each Stratum Found in Various Geographical Locations

Strata (Number of students in school district)	A. Large city (over 500,000)	B. Suburb of a large city (500,000-1,000,000)	C. Rural area near large city	D. Middle-size city (500,000-1,000,000)	E. Suburb of middle-size city	F. Rural area near middle-size city	G. Small city or town (less than 50,000)	H. Rural area not near large or middle size city
1 (0-699)	0.00	0.00	1.11	0.00	0.00	14.89	<u>16.04</u>	<u>67.96</u>
2 (700-1399)	0.00	0.00	4.23	0.00	4.23	18.30	<u>22.54</u>	<u>50.70</u>
3 (1400-2099)	0.00	0.00	7.50	0.00	0.00	5.00	<u>52.50</u>	<u>35.00</u>
4 (2100-4999)	0.00	<u>14.29</u>	0.00	0.00	3.17	3.17	<u>65.08</u>	<u>14.29</u>
5 (5000-9999)	0.00	<u>12.50</u>	6.25	<u>12.50</u>	0.00	0.00	<u>62.50</u>	6.25
6 (10,000-24,999)	0.00	7.40	7.40	<u>48.18</u>	3.70	7.40	<u>22.22</u>	3.70
7 (25,000-49,999)	0.00	0.00	0.00	<u>93.34</u>	<u>6.66</u>	0.00	0.00	0.00
8 (50,000-99,000)	--	--	--	--	--	--	--	--
9 (100,000 & over)	<u>100.00</u>	0.00	0.00	0.00	0.00	0.00	0.00	0.00

primary area of concentration of school population

secondary area of concentration of school population

\* only Milwaukee Title I schools are sampled in stratum 9.

Note: Appendix A, Principal form, Question 22.

In summary, stratification allows a discrete "telescopic view" of Wisconsin's Title I schools, pupils and programs rather than an overview.

Data in this report are divided into 3 parts, as follows:

- Part I. Characteristics of Title I schools and teaching staff.
- Part II. Cross-tabulations and analyses of data on pupils in Title I schools.
- Part III. Rate of Learning studies: achievement data on Title I and non-Title I students.

PART I

A 40% random sampling of principal forms provided descriptive statistics comparing student enrollment, school budget, school facilities, school personnel, socio-economic status of students and attendance areas across strata. Data on the background, experience and class organization of teachers in the 2nd, 4th and 6th grades are also included in this section.

Enrollment information from the principal form reveals a major concentration of students in compensatory education programs in the larger city Title I schools (see fig. 1).

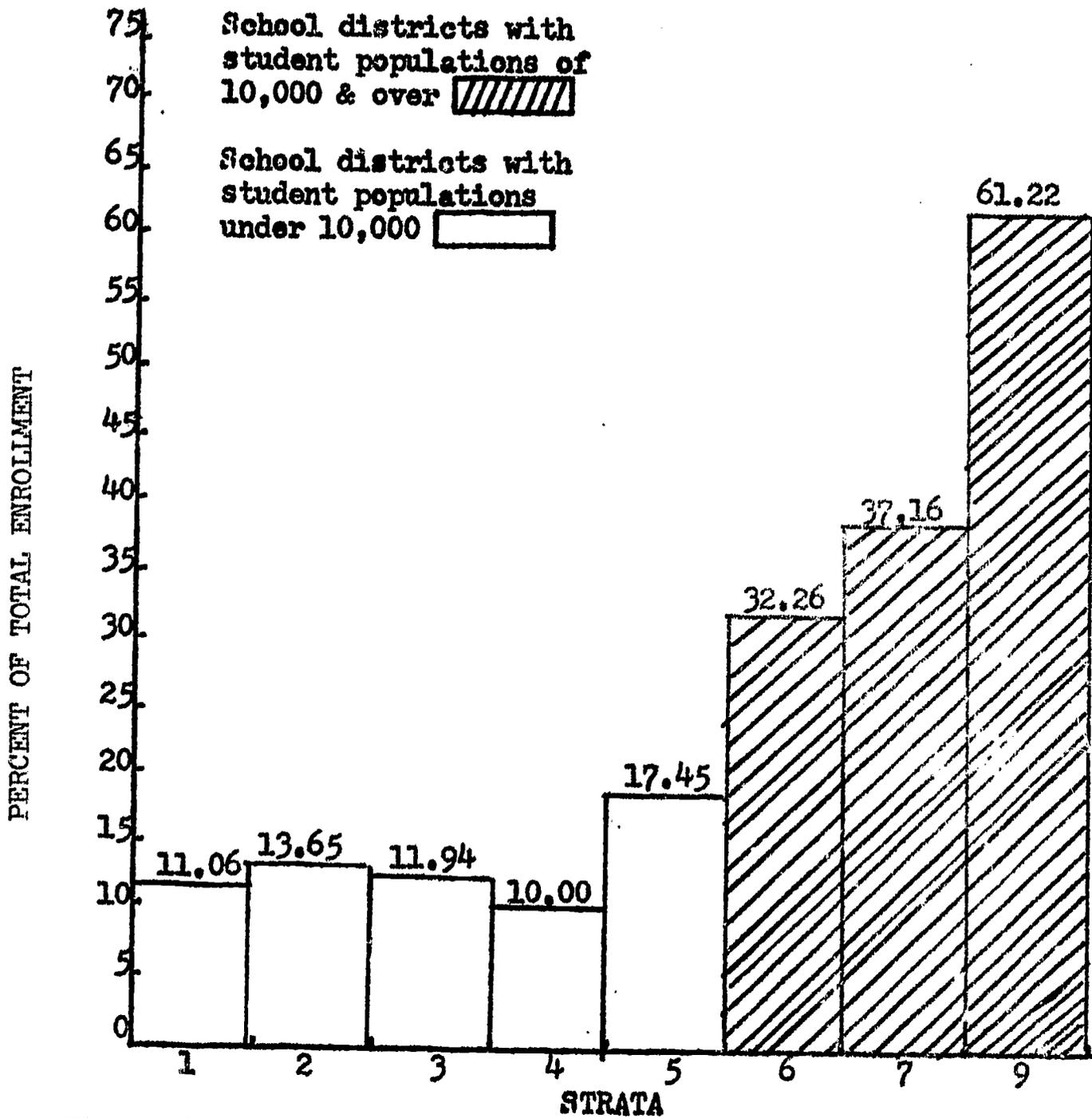


Figure 1 shows the distribution of students participating in compensatory programs in Title I schools, 1967-1968.

Note.-- Appendix A: Principal form, question 1-f,03.

Data on absenteeism supports this emphasis of compensatory programs in the city Title I schools. An almost direct inverse relationship of attendance rate to size of school district is observed with the poorest attendance rate or highest absenteeism in city school. The relationship of absentee rate, defined by percentage of students enrolled attending school daily, to school district size is shown in Table 3.

Table 3

The Relationship of School District Size to Percentage of Students Enrolled Who Attend School Daily

Strata	School district size	Location*	% enrolled who attend school daily** (rank ordered)
2	700-1399	Rural area, isolated Small city or town	93.54
1	0-699	Rural area, isolated Small city or town	91.21
3	1400-2099	Small city or town Rural area, isolated	90.95
5	5000-9999	Small city or town Suburb Middle size city	88.01
4	2100-4999	Small city or town Rural area, isolated Suburb	87.98
7	25000-49999	Middle size city Suburb	86.53
6	10000-24999	Middle size city Small city or town	86.52
9	100000 & over	Large city	83.93
8	50000-99999	--	--
			MEAN: <u>88.57</u>

\* See Table 2

\*\*  $\frac{\text{Stratum } \bar{X} \text{ of average daily attendance, 11-67} + \text{stratum } \bar{X} \text{ of average daily attendance, 4-68}}{2}$

Stratum X, 1967-1968 enrollment

Note: Appendix A, principal form, questions 1-a, 1-b, 03.

The pattern of growth in enrollment of Title I schools is seen in a comparison of total enrollment figures from 1965-1966 to 1967-1968 (Fig. 2).

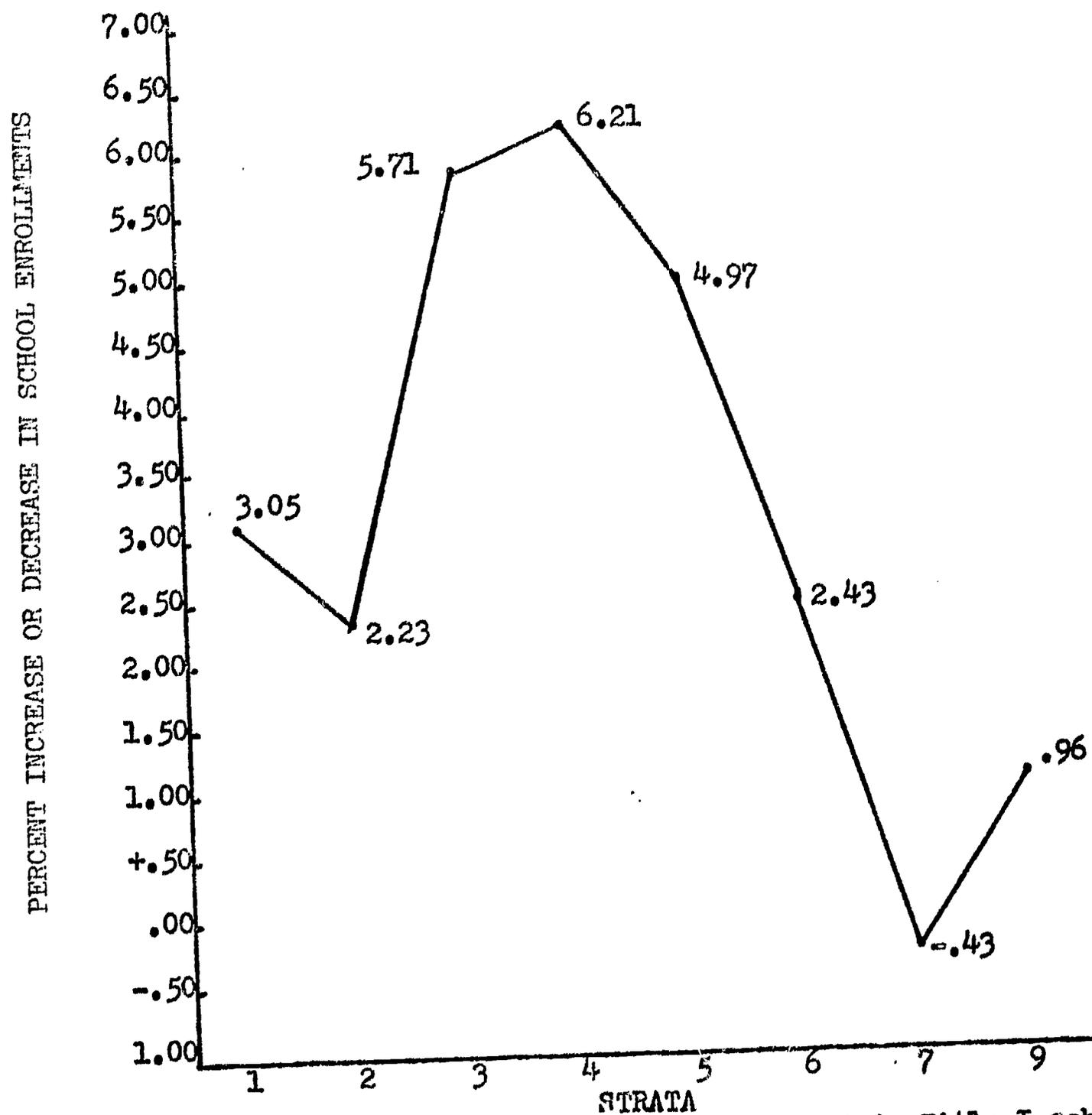


Figure 2 shows trends in growth of enrollment in Title I schools from 1965-1966 to 1967-1968.

Note.--Appendix A: Principal form, question 03

Although there is a trend toward increased enrollment in Title I schools observed in strata 3, 4 and 5, this growth is statistically nonsignificant. There is, however, recognition of major school district consolidations occurring in these strata between 1967 and 1968; many rural schools combined into single districts; others joined districts located in small cities or towns adding to the school population of the larger community. Title I schools, accordingly, reflect this fact.

Enrollment data on Title I schools in the larger districts appears related to socio-economic status of the student body. Strata 7 and 9 reveal loss or negligible gain in enrollment in each stratum when compared to other strata or districts (Fig. 2). There is also a critically high percentage of Title I schools within strata 7 and 9 showing a decrease in socio-economic status of the student body (Fig. 3). A linear relationship between attendance areas serving residential-commercial-industrial neighborhoods and a decrease in socio-economic status of the student body is also found (Fig. 3). A similar relationship is observed between primarily residential attendance areas and an increase in socio-economic status of student body (Fig. 4).

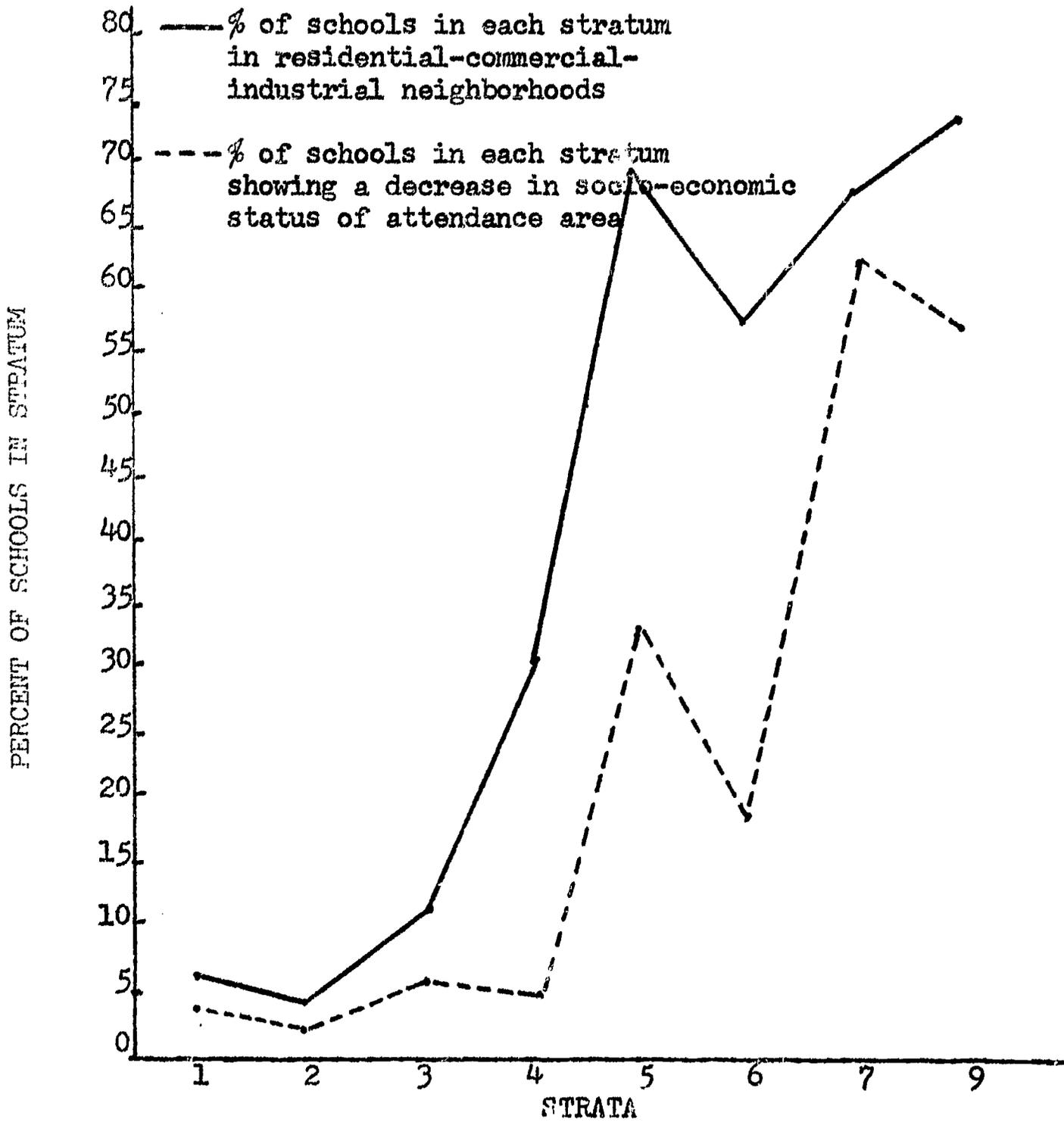


Figure 3 shows the relationship of residential-commercial-industrial neighborhoods to decrease in socio-economic status of attendance area. Note.-- Appendix A: Principal form, questions 21,23.

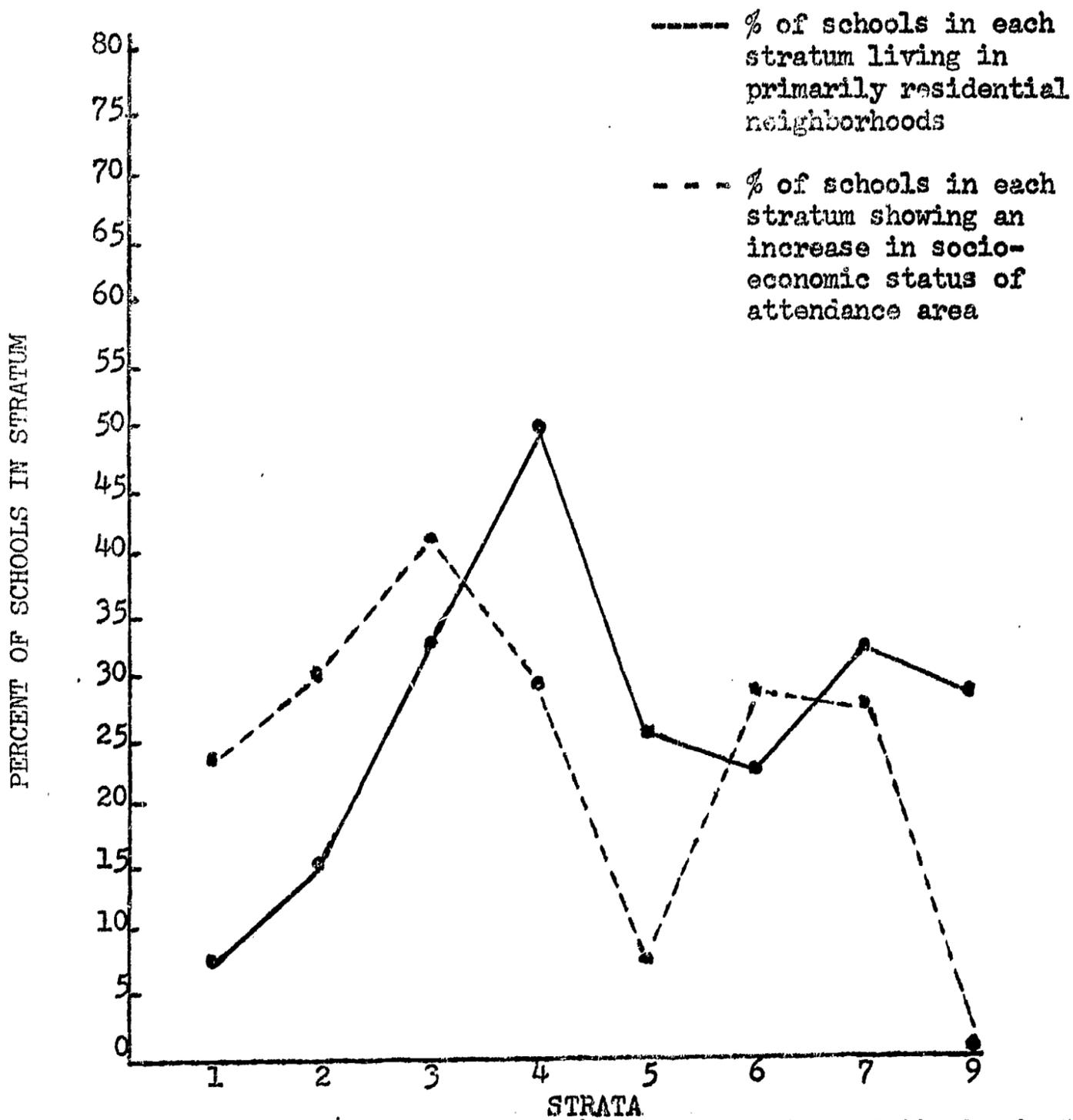


Fig.4 shows the relationship between residential neighborhoods and increase in socio-economic status of attendance area.  
 Note.-- Appendix A: Principal form, Questions 21,23.

The proportion of Title I school's total budget appropriated from state and federal funds for compensatory education has increased each year from 1965-1966 through 1967-1968. Nevertheless, all strata with the exception of Milwaukee (stratum 9) showed a decrease in federal and state appropriations during the current 1967-1968 school year. The percentage of Title I school's total budget for compensatory education was also found to generally increase with size of school district or stratum (Fig. 5).

PERCENT OF TOTAL SCHOOL BUDGET

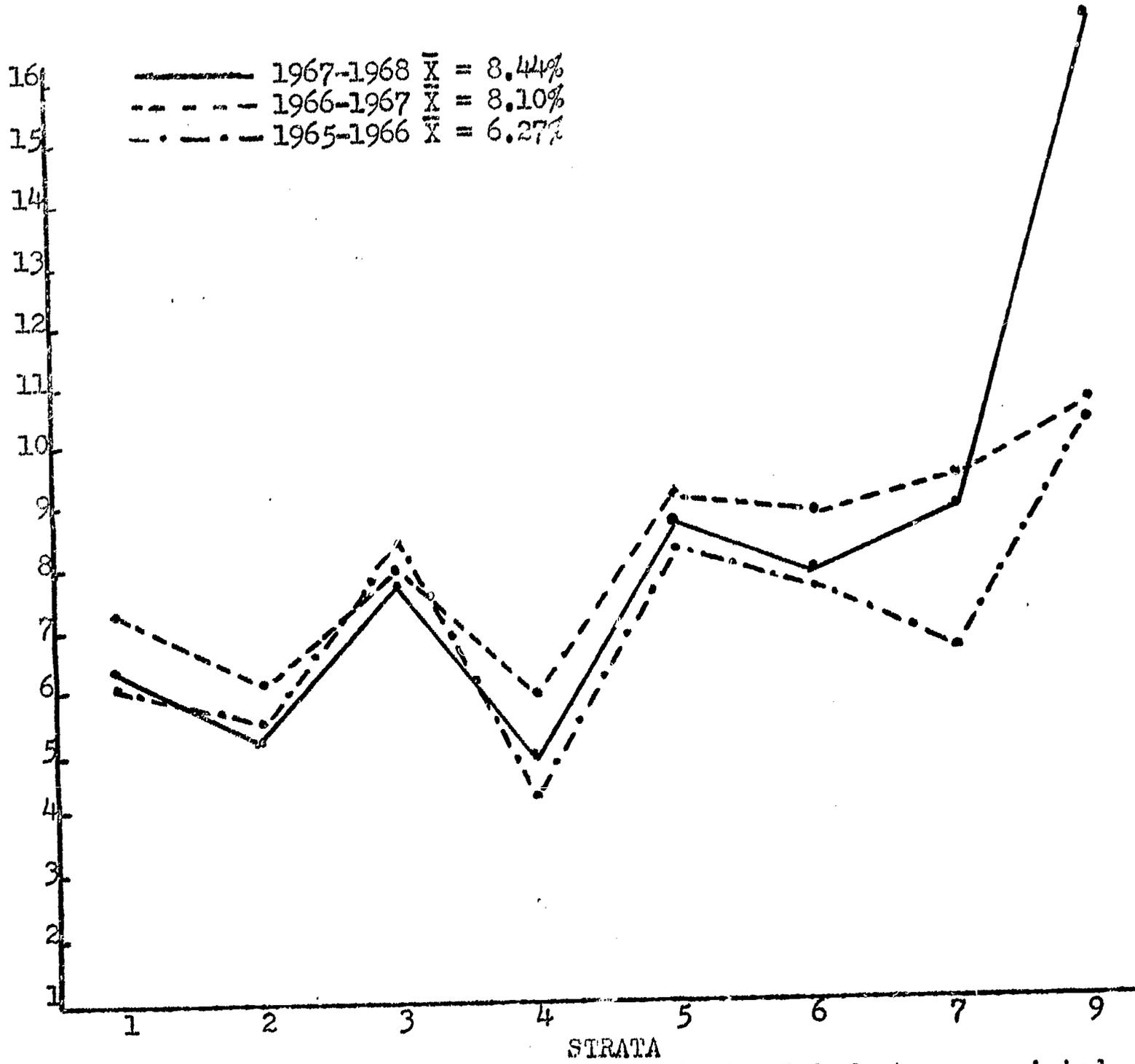


Fig. 5 shows the percentage of Title I school's total budget appropriated from State and Federal funds for compensatory education for 1965-1966, 1966-1967 & 1967-1968.

Note.--Appendix A: Principal form, Question 04,05,06.

Table 4 shows considerable variability in program emphasis among Title I schools. Nevertheless, compensatory funding across all grades assumes a surprisingly normal distribution. As expected, the greater proportion of federal and state funds was spent on projects in the elementary schools. Data reflects a wider distribution of compensatory funds across grades in the smaller districts; this seems to represent an artifact of sampling the smaller district populations. Principals reporting from the smaller district are more likely to include grades K through 12 than principals in the larger districts where elementary schools are usually administratively independent of the junior high or high school.

Table 4  
 Proportion of Federal and State Compensatory Funds  
 Spent in Each Grade Within Each Stratum of  
 Title I Schools

S*	P-K**	K	1	2	3	4	5	6	7	8	9	10	11	12	Sp***	UnG****	Total
1	.76	1.19	6.72	11.15	12.52	14.27	13.86	11.54	10.56	7.01	2.18	1.91	.91	.59	3.68	1.15	100.00
2	.68	2.76	7.78	12.77	16.62	18.70	16.02	12.62	4.35	2.80	1.37	1.01	.95	.46	.72	.39	100.00
3	1.06	5.55	10.10	15.66	15.11	15.02	11.64	11.90	2.76	3.22	2.12	1.61	1.12	1.28	1.52	.33	100.00
4	.50	2.41	12.95	14.74	20.95	20.72	14.37	11.07	.77	.53	.10	.13	.05	.05	.66	.66	100.00
5	1.62	14.06	22.31	15.25	13.56	13.12	9.81	9.25	.05	.08					1.02	1.02	100.00
6	.00	4.50	8.01	15.52	15.88	18.59	17.54	12.94	.05						6.89		100.00
7	1.76	13.42	18.16	26.33	17.42	10.21	6.42	5.09							.13	1.06	100.00
8	-	-	-	-	-	-	-	-									
9	16.68	6.68	10.31	8.31	10.26	14.92	12.95	15.36	2.27	.45					1.63	.18	100.00
$\bar{X}$	2.88	6.32	12.04	14.96	15.29	14.44	12.82	11.22	2.59	1.76	.72	.58	.37	.29	1.82	.59	98.69

\* Strata

\*\* Pre-Kindergarten

\*\*\* Special classes

\*\*\*\* Ungraded

Note: Appendix A: Principal form, question 07-9.

Monies appropriated from state and federal funds to Title I schools provided compensatory services in the range of 100-200 dollars per pupil in the majority of school districts. A large percentage of students received services in the 200-400 dollar range also. Expenditure per pupil appears to be distributed fairly evenly among dollar levels ranging from 5-50 dollars to 200-400 dollars. These data are shown in Table 5.

Table 5

The Percentage of Pupils Who Have Received  
State and Federally Funded Compensatory Services at Each  
Dollar Level Within Each Stratum

STRATA	DOLLAR LEVEL				
	5-50\$ a year per pupil	50-100\$ a year per pupil	100-200\$ a year per pupil	200-400\$ a year per pupil	More than 400\$ a year per pupil
1	29.54	11.54	31.61	18.33	8.98
2	28.76	9.63	44.32	14.90	2.39
3	15.42	7.42	27.36	46.37	3.43
4	13.77	14.63	41.31	27.12	3.17
5	17.30	21.14	17.47	30.13	13.96
6	22.54	7.68	31.87	37.91	0.00
7	4.82	5.87	82.39	6.92	0.00
9	No data available				
NEAN	18.87	11.13	39.47	25.95	4.56
MEDIAN	17.30	9.63	31.87	27.12	3.43

Note: Appendix A: principal form, question 8.

Data reported on Title I school buildings generally reflect the socio-economic status and attendance areas of the school. More than one-half of Wisconsin's Title I schools were built before World War II (see Fig. 6). Findings also reveal 89.28% of Title I school buildings in stratum 9 are over 40 years old. All other strata show 60% or less of their Title I schools in this age bracket.

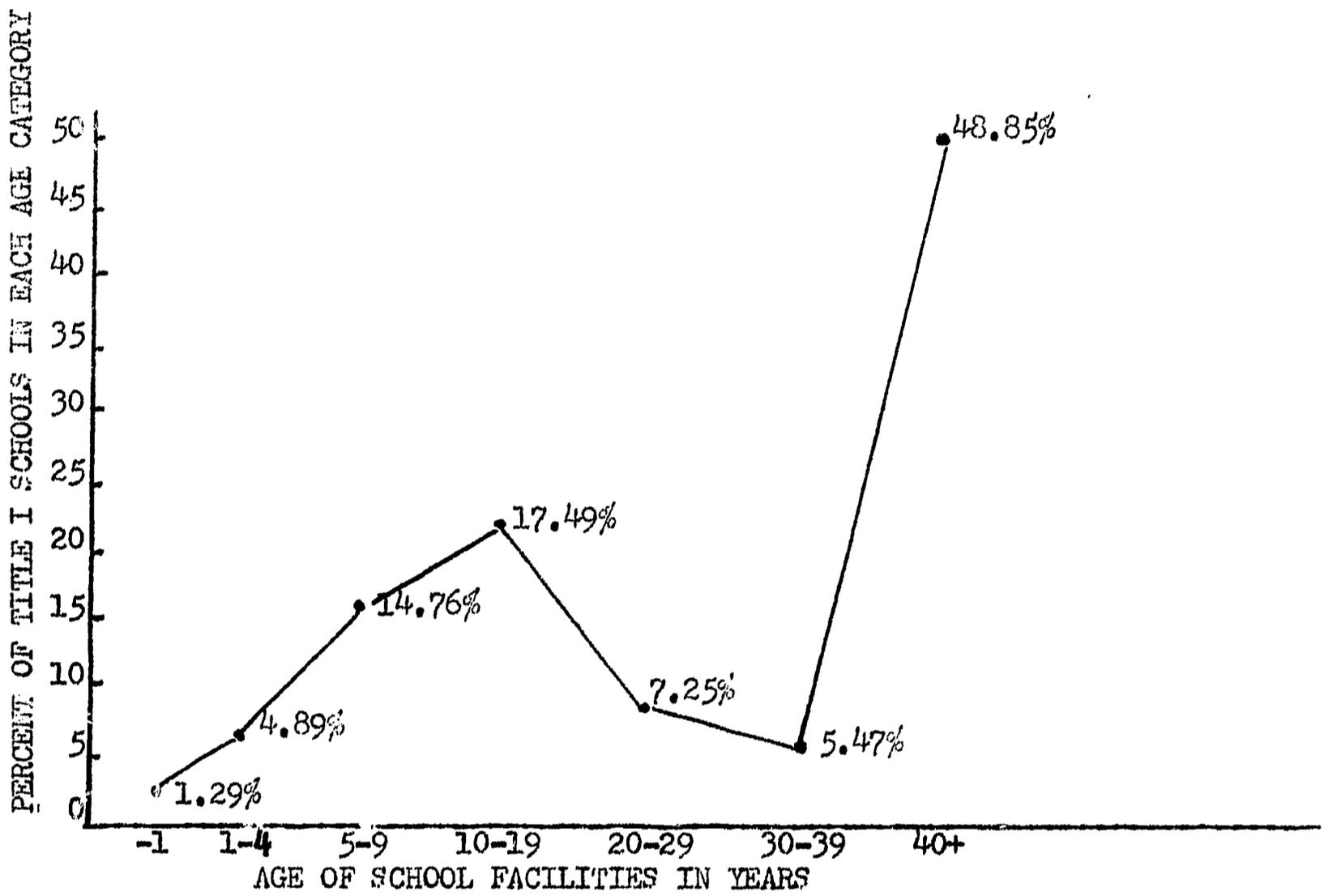


Fig.6 shows percentage of all Title I schools in Wisconsin that fall in each age category.

Note.--Appendix A: Principal form, question 11.

The majority of Title I schools have libraries ranging in size from 1500 to above 10,000 volumes; library facilities show little or no differentiation across strata. These findings, as shown in Table 6, are not unexpected. The size of school libraries is usually determined by the student population in the immediate area. The reader is reminded that the present study involves Title I schools within districts. However, enrollment figures for individual schools, while showing variability, are usually found to be comparable.

Table 6

-21-

A comparison of School Library Facilities and Strata  
Showing Percentage of Schools in each Category

STRATA	LIBRARY VOLUMES									
	None or -249	250- 499	500- 749	750- 999	1000- 1499	1500- 2499	2500- 4999	5000 7499	7500- 9999	10,000 or more
1	0.00	0.00	0.00	0.00	7.58	11.32	<u>37.19</u>	<u>23.56</u> *	7.48	12.87
2	0.00	0.00	0.00	0.00	6.15	4.62	<u>29.23</u> *	20.00	18.47	<u>21.53</u> *
3	2.71	2.71	5.40	0.00	0.00	21.62	13.52	<u>29.72</u> *	0.00	<u>24.32</u> *
4	0.00	1.87	1.87	0.00	1.87	7.56	<u>33.98</u>	<u>35.86</u> *	15.11	1.88
5	0.00	15.39	0.00	0.00	0.00	<u>30.77</u>	<u>38.46</u> *	7.69	7.69	0.00
6	0.00	0.00	0.00	0.00	0.00	<u>30.43</u>	<u>43.47</u> *	13.05	0.00	13.05
7	14.29	0.00	0.00	0.00	0.00	0.00	<u>21.42</u>	<u>35.72</u>	<u>21.42</u> *	7.15
8	--	--	--	--	--	--	--	--	--	--
9	8.33	0.00	0.00	0.00	0.00	12.51	<u>29.16</u>	<u>20.84</u> *	12.50	16.66
$\bar{X}$	3.16	2.49	.90	0.00	1.95	14.85	30.80	23.30	10.33	12.18

\*Categories having percentage figures underlined represent the largest proportion of Title I schools in each stratum.

Note: Appendix A: principal form, question 12b.

The percentage of full time equivalents of classroom teachers, special instructional personnel, health and pupil personnel in Title I schools is shown in Table 7. Professional staffing of Title I schools reflects greater emphasis on pupil personnel services in the larger districts.

Table 7

Percentage of Professional Staff Members Available to Pupils in Title I Schools

STRATA	Regular classroom teachers	Special instructional personnel (speech, physical education, reading, etc.)	Health personnel (school nurse, physician, etc.)	Psychological personnel, social workers, counselors, etc.)
1	79.40	20.00	.10	.50
2	77.60	17.62	1.45	3.33
3	76.27	19.10	2.28	2.35
4	72.95	19.30	3.77	3.98
5	65.73	21.08	5.52	7.67
6	70.44	19.37	2.95	7.24
7	81.75	12.98	1.72	3.55
9	77.68	11.85	2.94	7.53

Note: Appendix A, principal form, question 17.

Employment of teacher aide services was most frequently contracted in the larger school districts. While 92.48% of the teachers in strata 1, 2, 3, 4, and 5 stated they had no assistance whatsoever, only 74.27% of the teachers in strata 6, 7 and 9 reported lack of classroom help. This difference in teaching aides in 2nd, 4th and 6th grade classrooms in Title I schools was supported by the fact that 25.07% of teachers from the larger districts reported some part time classroom assistance while only 6.18% of the teachers in the smaller districts had the same services.

Class organization was similar across all strata with two exceptions; departmentalized and ungraded classes were found more frequently in larger school districts. Ability grouping, tracking, the assistance of specialist teachers, and team teaching were comparable classroom characteristics across all strata.

Administrative duties of school principals in Title I schools varied according to the size of district in which they were employed. Fewer principals in the larger districts had extra teaching duties although almost all found themselves teaching in emergencies. This is shown in Table 8.

Table 8

Percentage of Title I School Principals  
with Additional Teaching Duties

STRATA	No additional teaching duties	Teaching 1 or more regularly schedules classes	Teach only in emergency situations
1	36.38	56.92	6.70
2	49.27	34.79	15.94
3	51.22	36.58	12.20
4	45.77	47.45	6.78
5	62.50	12.50	25.00
6	69.23	19.24	11.53
7	73.34	6.66	20.00
9	60.72	0.00	39.28

Note: Appendix A, principal form, question 16.

Distribution of teachers by sex appears to reflect a fairly heterogeneous population across all strata although means for school districts with under 10,000 students compared with means for school districts with 10,000 or more students show a slight increase in the number of male teachers employed in the larger districts. These data are shown in Table 9.

Table 9

Percentage of Male and Female 2nd, 4th and 6th Grade Teachers; Distribution Across Strata\*

Sex	STRATA									$\bar{X}$ (6,7,9)
	1	2	3	4	5	(1,2,3,4,5)	6	7	9	
Male	11.62	9.24	12.30	18.75	10.52	<u>12.49</u>	26.66	13.04	99.80	<u>16.40</u>
Female	88.38	90.76	87.70	81.25	89.48	<u>87.51</u>	73.34	86.96	90.20	<u>83.50</u>

\*Means for grouped strata are underlined.

Note: Appendix B, teacher form, question 1.

It is interesting to note that stratum 6 has the greatest percentage of male 2nd, 4th and 6th grade teachers as well as the largest annual starting salary for beginning teachers with B.A. degrees (see Fig. 7).

Teachers in smaller school districts are seemingly more experienced according to findings reported in Table 10. Over 50% of the teaching staff in strata 1 through 5 have had 10 years or more teaching experience while 31.81% of the teachers in strata 6 through 9 fall in this same category. This difference was also observed in relation to limited teaching experience; only 17.06% of the teachers in strata 1 through 5 as opposed to 32.83% of teachers in strata 6 through 9 have taught for 3 years or less.

Table 10

Years of Full Time Teaching Experience of  
2nd, 4th and 6th Grade Teachers in Title I  
Schools: Percentage in each category

Strata	Under 3 years teaching exper- ience	Over 3 years & less than 10 years	10 years or more
1,2,3,4,5	17.06	30.95	51.99
6,7,9	32.83	35.36	31.81

Note: Appendix B: teacher form, question 2.

In summary, there is a fairly even distribution of teachers with comparable teaching experience in the larger districts while smaller school districts have a greater proportion of teachers who have taught for longer periods of time.

Teachers in the smaller school districts also appear to have greater environmental stability. The findings in Table 11 point to a significant difference between the percentage of teachers in the small and large districts who have taught in the same school for a period of 10 years or more. An inverse relationship of years taught in the same school to stratum is also observed in the category of under 3 years.

Table 11

Years Taught in the Same School by 2nd, 4th and 6th  
Grade Teachers in Title I Schools:  
Percentage in each Category

Strata	Less than 3 years	At least 3 years but less than 10	10 years or more
1,2,3,4,5	36.53	39.48	23.99
6,7,9	49.87	36.95	13.18

Note: Appendix B: teacher form, question 3.

Both Tables 10 and 11 establish the not unexpected relationship of teaching experience to environmental stability; the teachers with the most experience have remained in their teaching positions for the longest periods of time. The obverse is true of teachers with the least experience.

Larger districts appear to have teaching staffs with better educational backgrounds. More teachers in the smaller districts are employed with no degree or less than a B.A. degree (fig. 7).

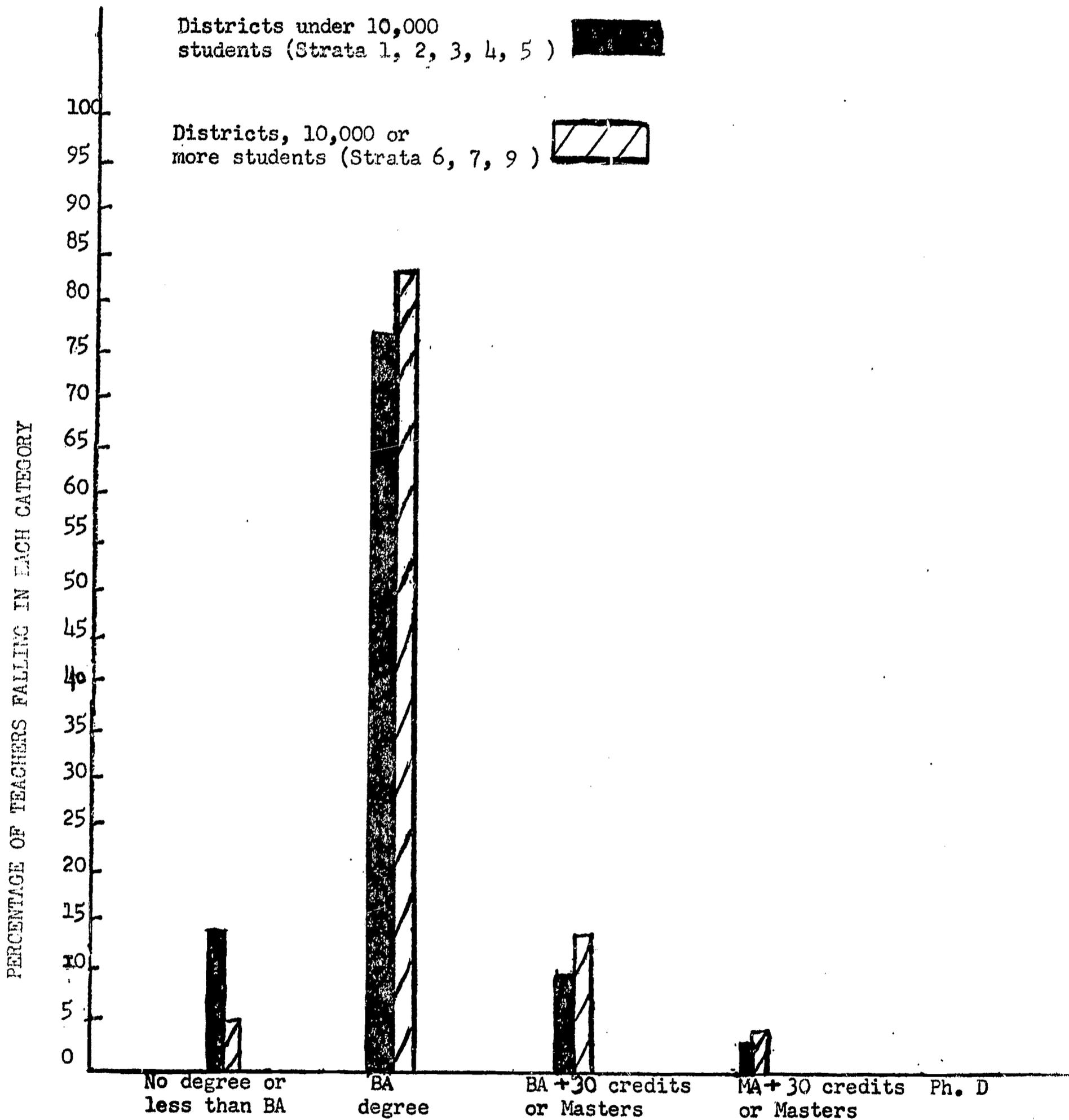


Fig. 7 shows the percentage of teachers in 2nd, 4th & 6th grades in Title I schools who fall in each of the above categories.

Note. -- Appendix B: Teacher form, Question 4.

There are also relatively few teachers in Wisconsin who are members of a minority group. In strata 1,2,3,4,6 & 7, no teachers in the 20% random sample were identified as belonging to any minority group. Stratum 5 reported 2.50% of their teaching staff as Negro while stratum 9 reported that 24.07% of their staff were Negro. An additional 1.85% were identified as Oriental in stratum 9.\*

Teaching staff in Wisconsin's Title I schools have had a marked increase in salaries over the past 3 years (see fig. 8). All schools in all districts show relatively proportional increases. Stratum 6, representing districts with populations of 10,000 to 24,000 offered the highest salaries. Teacher salaries were the lowest in the smallest and most rural districts.

\*Appendix A: principal form, question 10.

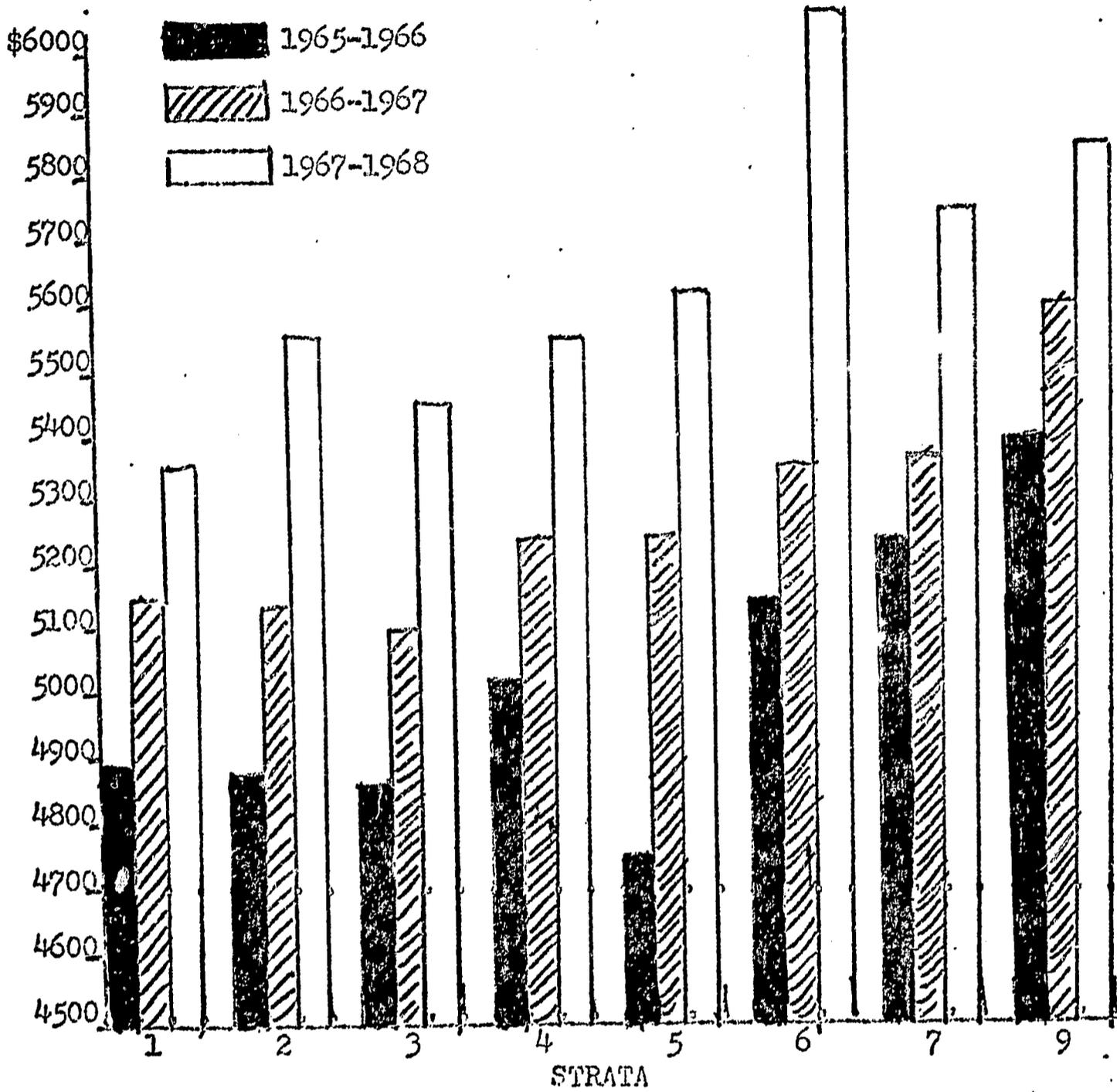


Fig. 8 shows increase in annual salary of beginning teachers (with B.A. degree) in Title I schools in each stratum.

Note.--Appendix A: Principal form, question 07-10.

## PART I - SUMMARY

Title I schools in Wisconsin represent the entire student population of the state. Title I schools were stratified by school district size; this permitted homogeneous grouping of schools and identification of districts not only by size but also by geographical location and socio-economic status of the population area.

The major concentration of students in compensatory education programs was found in Title I city schools. Students in Title I city schools also had the poorest attendance rate with absenteeism inversely related to size of school district.

Title I school enrollments have increased the most in districts with student populations of approximately 1500 to 10,000; the large increase in enrollment in these districts seems to be an artifact of school district consolidation. Significant relationships were found between a decrease in socio-economic status of the student body and the neighborhood served by the Title I school. A similar relationship was found between rising socio-economic status of the student body and middle-class residential communities.

Although the proportion of Title I school appropriations received from state and federal funds for compensatory education has increased over the last 3 years, all strata except stratum 9 showed a decrease in appropriations during the current 1967-1968 school year. Expenditures per pupil appear to be fairly evenly distributed across dollar levels of \$5.00 - \$50.00 to \$200.00 - \$400.00.

Library facilities appear to be comparable across all strata although Wisconsin's Title I schools are aging rapidly; more than one-half of the Title I school buildings are over 30 years old. Almost 90% of the Title I school buildings in stratum 9 are 40 years or older.

Professional staffing of Title I schools reflects greater emphasis on pupil personnel services in the larger districts; teachers in the larger districts also have more teaching aides and assistants. Almost all elementary principals found themselves teaching in emergencies although fewer principals in the larger districts had extra teaching duties assigned.

Female teachers outnumber male teachers by a ratio of about 9/1; more male teachers are employed in the larger districts than in the smaller districts. The stratum showing the greatest salary increase over the past three years also has the most male faculty members.

Teachers in smaller districts are older, more experienced and tend to stay in one teaching position for a longer period of time. Age and teaching experience do not appear to be related to educational training; larger school districts have better trained teachers.

Few teachers in Wisconsin are members of a minority group; teachers with minority group membership are found primarily in metropolitan areas.

Class organization in Title I schools was similar in all strata although departmentalized and ungraded classes seemed to be more characteristic of the larger districts.

## PART II

### CROSS TABULATIONS AND ANALYSES OF DATA ON PUPILS IN TITLE I SCHOOLS

Almost all questions from the pupil form were used in the data analyses; items were omitted if comparable data were reported in other parts of the 1967-1968 Title I evaluation. Questions were organized in 5 units as follows:

1. Characteristics of Title I and non-Title I Pupils
2. The Title I Instructional Program and the Title I Pupil
3. Learning Experiences of Title I and non-Title I Pupils Other than Regular School Year Program
4. Additional Factors Related to Pupil's Self-Concept and School Achievement

Title I and non-Title I pupils were defined according to the pupil's participation in compensatory education programs for the academic year, 1967-1968. All cross tabulations and chi square values<sup>\*</sup> were between Title I and non-Title I pupils; Title I and non-Title pupils were also evaluated across strata on selected variables.

Data represent only Title I schools, Title I and non-Title I pupils in grades 2, 4 or 6, combined grades 2, 4, 6, or Title I and non-Title I pupils in grades 2, 4, 6, across strata. Findings are not to be generalized to grades 1 through 6 in Title I schools or to grades 1 through 6 in other elementary schools in Wisconsin; enough differences were found between grades to preclude generalization.

A 15% stratified systematic random sampling of the population of 14,059 pupil forms established an initial sampling N of 2,114 respondents. Missing or unusable data reduced the N to between 1433 and 1702 subjects, depending

<sup>\*</sup>See footnote on following page.

upon the question or data used; sample size required for valid statistical inference meets and exceeds criteria of 10% of population parameters.

All Title I non-Title I comparisons are based on unequal Ns; Title I pupils comprised approximately one fourth of the total N for each study while the remaining three fourths were non-Title I pupils. A number of the individual studies report several chi square values with differing levels of significance, the level of significance for the non-Title I pupils being always greater than the level of significance for the Title I pupils. Significance levels for Title I and non-Title I pupils on a given study or set of variables should therefore be evaluated within the context of unequal Ns. No significance levels are reported that are larger than  $p < .02$ .\*

Minority group membership, preschool, and neglected, delinquent and migrant Ns are very small; studies are reported but should be viewed with caution.

Most of the data in this section are derived from teachers' "estimates" of family and student characteristics. These estimates represent ex post facto judgments, if not circumstantial evidence, particularly in the area of behavior ratings. Use of teacher estimates will be discussed in greater detail in the conclusions.

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The chi square statistic is used with qualitative data or discrete variables and reports the number of individuals falling in well defined classes. Its purpose is to find out whether or not a given set of data approximate a normal or "chi square" distribution; in effect, it compares observed numbers to expected or average numbers in a given cell when the hypothesis is true to given theoretical values. The level of significance implies that if we draw another sample from the same population as the first sample, both the sample mean and standard deviation may be expected to be different from the values obtained in the first sample. The use of the .02 level of significance means that we are expressing our degree of confidence that in repeated sampling, with expected differing values, the inference concerning our sample will still be essentially correct 98 times in 100. It follows that the .01 level of

significance implies that the inference concerning our sample will be essentially correct 99 times in 100, and the .001 level essentially correct 999 times in 1000. Although the N of the sample is small in comparison to the total population, use of the .02, .01 and .001 levels of significance establish not only the identity of the sample with that of the population but also determines the significance of relationship between variables.

UNIT 1: CHARACTERISTICS OF TITLE I AND NON-TITLE I PUPILS

Absentee rate of Title I and non-Title I pupils did not differ in grades 2 and 6. However, findings suggest a significant difference between Title I and non-Title I pupils in grade 4 ( $p < .02$ ) and across grades 2, 4, 6 ( $p < .02$ ). Differences between Title I and non-Title I pupils within grade 4 account for the significant chi square value across grades 2, 4, 6. These data are shown in Table 12.

TABLE 12

Chi Square Values: Title I x non-Title I Pupils x Absentee Rate for Grades 2, 4 & 6 and Combined Grades 2, 4, 6

Grade	$\chi^2$	df
2	1.7933 <sup>b</sup>	5
4	14.1500 <sup>a*</sup>	5
6	4.9985 <sup>a</sup>	5
2,4,6	13.76981 <sup>*</sup>	5

\*  $p < .02$

Note: Appendix C, Part I, question 1 and 4; Part II, question 1.  
N = 1644

Differences in absentee rates appear to be attributable to the greater number of non-Title I pupils who were absent for less than 5 days while Title I pupils had higher absentee rates in periods of absence of

5-10, 11-20, and 40+ days. Although non-Title I pupils showed higher absenteeism in the 21-30 and 31-40 day categories, these differences were no longer evident when categories were combined under "5 days and over" and compared with "less than 5 days" for Title I and non-Title I pupils. These data are shown in Table 13.

TABLE 13

Absentee rates of Title I and non-Title I Pupils in Grade 4 and Grades 2,4,6; Percentage Falling in Each Category\*

Periods of Absence	Title I Grade 4	non-Title I	Title I Grade 2,4,6	non-Title I
5 days or less	44.95	<u>59.75</u>	44.71	<u>53.13</u>
5-10 days	34.86	27.75	31.40	28.86
11-20 days	14.68	8.00	19.11	12.93
21-30 days	3.67	4.00	3.41	3.75
31-40 days	0.00	.50	.34	1.00
40+ days	1.83	0.00	1.02	.33
		55.04	55.28	46.87
		40.25		

\*The highest percentage in the categories of "5 days or less" and "5 days or more" is underlined.

Note: Appendix C: Part I, question 1 and 4; Part II, question 1.  
N = 1644 (Grades 2,4,6)

Environmental stability of migrant and non-migrant children were compared. As expected, no differences were found between Title I and non-Title I migrant children in grades 2, 4, 6, and number of schools attended; all migrant children were therefore assumed equally transient. However, when Title I migrant and non-migrant children were compared with non-Title I

migrant and non-migrant children, data reflected the presence of the less stable migrant population in the Title I group. A significant difference ( $p < .01$ ) was found between number of schools attended and Title I and non-Title I pupils in grades 2, 4, 6. These data are shown in Table 14.

TABLE 14

Chi Square Values: Title I x non-Title I x Number of Schools Attended x Migrant non-Migrant Status

Variables	Grade	$\chi^2$	df
Title I x non-Title I x non-Migrant Status x Number of Schools Attended	2,4,6	8.80589	5
Title I x non-Title I x Migrant Status x Number of Schools Attended	2,4,6	2.83333	3
Title I x non-Title I x Migrant non-Migrant status by Number of Schools Attended	2,4,6	16.71653**	5

\*\*  $p < .01$

Note: Appendix C: Part I, question 1,28,29; Part II, question 1  
N = 1487

Significant differences were found between minority group membership and Title I non-Title I status for pupils in grades 4 and 6. The chi square value for combined grades 2, 4, 6, was highly significant ( $p < .001$ ); the significance level appears to be a function of the increased N. These chi square values are shown in Table 15.

TABLE 15

Chi Square Values: Title I x non-title I x Minority  
Group Membership in Grades 2,4 and 6, and Grades 2,4,6

Grade	$\chi^2$	df
2	4.71800	4
4	15.45882**	4
6	17.18094**	4
2,4,6	31.20731***	6

\*\*  $p < .01$

\*\*\*  $P < .001$

Note: Appendix C: Part I, question 23; Part II, question 1.

Data analysis revealed that differences were due primarily to the inclusion of the response identifying approximately 90% of both Title I and non-Title I pupils as having non-minority group membership. Differences were also attributed to the greater number of Mexican children having Title I rather than non-Title I status. These data are supportive of the findings in Table 14 which reported more Title I migrant than non-Title I migrant children. Negroes comprised the largest minority group among both Title I and non-Title I pupils. Table 16 reports these data.

TABLE 16

Percentage of Combined Title I non-Title I  
Pupils Having Minority Group Membership

Minority Group	Title I %	non-Title I %
(non-membership)	89.37	92.25
American Indian	.33	1.05
Negro	6.31	5.43
Oriental	.33	.08
Cuban	0.00	.07
Mexican	3.65	.32
Puerto Rican	0.00	.08

Note: Appendix C: Part I, question 23; Part II, question 1  
N = 1636

All chi square values for Title I x minority group x strata, non-Title I x minority group x strata, and Title I non-Title I x minority group x strata were highly significant ( $p < .001$ ). The greatest proportion of minority group members were found in strata 7 and 9 with the exception of those identified as American Indian. The distribution of Title I non-Title I minority group membership cross strata is shown in Table 17.

TABLE 17

Distribution of Minority Groups Across Strata: Percentage of Total Membership Found in Each Stratum for both Title I & non-Title I Pupil Population

Minority Group	Strata			
	1	2	3	4
American Indian	10.53	0.00	15.79	31.58
Negro	0.00	0.00	0.00	4.35
Oriental	0.00	0.00	0.00	0.00
Cuban	0.00	0.00	0.00	100.00
Mexican	0.00	6.25	6.25	0.00
Puerto Rican	0.00	0.00	0.00	0.00

Minority Group	Strata			
	5	6	7	9
American Indian	5.26	5.26	0.00	31.58
Negro	4.35	6.52	23.91	65.22
Oriental	0.00	0.00	0.00	100.00
Cuban	0.00	0.00	0.00	0.00
Mexican	0.00	25.00	50.00	12.50
Puerto Rican	0.00	0.00	0.00	100.00

Note: Appendix C: Part I, question 23: Part II, question 1  
N = 1694

When only Title I pupils having minority group membership were compared in strata 7 and 9, several patterns emerged. The greatest proportion of Title I Negro pupils was found in stratum 9. An equal number of Mexican and Oriental children was also found in stratum 9. Negro and Mexican children were distributed in a ratio of about 3/2 in stratum 7. No Title I pupils were identified as American Indian, Cuban or Puerto Rican in either stratum 7 or 9. The percentage of students in each minority group with strata 7 and 9 is reported in Table 18.

TABLE 18

Percentage of Negro, Oriental and Mexican Children in Strata 7 and 9

Minority Group	Stratum	Stratum 9
Negro	58.35	84.34
Oriental	0.00	8.33
Mexican	41.65	8.33

Note: Appendix C: Part I, question 23; Part II, question 1  
N = 44

Neglected, delinquent and migrant children were distributed across strata as shown in Table 19. These data should be viewed with caution as the N in each category was extremely small. Identifying delinquency in grades 2,4,6 appears to be a rather premature assumption as only 1 child comprised the entire sample which fell in stratum 9. As expected, no significant chi square values were found between groups of children or within strata.

TABLE 19

Distribution of Neglected, Delinquent and Migrant Title I and non-Title I Children in Grades 2,4,6; Percentage in Each Category Across Strata

Strata	Neglected	Delinquent	Migrant
1	0.00	0.00	0.00
2	11.11	0.00	14.29
3	0.00	0.00	0.00
4	33.33	0.00	14.29
5	22.22	0.00	0.00
6	11.11	0.00	14.29
7	0.00	0.00	14.29
9	22.22	100.00	42.86

Note: Appendix C: Part I, question 29; Part II, question 1  
N = 17

Teachers were asked to identify their pupils' most immediate school-related needs. Findings revealed significant differences between the perception of needs of Title I and non-Title I pupils ( $p < .001$ ) for grades 2, 4, 6. Needs have been rank ordered for Title I and non-Title I pupils in grades 2, 4, 6. These are shown in Table 20.

TABLE 20

Rank Ordering of Teachers' Perception of Needs of Title I and non-Title I Pupils in grades 2,4,6: Percentage Falling in Each Category

Rank	Title I		non-Title I	
	% in category	Need	% in category	Need
1	35.45	Indiv. Instruction-Reading	17.94	Indiv. Instruction-Reading
2	20.07	Indiv. Instruction-Academic	14.85	Indiv. Instruction-Arithmetic
3	12.04	Indiv. Instruction-Arithmetic	11.53	Indiv. Instruction-Academic
4	9.03	Psychological or Psychiatric Counseling	4.63	Psychological or Psychiatric Counseling
5	1.67	More Adequate Diet	2.03	Eye Examination
6	1.67	Eye Examination	1.54	More Adequate Diet
7	1.34	Physician's Services	1.06	Dental Care
8	1.00	Dental Care	.89	Physician's Services
	17.73	none of above	45.54	none of above

Note: Appendix C: Part II, question 1; Part IV, question 3  
N = 1531

Findings suggest that the needs of Title I and non-Title I pupils were essentially similar; however, more Title I than non-Title I pupils were

identified as having school related needs in all categories. For example, individual reading instruction was a primary need with both Title I and non-Title I pupils, yet almost twice as many Title I as non-Title I pupils were felt to need individualized instruction in reading. Findings were similar in the area of individual academic instruction and in the area of psychological and psychiatric counseling; approximately twice as many Title I as non-Title I pupils were seen as needing individual academic instruction and psychological services. Few pupils were seen as having needs related to physical health.

Teachers were also asked how they would spend their time if given an hour of free time per school day for the purpose of working exclusively with the Title I or non-Title I pupil. Significant differences ( $p < .001$ ) were found in the ways teachers would spend their time with the Title I or non-Title I pupil. Structure of the question\* required a response in both academic and non-academic areas. Those data were combined to give a total of 29 "areas of concentration" which represent all possible combinations of academic choice.

Data analysis did not provide information as to how much each individual academic or non-academic score contributed to the total score when variables were combined, however, the following observations were made. The majority of teachers feel that extra time should be spent with Title I and non-Title I pupils in remedial reading skills, primarily in the area of comprehension and vocabulary. Teachers preferred to spend time with the Title I pupil not only in reading remediation but in the non-academic areas of classroom behaviors and child-child relationships. Psychological health and positive attitudes toward school work and peers were more

\*Appendix C: Part IV, question 2

characteristic of the non-Title I than Title I pupil according to teachers' choice of "areas of concentration." This last observation would be supportive of the finding that more Title I than non-Title I pupils had needs in the area of psychological and psychiatric counseling.\*\* Rank ordering of "areas of concentration" for Title I and non-Title I pupils are shown in Table 21 and 22.

TABLE 21

Rank Ordering of Areas Where Teachers Would Prefer to Spend Extra Time with Title I Pupils

Rank (all categories)	Rank (academic areas)	Rank (non-academic areas)	Percent falling in category	Description
1	1		18.40	Reading comprehension
2			8.68	Reading comprehension, classroom behaviors
3	2		7.99	Reading vocabulary
4	3		5.90	Number concepts
5			5.90	Reading comprehension, child-child relationships
6	4		5.21	Arithmetic computations
7			4.17	Reading vocab., classroom behaviors
8	5		4.17	Speech
9			3.13	Arithmetic comput., child-child relationships
10			3.13	Reading vocabulary, child-child relationships
11	6		3.13	Another reading area
12	1		2.78	Classroom behaviors
13			2.08	Arithmetic comput., school citizenship
14			2.08	Other arith. material, school citizenship
15			2.08	Reading vocab., school citizenship
16	7		1.74	Other arithmetic material
17			1.74	Reading comprehension, school citizenship
18			1.39	Number concepts, child-child relationship
19			1.39	Another reading area, class behaviors
20			1.04	Number concepts, class behaviors
21			1.04	Number concepts, school citizenship
22			1.04	Other arith. material, child-child relationship
23			1.04	Another reading area, child-child relationship
24			1.04	Child-child relationships
25	2		.69	School citizenship
26	3		.69	Other arith. material, class behavior
27			.35	Speech, school citizenship
28			.35	Speech, child-child relationships
29			.00	Another reading area, school citizenship
			(6.60)	(None of the above)

Note: Appendix C: Part II, question 1, Part IV, question 2.

\*\*Reported in Table 20.

TABLE 22

Rank Ordering of Areas where Teachers would Prefer to Spend Extra Time with non-Title I Students

Rank (all categories)	Rank (academic areas)	Rank (non-academic areas)	Percent falling in category	Description
1	1		12.19	Reading comprehension
2	2		9.63	Arithmetic computation
3	3		5.20	Reading vocabulary
4	4		4.86	Another reading area
5	5		4.60	Other arithmetic material
6			3.75	Reading comprehension, classroom behaviors
7	6		3.67	Number concepts
8			3.50	Reading comprehension, child-child relation
9		1	2.98	Child-child relationships
10			2.64	Reading comprehension, school citizenship
11	7		2.47	Speech
12		2	2.47	Classroom behaviors
13			2.22	Arith. Computations, child-child relationship
14			2.13	Arith. computations, school citizenship
15			2.05	Reading vocabulary, classroom behaviors
16			1.79	Reading vocabulary, child-child relationship
17			1.62	Number concepts, classroom behaviors
18			1.36	Number concepts, child-child relationship
19			1.28	Other arith. material, classroom behavior
20			1.28	Other arith. material, child-child relationship
21			1.19	Another reading area, child-child relationship
22		3	1.02	School citizenship
23			.94	Speech, child-child relationships
24			.85	Speech, classroom behaviors
25			.85	Reading vocabulary, school citizenship
26			.77	Another reading area, classroom behaviors
27			.68	Number concepts, school citizenship
28			.43	Speech, school citizenship
29			.26	Other arith. material, school citizenship
			(20.72	None of the above)

Note: Appendix C: Part II, question 1; Part IV, question 2.

When teachers' choice of areas of concentration was evaluated in terms of specific need, findings revealed differences in response according to Title I status, non-Title I status and grade level. Areas of concentration are also more variable for the non-Title I pupil than for the Title I pupil; this would appear to be a function of the identification of the non-Title I pupil as one with fewer problems, thus areas of concentration are more difficult to discriminate.

Teachers preferred to teach reading vocabulary skills to pupils needing reading remediation in grades 2 and 4; as need for vocabulary skills decreased across grade levels, need for teaching reading comprehension increased. A similar pattern was observed in pupils needing individual instruction in arithmetic. Teachers preferred teaching number concepts in the earlier grades; arithmetic computation was a major area of emphasis by grade 6.

Needs for individual academic instruction also reflected similar curriculum across grades. These findings are reported in Tables 23, 24 and 25.

TABLE 23

Teachers' Preference for Way Additional Time Would be Spent with Pupil with Specific Need for Individual Instruction in Reading

% of teachers choosing each area of concentration for Title I pupils in Gr. 2	Gr. 4	Gr. 6	Area of concentration where teacher would prefer to spend available time	% of teachers choosing each area of concentration for non-Title I pupils in	
				Gr. 2	Gr. 4 Gr. 6
3.23	8.33	2.94	Other arithmetic material	1.35	3.45
9.68	2.94	2.94	Reading vocab., classroom behaviors	4.05	3.45
9.68	2.94	2.94	Reading vocab., school citizenship	5.41	
3.23	5.56	2.94	Reading vocab., child-child relationships	5.41	3.45
19.35	13.89		Reading vocabulary	10.81	10.34
16.13	13.89	17.65	Reading comprehension, class behavior	6.76	10.34
3.23	2.78	2.94	Reading comprehension, school citizenship	4.05	8.62
3.23	8.33	2.94	Reading comprehension, child-child relationships	6.76	6.90
16.13	33.33	41.18	Reading comprehension	40.54	37.93
3.23			Another reading area, child-child relationship	1.72	1.72
6.45		2.94	Speech, class behaviors	1.72	1.72
3.23			None	1.35	
		5.88	Arithmetic computation, child-child relationship	1.35	1.72
			Arithmetic computation		
			Another reading area, class behavior	1.18	1.72
			Another reading area	1.18	3.45
	2.78		Speech, child-child relationships	5.41	
		2.94	Speech	1.35	1.72
	5.56	2.94	Number concepts	1.35	1.72
	2.78	2.94	Speech, school citizenship		
	2.78		Number concepts, class behavior		
			Arithmetic computation, school citizenship	1.35	3.45

Principal form, Part IV, question 2; question 3 for Tables 23, 24, 25, 26.



TABLE 24

Teacher's Preference for Way Additional Time Would  
 be Spent with Pupils with Specific Need for  
 Individual Instruction in Arithmetic

	% of teachers choosing each area of concentration for Title I pupils in			% of teachers choosing each area of concentration for non-Title I pupils in		
	Gr. 2	Gr. 4	Gr. 6	Gr. 2	Gr. 4	Gr. 6
Area of concentration where teacher would prefer to spend available time						
Number concepts, classroom behaviors	7.69			10.87	5.45	4.92
Number concepts, child-child relationships	15.38	12.50		6.52	7.27	3.28
Number concepts	30.77	37.50	20.00	17.39	10.91	8.20
Arithmetic computation	15.38		30.00	28.26	40.00	50.82
Other arithmetic materials	7.69			8.170	16.36	
Reading vocabulary, school citizenship	9.68					
Reading comprehension	15.38			2.17		
Number concepts, school citizenship		12.50		2.17	1.82	3.28
Arithmetic computation, school citizenship		12.50	10.00	2.17	7.27	6.56
Arithmetic computation, child-child relationships		12.50	10.00	6.52	3.64	8.20
Other arithmetic materials, child-child relationships				4.35		3.28
Reading computation, child-child relationships				2.17	1.82	1.64
None		12.50		2.17	3.64	
Other arithmetic materials, school citizenship			20.00		1.82	4.92
Other arithmetic materials			10.00			3.28
Other arithmetic materials, classroom behavior						1.64
Speech						
Reading vocabulary, classroom behavior	7.69					

TABLE 25

Teachers' Preference for Way Additional Time would be Spent with Pupil with Specific Need for Individual Academic Instruction

% of teachers choosing each area of concentration for Title I pupils in		Area of concentration where teacher would prefer to spend available time	% of teachers choosing each area of concentration for non-Title I pupils in	
Gr. 2	Gr. 4		Gr. 4	Gr. 6
6.25		Number concepts, child-child relationship	2.78	4.55
12.50	4.00	Number concepts	2.78	2.27
18.75	4.00	Reading vocabulary, child-child relationship	2.78	6.82
6.25	11.76	Reading vocabulary	5.56	2.27
6.25	16.00	Reading comprehension, class behaviors	5.56	6.82
18.75	5.88	Reading comprehension, child-child relationship	8.33	1.75
6.25	17.65	Reading comprehension	11.11	19.30
18.75		Another reading area	5.56	8.77
	8.00	Number concepts, classroom behaviors	2.78	3.51
	4.00	Arithmetic computation	8.33	3.51
	4.00	Other arithmetic materials, class behavior	2.78	1.75
	4.00	Other arithmetic materials	5.56	5.26
	8.00	Reading vocabulary, class behaviors	11.11	1.75
		Reading vocabulary, school citizenship	2.78	1.75
		Reading comprehension, school citizenship	8.33	8.77
		Another reading area, school citizenship	5.56	3.51
		Speech, class behaviors	5.56	
		Class behaviors	2.78	9.09
	4.00	Arithmetic computation, child-child relationship		3.51
	4.00	Other arithmetic materials, school citizenship		1.75
	4.00	Other arithmetic materials, child-child relationship		1.75
		Number concepts, school citizenship		1.75
		Arithmetic comprehension, school citizenship		
		Another reading area, classroom behaviors		
	5.88	Another reading area, child-child relationship	2.27	
		Speech, child-child relationships	2.27	3.51
	5.88	Speech	2.27	1.75
	5.88	Classroom behaviors	4.55	3.51
		School citizenship	2.27	1.75
		Child-child relationships		1.75
		None		12.28

TABLE 26

Teachers' Preference for Way Additional Time would be Spent with Pupil with Specific need for Psychological or Psychiatric Counseling

% of teachers choosing each area of concentration for Title I pupils in Gr. 2 Gr. 4 Gr. 6	Area of concentration where teacher would prefer to spend available time	% of teachers choosing each area of concentration for non-Title I pupils in Gr. 2 Gr. 4 Gr. 6
16.67	Number concepts, school citizenship	6.25
16.67	Other arithmetic material, class behavior	6.25
16.67	Reading comprehension, class behavior	12.50
16.67	Classroom behavior	6.25
16.67	Speech, class behavior	12.50
16.67	None	
20.00	Number concepts	
10.00	Arithmetic computations, child-child relationship	6.25
10.00	Reading vocabulary, child-child relationship	6.67
10.00	Another reading area, school citizenship	6.67
	School citizenship	6.67
	Child-child relationships	6.67
	Other arithmetic, child-child relationship	6.67
10.00	Reading vocabulary, school citizenship	
10.00	Reading comprehension	
10.00	Number concepts, class behavior	12.50
	Arithmetic computations, school citizenship	6.25
	Reading computations, school citizenship	12.50
	Another reading area, class behavior	6.25
	Another reading area, child-child relationship	6.25
	Speech, school citizenship	6.25
	Other arithmetic, school citizenship	
22.22	Reading computations, child-child relationship	
22.22	Number concepts, child-child relationship	
	Arithmetic computation	5.56
	Other arithmetic material, child-child relationship	5.56
	Speech, child-child relationships	5.56

For pupils needing psychological and psychiatric counseling, the initial impression of areas of concentration is contradictory. Data in Table 26 suggests that teachers are more concerned about psychological services for the non-Title I pupil than for the Title I pupil. This conclusion is incorrect. Closer analysis of these data shows that academic areas of concentration are weighted so heavily for the Title I child that he is seen primarily within the context of academic rather than non-academic need. Actually, needs for psychiatric and psychological counseling for the Title I pupil are twice that of the non-Title I pupil.\* Teachers apparently recognize these needs of the Title I pupil in the area of psychological and psychiatric counseling but tend to respond in terms of their own abilities for working with the child.

Nevertheless, more Title I pupils than non-Title I pupils in grades 2, 4, 6, participated in programs treating social, emotional and disciplinary problems. Table 27 shows the percentage of students receiving help from pupil services.

TABLE 27

Percentage of Title I and non-Title I pupils who Participated in Programs treating Social, Emotional, and Disciplinary Problems\*\*

	Type of Participation in Program			
	Yes, as a part of the regular personnel services provided to any pupil in this school district	Yes, as a part of a special compensatory pupil personnel service	Yes, but don't know source of help	No
Title I	<u>10.96</u>	<u>5.14</u>	.34	83.56
non-Title I	3.49	2.13	<u>.94</u>	<u>93.44</u>

\*\*The largest percentage in each category is underlined.

Note: also see Appendix C: Part II, IV, question 1.

x of 16.47128 ( $p < .01$ )

N = 1466

\*See Table 20

Although the chi square value in Table 27 is attributed mostly to the large percentage of Title I and non-Title I pupils who did not receive pupil services, the percentage of Title I and non-Title I pupils receiving psychological services compares favorable with pupils identified as having needs in this area. Again, the data is somewhat misleading as the need-pupil services relationship is within the context of perceived or recognized needs. These data do not acknowledge the etiology of the learning disability which is frequently psychological in character and undiagnosed or treated except in terms of academic remediation. One must conclude that the need-pupil service relationship is discrete and somewhat superficial. A more meaningful implication of these data is that needs are not being met.

#### UNIT 2: THE TITLE I INSTRUCTIONAL PROGRAM AND THE TITLE I STUDENT

Of those Title I students participating in academic compensatory programs involving reading,

- 8% were in reading programs in a 1-1 relationship,
- 50% were in reading programs with 2-5 pupils,
- 34% were in reading programs with 6-15 pupils,
- 6% were in reading programs with 16-25 pupils,
- 2% were in reading programs with 26 or more pupils.

Of those Title I students enrolled in the above reading programs,

- 4% were in programs lasting less than 6 weeks per year,
- 12% were in programs lasting 6-12 weeks per year,
- 16% were in programs lasting 13-24 weeks per year,
- 68% were in programs lasting 25 or more weeks per year.

Of those Title I students enrolled in arithmetic programs,

- 2% were in arithmetic programs in a 1-1 relationship,
- 21% were in arithmetic programs with 2-5 pupils,
- 30% were in arithmetic programs with 6-15 pupils,
- 30% were in arithmetic programs with 16-25 pupils,
- 17% were in arithmetic programs with 26 or more pupils.

Of those Title I students enrolled in the above arithmetic programs,

11% were in programs lasting less than 6 weeks,  
22% were in programs lasting 6-12 weeks per year,  
10% were in programs lasting 13-24 weeks per year,  
57% were in programs lasting 25 or more weeks per year.

Of those Title I pupils enrolled in the English Usage programs,

4% were in English Usage programs in a 1-1 relationship  
22% were in English Usage programs with 2-5 pupils,  
34% were in English Usage programs with 6-15 pupils,  
28% were in English Usage programs with 16-25 pupils,  
12% were in English Usage programs with 26 or more pupils.

Of those Title I pupils enrolled in the above English Usage program,

10% were in programs lasting less than 6 weeks per year,  
20% were in programs lasting 6-12 weeks per year,  
15% were in programs lasting 13-24 weeks per year,  
55% were in programs lasting 25 or more weeks per year.

Of those Title I pupils participating in other academic programs,

18% were in other academic programs in a 1-1 relationship,  
16% were in other academic programs with 2-5 pupils,  
19% were in other academic programs with 6-15 pupils,  
28% were in other academic programs with 26 or more pupils.

Of those Title I pupils enrolled in the above academic programs,

15% were in programs lasting less than 6 weeks,  
23% were in programs lasting 6-12 weeks per year,  
19% were in programs lasting 13-24 weeks per year,  
43% were in programs lasting 25 or more weeks per year.

To summarize, the greatest percentage of Title I pupils enrolled in reading programs were in very small classes (2-5 pupils) lasting at least two thirds of the regular school year. The majority of Title I pupils enrolled in arithmetic programs were in classes of moderate to large size (6-15, 16-25 pupils) lasting at least two thirds of the regular school year. Most Title I pupils enrolled in English Usage programs were in classes within the moderate size range (2-5, 6-15, 16-25 pupils). English Usage pro-

grams were also in effect for at least two thirds of the school year. Title I pupils participating in other academic programs were fairly evenly distributed across classes of all size from the 1-1 relationship to classes with over 25 pupils. The majority of English usage programs lasted at least two thirds of the regular school year.

UNIT 3: LEARNING EXPERIENCES OF TITLE I AND NON-TITLE I PUPILS OTHER THAN REGULAR SCHOOL YEAR PROGRAM

Pre-school learning experiences of Title I and non-Title I pupils in structured academic programs differed in only 1 category; this was Headstart, School Year. A PQ test for significance found more Title I pupils in grades 2, 4, 6 enrolled in Headstart programs ( $p < .01$ ). The percentage of pupils in other programs was comparable in all other categories. These data are shown in Table 28.

TABLE 28

Learning Experiences of Title I and non-Title I Pupils: Percentage falling in each Category\*

School experiences before 1st grade	Title I	non-Title I
Don't know	<u>4.56</u>	3.61
Other preschool program	.34	<u>.40</u>
Headstart, School Year	<u>.65**</u>	.08
Nursery school	.97	.96
Kindergarten	77.60	<u>88.22</u>
Headstart, summer	.97	.73
None	<u>14.91</u>	13.10

\*The largest percentage in each category is underlined

\*\*PQ test for significance:  $p < .001$

Note: Appendix C: Part II, question 1; Part I, question 22

N = 1687

During 1967, there were more Title I than non-Title I pupils participating in summer programs. These differences are highly significant for combined grades 2, 4, 6 ( $p < .001$ ). Table 29 reports the percentage of Title I and non-Title I pupils who participated in academic programs during the summer of 1967.

TABLE 29

The Percentage of Title I and non-Title I Pupils who Participated in Summer Programs in 1967\*

Grade	Title I	non-Title I
2	<u>22.99</u>	6.75
4	<u>30.84</u>	7.67
6	<u>24.72</u>	8.64

\*The highest percentage is underlined in each Title I category for each grade.

Note: Appendix C: Part II, question V, 1.  
N = 163

Participation in cultural enrichment programs was compared across Title I and non-Title I pupils and grades 2, 4 and 6. Although chi square values in grades 2 and 6 approached significance, only grade 4 met the criteria of a significant difference between categories. These data are shown in Table 30.

TABLE 30

Chi Square Values: Title I x non-Title I x Cultural Enrichment x grades 2,4 and 6

Grade	$\chi^2$	df
2	3.28867	1
4	6.57384**	1
6	2.86269	1

\*\*  $p < .01$

Note: Appendix C: Part II, question 1.  
N = 291

Cultural enrichment programs were evaluated across strata; several patterns emerged. There was a greater percentage of Title I than non-Title I pupils in cultural enrichment programs in all strata with the exception of strata 1 and 3. The ratio of Title I to non-Title I pupils in programs is approximately 2/1. Surprisingly, the emphasis of cultural enrichment programs across strata seems unrelated to socio-economic status with the exception of stratum 7. Table 31 shows these comparisons.

TABLE 31

The Percentage of Title I and non-Title I Pupils in Grades 2,4,6 in Cultural Enrichment Programs Across Strata

	STRATA				
	1	2	3	4	5
Title I	19.23	<u>36.23</u>	23.68	<u>27.50</u>	<u>43.48</u>
non-Title I	<u>19.64</u>	<u>13.71</u>	<u>28.09</u>	<u>11.36</u>	<u>4.76</u>
	STRATA				$\bar{x}$
	6	7	9		
Title I	<u>28.57</u>	<u>73.91</u>	<u>37.50</u>	34.15	
non-Title I	<u>16.84</u>	<u>38.18</u>	<u>16.67</u>	16.90	

\*The highest percentage of pupils in each stratum is underlined

Note: Appendix C: Part II, questions 1 & 2.

N = 291

#### UNIT 4: ADDITIONAL FACTORS RELATED TO PUPIL'S SELF-CONCEPT AND SCHOOL ACHIEVEMENT

Behavioral data revealed significant differences between Title I and non-Title I pupils on pre-test evaluation, post-test evaluation and difference between pre and post test or amount of behavioral change (all chi square values,  $p < .001$ ). Pupils were judged on 14 behaviors ranging

across factors of ability, motivation, and peer and teacher relationships. Ratings were on a 5 point scale ranging from far below average (1) to far above average (5). With 14 behaviors, each pupil was permitted a pre or post test minimum total score of 14 and a pre or post test maximum total score of 70. Fifty-seven scoring categories were established from this range of scores, 1 category for each possible total score. Chi square percentage values were then determined by the percentage of students falling in each of the 57 categories. These percentage figures are shown in Table 32.

TABLE 32

Pre-Test and Post-Test Behavior Scores of Title I and non-Title I Students in grades 2,4,6

Category	Pre-Test (%)				Post-Test (%)				Direction of Difference			
	Total Possible	Title I Score	Title I	Non-I I	Total Possible	Title I Score	Title I	Non-I I				
1.	14	1.68	1.68	9.73	14	.34	.02	29.	42	4.36	4.01	-
2.	15	1.34	.90	1.68	15	.67	.16	30.	43	10.49	9.34	-
3.	16	2.68	.49	5.40	16	1.134	.41	31.	44	2.03	4.24	+
4.	17	2.01	.66	11.78	17	1.01	.15	32.	45	1.34	3.85	+
5.	18	2.35	1.15	2.68	18	.34	.66	33.	46	14.61	14.02	-
6.	19	2.02	1.23	2.35	19	2.01	.49	34.	47	2.68	3.77	+
7.	20	7.07	1.72	6.40	20	1.68	.41	35.	48	3.36	3.60	+
8.	21	5.05	1.72	1.68	21	2.01	.82	36.	49	6.73	7.05	+
9.	22	5.72	2.54	1.01	22	2.36	.57	37.	50	1.01	3.52	+
10.	23	2.68	.32	6.73	23	1.34	.41	38.	51	2.01	4.18	+
11.	24	2.68	.74	1.01	24	3.37	1.23	39.	52	6.42	7.05	-
12.	25	3.36	.66	1.01	25	3.02	.74	40.	53	1.68	5.00	+
13.	26	5.70	1.31	2.69	26	2.69	1.07	41.	54	5.72	7.70	+
14.	27	3.69	2.21	2.69	27	2.01	.74	42.	55	1.34	2.54	+
15.	28	9.40	2.05	.34	28	2.35	1.68	43.	56	5.39	6.31	+
16.	29	6.73	2.62	2.36	29	7.05	1.31	44.	57	1.34	2.62	+
17.	30	6.38	2.21	1.01	30	6.71	1.39	45.	58	3.73	7.46	+
18.	31	4.70	3.52	.34	31	4.38	1.39	46.	59	.67	2.95	+
19.	32	10.10	4.92	1.01	32	8.36	2.05	47.	60	2.69	4.75	+
20.	33	5.03	2.78	1.34	33	4.36	2.67	48.	61	.34	1.64	+
21.	34	5.03	3.19	.67	34	9.43	3.69	49.	62	.34	1.97	+
22.	35	8.42	6.39	.67	35	7.70	3.77	50.	63	2.78	2.38	+
23.	36	5.70	3.69	.00	36	7.05	4.75	51.	64	.34	2.78	+
24.	37	4.70	4.67	.34	37	7.07	3.69	52.	65	.34	4.67	+
25.	38	7.74	7.76	.00	38	5.70	4.75	53.	66	.34	2.21	+
26.	39	4.03	5.08	.34	39	12.42	9.50	54.	67	1.01	4.59	+
27.	40	3.02	6.06	.00	40	8.92	5.49	55.	68	.67	3.85	+
28.	41	10.10	10.08	.67	41	2.35	4.34	56.	69	.00	2.13	+
				.34	70			57.	70	.34	5.08	+

N = 1702

Table 32 reveals a consistent pattern of differences between Title I and non-Title I pupils. Total possible scores in the range of approximately 14 through 37 show more Title I than non-Title I pupils receiving lower scores. The opposite holds true in the upper range of total possible scores.

Frequency tables made available the percentage of Title I and non-Title I pupils whose behavior had changes in either a positive or negative direction or ~~remained~~ the same. Table 33 reports these values after conversion to the original 5 point scale.

TABLE 33

Percentage of Pupils whose behavior changed from Pre to Post in each of 5 Total Possible Score Categories\*

Pre-test	Title I			non-Title I		
	% receiving lower than initial pre-test score	% receiving same as pre-test score	% receiving higher than pre-test score	% receiving lower than initial pre-test score	% receiving same as pre-test score	% receiving higher than pre-test score
far below (1)	0.00	20.00	80.00	0.00	12.50	<u>87.50</u>
below average (2)	0.00	28.10	71.90	1.61	19.69	<u>78.97</u>
average (3)	3.75	39.13	57.12	5.29	32.29	<u>62.42</u>
above average (4)	33.33	42.87	23.80	1.78	49.36	<u>47.86</u>
far above (5)	0.00	100.00	100.00	0.00	52.00	<u>48.00</u>

\*The highest percentage of those receiving higher than pre-test scores in each total possible score category is underlined.

Note: Appendix C: Part II, question 1, Part IV, question 1.

N = 1702

Table 33 shows more non-Title I than Title I students having positive behavior change across all scoring categories. More Title I students also show lack of improvement in behavior. As expected, the greatest behavior change was observed in the lowest scoring categories while least change was found in the above average and far above average categories.

Teachers were asked to estimate potential achievement levels of Title I and non-Title I students. Marked differences were found in the teacher's perception of these students ( $p < .001$ ); the Title I child was perceived as having less academic potential than the non-Title I child. These data are shown in Table 34.

TABLE 34

Teacher's Estimate of Potential Achievement Level of 2nd, 4th, 6th grade Title I and non-Title I pupils; Percentage falling in each Category\*

Estimate of Educ. Achievement (Ability Known)	Title I	non-Title I
Will complete 8th grade or less	<u>6.62</u>	1.13
Will complete 9th or 10th grade	<u>8.94</u>	2.59
Will complete 11th or 12th but not graduate H.S.	<u>10.93</u>	3.72
Graduate from H.S.	<u>52.32</u>	35.47
Will enter College	21.19	<u>57.09</u>

\*The larger percentage in each category is underlined.

Note: Appendix C: Part II, question 1; Part I, question 25.

N = 1693

Teachers' perceptions of academic potential of Title I and non-Title I pupils were more sharply defined when observed across strata. The following conclusions may be drawn from the percentage figures presented in Table 35. Although ability level was considered, teachers in the smaller districts (strata 1 through 6) are apparently less confident of higher achievement in Title I pupils than teachers of non-Title I pupils in the larger districts (strata 7 and 9). The Title I pupil, by definition, is disadvantaged, thus the phenomena of generalization permits extending socio-cultural characteristics to the area of academic potential. This is done more easily in the smaller community; previously reported data\* asserts that employment of older, more experienced teachers is more characteristic of the smaller district, thus teachers in these districts know pupils, their families and homes, better and for longer periods of time. Further, social class attitudes of the older teacher in the smaller community may allow greater prejudicial judgments against the Title I pupil.

In the largest districts, socio-economic levels are are stable and consistently depressed across the entire Title I school population while various socio-economic levels are usually more evident in the Title I schools in the smaller districts. Evaluating the Title I pupil within the context of his classroom peer group in the smaller community permits greater discrimination and identification; thus the Title I pupil is more easily compared unfavorably with the less disadvantaged non-Title I pupil.

\*See Part I, page 26-27, Tables 10 and 11.

TABLE 35

Teachers' Estimate of Potential Achievement Level of 2nd,  
4th,6th Grade Title I and non-Title I Pupils  
Across Strata: Percentage falling in each Category\*

Estimate of educational achievement (ability known)	Strata							
	1		2		3		4	
	Title I	non-Title I	Title I	N-T	T	N-T	T	N-T
Will complete either 8th,9th,10th,11th,12th grade or graduate from H.S.	<u>88.46</u>	36.13	<u>77.63</u>	36.65	<u>85.00</u>	40.21	<u>82.50</u>	44.49
Will enter college	11.54	<u>63.87</u>	22.37	<u>63.35</u>	15.00	<u>59.79</u>	17.50	<u>55.51</u>
	Strata							
	5		6		7		9	
Will complete 8th,9th,10th,11th,12th grade or graduate from H.S.	<u>84.62</u>	54.05	<u>80.00</u>	50.00	<u>57.69</u>	39.66	66.67	<u>68.18</u>
Will enter college	15.38	<u>54.95</u>	20.00	<u>50.00</u>	42.31	<u>60.34</u>	<u>33.33</u>	31.82

\*The largest percentage in each stratum is underlined.

Note: Appendix C: Part II, question 1; Part I, question 25

N = 1537

Teachers were asked to evaluate the educational aspirations parents had for their children. Data revealed no significant difference in educational aspirations for Title I and non-Title I students in grade 2 although expectation of achievement differed significantly for Title I and non-Title I students in grade 4 ( $p < .02$ ), grade 6 ( $p < .001$ ) and subsequently for grades 2,4,6 ( $p < .001$ ). These data are shown in Table 36.

TABLE 36

Parent's Educational Aspirations of Title I and non-Title I Pupils in grades 2,4, and 6 and grades 2,4,6: Chi Square Values

Grade	$\chi^2$	df
2	10.89959	5
4	14.20951**	5
6	53.24643***	5
2,4,6	61.44022***	5

\*\* p .02

\*\*\* p .001

Note: Appendix C: Part II, question 1; Part I, question 20.  
N = 1534 (grades 2,4,6)

Differences reflected more favorably on the family attitude of the non-Title I than the Title I student. Teachers reported that more parents of Non-Title I pupils wanted their child near the top of the class while parents of Title I students were only concerned about their child passing the grade. In the absence of a direct statement from parents, the same pattern of family attitudes was observed; teachers felt that more parents of non-Title I students wanted their son or daughter near the top of the class; they also felt that parents of Title I students only wanted their child to pass the grade. A significantly greater percentage of Title I pupils than non-Title I pupils also had parents who were not concerned about their child's educational achievement. These data are shown in Table 37.

TABLE 37

Parent's Educational Aspirations of Title I and non-Title I Students  
in grades 2,4,6: Percentage of students falling in each Category\*

Expectation of achievement	Title I	non-Title I
Parents state that they want him to be near top of class	2.67	<u>6.63</u>
Parents state they want him to pass this grade	<u>9.33</u>	6.47
I feel parents want him! near top of class	11.33	<u>32.09</u>
I feel parents want him to pass this grade	<u>57.33</u>	41.47
I feel parents are unconcerned	<u>7.33</u>	4.37
I don't know	<u>12.00</u>	8.97

\*The largest percentage in each category is underlined.

Note: Appendix C: Part II, question 1; Part I, question 20.

N = 1534

#### UNIT 5: FAMILY CHARACTERISTICS OF TITLE I AND NON-TITLE I PUPILS

Title I schools, by definition, represent the lower strata of income levels. Thus, differences were not anticipated between the Title I students or those within compensatory programs in Title I schools, 1967-1968, and the non-Title I students in Title I schools. Nevertheless, a significant inverse relationship was found ( $p < .01$ ) between income level families and Title I non-Title I status. These percentages are shown in Table 36.

TABLE 38

The Percentage of 2nd, 4th, 6th grade Pupils whose Families fall in Income Level Categories according to Classroom Teachers' Estimate of Income

Income levels (per year)	Title I	non-Title I
Under \$3000	<u>9.40</u>	3.80
\$3000-5999	<u>38.64</u>	30.61
\$6000-9000	44.41	<u>49.92</u>
\$9000 +	7.46	<u>15.68</u>

Note: Appendix C: Part I, question 9  
N = 1702

Chi square values were highly significant when family dwellings of Title I and non-Title I pupils were compared as groups ( $p < .001$ ) and across strata ( $p < .001$ ). Generally, the types of family dwelling of the Title I and non-Title I pupil in the larger city schools were distributed more evenly across each of these stratum than in the smaller districts. When categories of well kept single family houses and well kept multi-family houses were combined and compared with the categories, run down single family houses and run down multi-family houses, non-Title I family homes were significantly better than Title I homes even though located in the Title I school population area. These data are shown in Table 39.

TABLE 39

Home Description of Title I and non-Title I Pupils;  
The Percentage of Pupils who live in each type Home\*

Home Description	Strata							
	1		2		3		4	
	Title	N-T	Title	N-T	Title	N-T	Title	N-T
Well kept single and multi-family homes	76.93	<u>90.00</u>	81.08	<u>84.57</u>	85.00	<u>89.12</u>	57.50	<u>87.19</u>
Run down single and multi-family homes	<u>15.38</u>	6.67	<u>10.81</u>	4.63	<u>7.50</u>	5.67	<u>32.50</u>	7.86
Don't know	7.69	3.33	8.11	10.80	7.50	7.22	10.00	4.96

Home description	Strata							
	5		6		7		9	
	Title	N-T	Title	N-T	Title	N-T	Title	N-T
Well kept single and multi-family homes	60.00	<u>71.81</u>	66.00	<u>72.16</u>	<u>57.69</u>	56.90	33.33	<u>48.86</u>
Run down single and multi-family homes	<u>40.00</u>	17.28	<u>32.00</u>	19.59	<u>42.30</u>	39.65	<u>66.67</u>	40.91
Don't know	0.00	10.91	2.00	8.25	0.00	3.45	0.00	10.23

\*The largest percentage in each category within each stratum is underlined.

Note: Appendix C: Part II, question 1: Part I, question 18.

N = 1692

Note: Title=Title I, N-T= non-Title I.

Chi square values approaching significance ( $p < .05$ ) were found between family size and Title I and non-Title I pupils in grades 2,4,6. Data in Table 40 reflects a pattern of larger families of Title I than non-Title I pupils. Patterns of family size were found to be consistent across all strata for both Title I and non-Title I pupils.

TABLE 40

The Relationship of Family Size to Title I and non-Title I Students  
in grades 2,4,6 in Title I schools: Percentage falling in each Category

Size of Family (children - parents)	Title I	non-Title I
less than 4	15.33	<u>23.18</u>
5 to 6	<u>42.00</u>	46.11
7 to 10	<u>38.33</u>	26.99
10 +	<u>4.33</u>	3.73

Note: Appendix C: Part II, question 1; Part I, question 12.  
N = 1692

Fathers of Title I students were less well educated than fathers of non-Title I students ( $p < .001$ ). These data are shown in Table 41.

TABLE 41

Estimate of Educational Level of Fathers of Title I and non-Title I Students in grades 2,4,6; Percentage in each Category\*

Estimate of educational level of father	Title I	non-Title I
Little or no education	<u>2.37</u>	.57
less than 8th grade	<u>9.49</u>	31.19
completed 8th grade	<u>20.00</u>	10.22
some H.S.	<u>23.39</u>	19.22
completed H.S.	31.86	<u>44.24</u>
some post H.S. of some college	8.81	<u>12.35</u>
completed college	4.07	<u>10.22</u>

\*The largest percentage in each category is underlined.

Note: Appendix C: Part II, question 1; Part I, question 13.

N = 1700

Differences between the educational level of fathers of Title I and non-Title I students were also found to be significant across strata ( $p < .001$ ). These data are shown in Table 42.

TABLE 42

Estimate of Educational Level of Fathers of Title I and non-Title I Students in grades 2,4,6 across Strata: Percentage in each Category\*

Estimate of Edu. Level of Pupil's Father	Strata							
	1		2		3		4	
	Title I	Non-T						
Little or no educ.	0.00		<u>2.67</u>	0.31	0.00	<u>0.52</u>	0.00	0.00
Probably less than 8th grade	<u>3.85</u>		<u>1.67</u>	2.18	<u>5.00</u>	0.52	<u>15.00</u>	1.67
Probably complete 8th grade	<u>34.62</u>	6.67	<u>20.00</u>	11.21	<u>17.50</u>	9.33	<u>25.00</u>	7.08
Probably some H.S.	<u>23.08</u>	20.83	<u>20.00</u>	16.82	<u>25.00</u>	15.54	17.50	<u>20.00</u>
Probably completed H.S.	38.46		36.00	<u>47.04</u>	40.00	<u>49.22</u>	30.00	<u>45.42</u>
Probably some post H.S. training or college	0.00	<u>13.33</u>	6.67	<u>10.59</u>	5.00	<u>13.99</u>	10.00	<u>15.42</u>
Probably completed college	0.00	<u>5.83</u>	4.00	<u>11.84</u>	7.50	<u>10.88</u>	2.50	<u>10.42</u>
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
				Strata				
		5		6		7		9
Little or no educ.	<u>4.00</u>	0.00	<u>6.00</u>	0.00	0.00	<u>1.75</u>	<u>6.67</u>	3.45
Probably less than 8th grade	4.00	<u>4.59</u>	<u>6.00</u>	2.08	<u>20.83</u>	7.02	13.33	<u>14.94</u>
Probably complete 8th grade	<u>12.00</u>	10.09	<u>16.00</u>	11.46	<u>16.67</u>	12.28	<u>20.00</u>	19.54
Probably some H.S.	<u>28.00</u>	16.51	24.00	<u>29.17</u>	<u>29.17</u>	19.30	<u>33.33</u>	24.14
Probably completed H.S.	<u>40.00</u>	38.53	26.00	<u>39.58</u>	16.67	<u>36.84</u>	13.33	<u>28.74</u>
Probably some post H.S. training or college	8.00	<u>14.68</u>	<u>16.00</u>	12.50	<u>12.50</u>	5.26	<u>13.33</u>	6.90
Probably completed college	4.00	<u>15.60</u>	<u>6.00</u>	5.21	4.17	<u>17.54</u>	0.00	<u>2.30</u>
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

\*The largest percentage in each category is underlined.  
 Note: Appendix C: Part II, question 1; Part I, question 13.  
 N = 1700  
 See Table 27.



In comparing the percentage of fathers of Title I and non-Title I fathers across strata, several significant patterns emerge. All strata with the exception of stratum 6 showed estimates of more non-Title than Title I fathers completing high school. More fathers in strata 1 through 5 were estimated to have completed some post high school as well as some college. All strata with the exception of strata 5 show an estimate of more non-Title than Title I fathers completing college.

Greater variability in educational level is observed in strata 5 through 9. Nevertheless, when the percentage figures in strata 5 through 9 are combined for fathers estimated as having less than an high school education as opposed to fathers with high school or more education, the pattern is still apparent. Title I fathers in all strata are estimated to be less well educated than non-Title I fathers. These cumulative percentage figures are shown in Table 43.

TABLE 43

Estimate of Educational level of Fathers of Title I and non-Title I Students in grades 2,4,6; Cumulative Percentage in each Category\*

	Strata							
	Title I	Non-T						
Less than H.S.	<u>48.00</u>	31.19	<u>52.00</u>	42.71	<u>66.67</u>	40.35	<u>73.33</u>	62.07
H.S. & H.S. +	52.00	<u>68.81</u>	48.00	<u>57.29</u>	33.33	<u>59.69</u>	26.67	<u>37.94</u>

\*The largest percentage in each category is underlined.  
 Note: Appendix C: Part II, question 1; Part I, question 13.  
 N = 1700

The educational background Title I and non-Title I mothers was the same as that observed in Title I and non-Title I fathers; more Title I mothers were estimated to have less education than non-Title I mothers. These data are shown in Table 44. Educational background of mothers was not compared across strata. Differences were significant at the .001 level.

TABLE 44

Estimate of Educational level of Mothers of Title I and non-Title I Students in grades 2,4,6; Percentage in each Category\*

Estimate of educ. level of mother	Title I	non-Title I
little or no educ.	<u>2.01</u>	0.41
less than 8th grade	<u>7.38</u>	2.68
completed 8th grade	<u>13.76</u>	7.38
some H.S.	<u>25.17</u>	19.55
completed H.S.	39.93	<u>51.58</u>
some post H.S. or some college	7.38	<u>11.44</u>
completed college	4.36	<u>6.97</u>

\*The largest percentage in each category is underlined

Note: Appendix C: Part II, question 1; Part I, question 14.

N = 1531

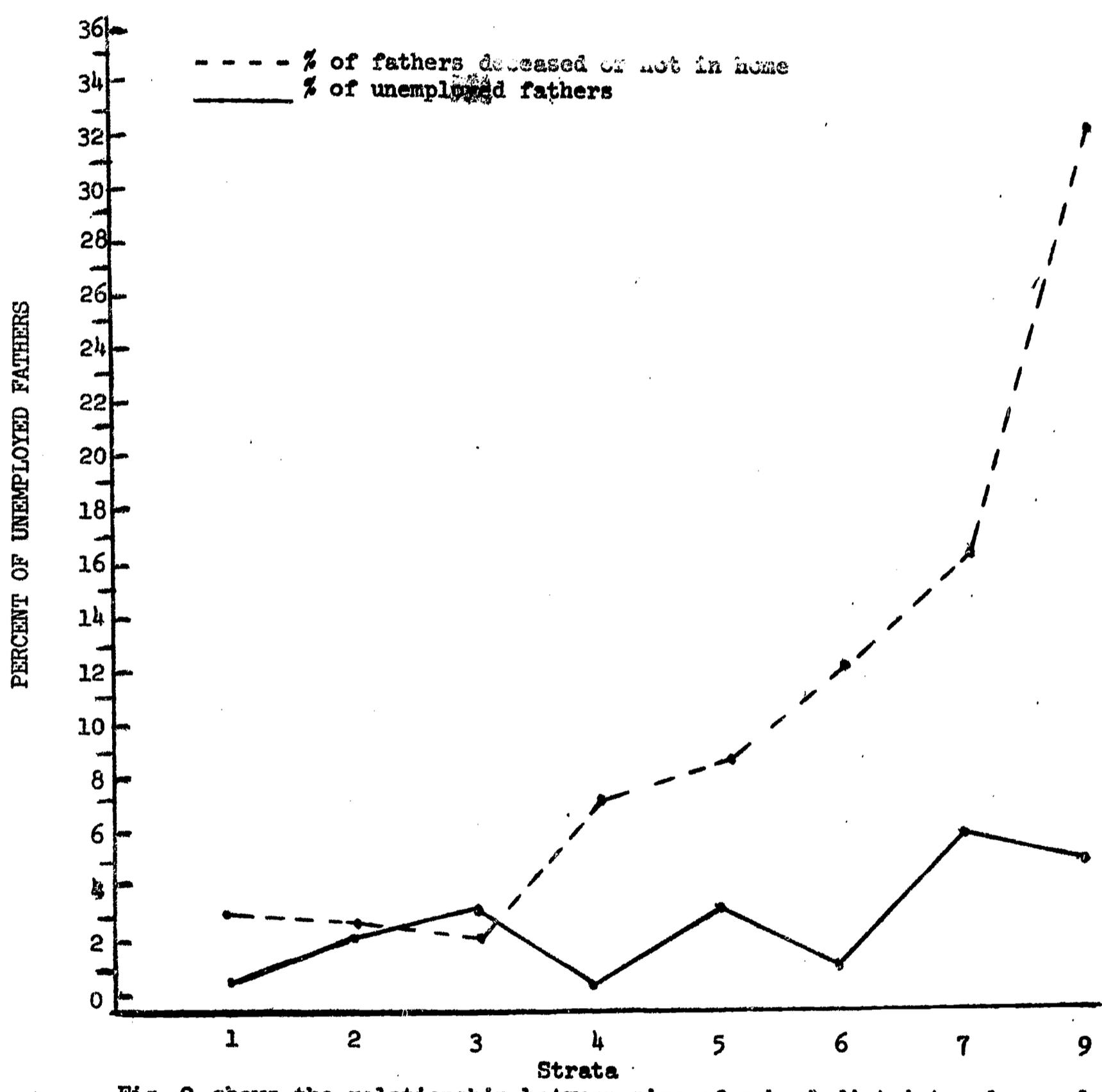


Fig. 9 shows the relationship between size of school district and unemployment status of Title I and non-Title I fathers of students in grades 2,4,6.

The employment status of Title I and non-Title I fathers was similar within each stratum. However, findings revealed significant chi squares ( $p > .01$ ) for Title I fathers across strata, non-Title I fathers across strata, and Title I and non-Title I fathers across strata. A linear relationship was found between size of stratum and the percentage of Title I and non-Title I fathers who were either deceased or not in the home. The percentage of unemployed fathers also increased with size of school district although greater variability in employment status was noted in districts of moderate size (fig. 9). The percentage of fathers employed full time showed little variability in strata 1 through 4 but dropped significantly in strata 5 through 9. Data on employment status of fathers of Title I and non-Title I students are shown in detail in Table 45.

TABLE 45

Estimate of Employment Status of Fathers of Title I and non-Title I Students in grades 2,4,6 across Strata: Percentage in each Category

Estimate of employment status	Strata							
	1	2	3	4	5	6	7	9
No father or deceased	3.05	2.91	2.49	7.10	8.57	12.12	16.28	32.46
Employed part-time	7.93	2.91	2.49	4.63	3.00	3.93	1.16	5.26
Employed full-time	87.80	91.48	92.12	87.65	82.86	81.64	76.74	57.02
Unemployed	1.22	2.69	2.90	0.62	3.57	1.21	5.81	5.26

Note: Appendix C: Part II, question 1; Part I, question 10.  
N = 1680

Differences were not found between the employment status of mothers of Title I and non-Title I students in grades 2,4,6. Employment status of mothers was not evaluated across strata.

## PART II SUMMARY

Findings in Part II are strongly supportive of Title I's selection and identification of pupils needing compensatory services.

Highly significant differences were found in the sample of Wisconsin's Title I school populations between Title I pupils, those who were enrolled in 1 or more special compensatory education programs, 1967-1968, and non-Title I pupils, those who did not participate in special compensatory programs, 1967-1968.

The Title I pupil has a higher absentee rate than the non-Title I pupil; Grade 4 shows the greatest difference between groups. A greater number of migrant children have Title I rather than non-Title I status; minority group membership was also more characteristic of Title I than non-Title I pupils. The greatest proportion of minority group members was found in strata 7 and 9 with the exception of Title I pupils identified as American Indian; these children were identified in nearly all strata.

The family home of the Title I child was usually less desirable than the home of the non-Title I child except in stratum 7. This is a surprising finding; one would expect less differentiation in view of the population areas served by Title I schools. Income was also lower in the Title I family. Differences in family size approached significance ( $P < .05$ );\* the Title I family was found to be slightly larger than the non-Title I family.

Parents of the Title I child were less well educated than parents of the non-Title I child. Employment status did not differentiate between parents of Title I and non-Title I children although there was a linear relationship between employment status of parents of both Title I and non-Title I pupils and strata; more fathers were unemployed, not living in the home, or deceased as school district populations increased in size.

\*For purposes of this study, only the .02, .01 and .001 were predetermined acceptable significance levels.

Although rank ordering of needs for both groups were essentially the same, teachers saw the Title I pupil with greater academic and non-academic needs. Teachers also responded differentially to the needs of the Title I and non-Title I pupil, reflecting their own abilities in working with the child.

The Title I pupil was seen as receiving more pupil services treating social, emotional and disciplinary problems. Perception of needs of pupils for pupil services and academic remediation appears somewhat stereotyped; findings suggest little knowledge or understanding of learning disabilities. Remedial program emphasis is primarily academic with age and grade appropriate curriculum.

More Title I children than non-Title I children have been in Headstart and special summer programs. Cultural enrichment programs seem to lack the necessary relationship to socio-economic status of the area population. One would assume that the strongest cultural enrichment programs would be found in the larger city schools and more depressed areas; this was true only in stratum 7.

Teachers' perception of Title I pupils confirms previous studies reporting negative attitudes toward the disadvantaged child. Teachers saw less positive behavior change in the Title I than in the non-Title I child. They also saw him with less potential for achievement even with ability taken in consideration. The Title I pupil, by definition, is disadvantaged, thus the phenomenon of generalization permits extending socio-cultural characteristics to the area of academic potential.

Teachers also reflected the parent's view that the Title I child would achieve less than his non-Title I peer; the congruity between parent and teacher's perception of the student is an unfortunate but factual finding.

In summary, findings in Part II are strongly supportive of the Title I program's selection and identification of pupils needing compensatory services. Findings also reveal teacher and parent attitudes known to negatively influence achievement, social growth and psychological health of the disadvantaged child. Data on cultural enrichment programs suggests inappropriate emphasis in terms of population areas. Program emphasis is primarily academic; learning disabilities are generally undiagnosed and/or treated except in terms of academic remediation.

PART III

RATE OF LEARNING STUDY: ACHIEVEMENT DATA  
ON TITLE I AND NON-TITLE I PUPILS

## PREFACE

This preface represents a summary as well as a "study guide" to the main body of research in Section III. Its purpose is to make the data and general content of the study more comprehensible to those with minimal experience in inferential statistics and experimental design.

The purpose of the study is to compare achievement of Title I pupils with non-Title I pupils. The initial comparison is made with the use of the statistical technique of analysis of variance. Three "models" of covariance or three sets of covariates are also used to examine the effects of previous learning on in-program achievement for both Title I and non-Title I pupils. (See page 56). In other words, we are not only interested in establishing differences between our groups (using the analysis of variance), but we must also establish the validity of the differences by determining the covariate or factor responsible for such differences.

The study can be divided into three functional "units." The first "unit" is primarily introductory and explains the use of "rates of learning." The main assumption underlying the use of "rates of learning" for measuring achievement is that achievement gain is measured in unequal rather than equal grade equivalent units. Theoretically, the child must achieve more or maintain greater units of gain in the early grades than in the later grades to maintain normative gain. Grade equivalent scores are treated as cumulative scores and become a function of time or grade level. The rationale underlying this assumption is explained in detail in the Method section of the study (pages 53-55).

These basic symbols are used in the formulae:

ATRL - achievement test rate of learning or actual grade equivalent scores a pupil receives on standardized achievement tests. ATRL is based on the a priori assumption that the average child learns at a rate of 10 equal grade equivalent units or months per academic year.

GE - grade equivalent (scores)

PrT - achievement test pretest scores

PsT - achievement test post test scores

PrT-ATRL - refers to the average rate of learning per year up to the time of given pretest scores

IP-ATRL - refers to in-program rate of learning based on the pupils average rate of learning per year up to the time of given post test scores

PrT-ATRL and IP-ATRL are explained in greater detail in the Method section of the study (pages

The second functional "unit" of the study is the analysis of variance. Analysis of variance is used to test the hypothesis that differences exist between the achievement test scores of Title I and non-Title I pupils.

The third functional "unit" are the analyses of covariance. Three "models" of covariance are used to examine the effects of previous learning on in-program achievement for both Title I and non-Title I pupils and to further define which variable(s) within PrT-ATRL affect IP-ATRL. Covariate model I tests for the differential effect of all PrT-ATRL Title I and non-Title I scores on IP-ATRL. Covariate model II tests for the differential effect of PrT-ATRL grade x Title scores in IP-ATRL. Because rates of learning assume a time (grade) factor as well as Title I factor, a single analysis of covariance (model I) could not be expected to evaluate all effects of previous learning.

Results of the analysis of variance, analyses of covariance, models I, II and III; and an additional graphic plotting of covariant effects for model III are reported for each of the 4 achievement categories--Reading, Language, Arithmetic and Composite scores.

Conclusions emphasize the non-equivalence of GE units when evaluated as rates of learning across time. This implies that the disadvantaged slow

starting learner is handicapped not only by his inherent deficit but by the nature of the achievement test, itself. If the child makes little progress in the early years in school, it is mathematically and/or statistically impossible for him to make as rapid gains as would be possible if the learning loss were to occur in the later grades. Thus, if rates of learning are used, absolute comparisons can actually only be made across groups in the first grade. After the first year, the earlier loss or gain asserts a differential effect on any two or more groups that may be compared.

Nevertheless, in order to establish some basis for measuring the effects of learning, rates of learning scores were averaged over time and Title I and non-Title I pupils were compared on the basis of grade level as well as Title I status. Findings emphasize achievement loss in the non-Title I child in the Title I school. The Title I child did not show exceptional progress in any of the categories, however, the non-Title I child in the Title I school showed less progress than the Title I child in several of the achievement categories. This finding is also explained in greater detail in the Conclusions of the study. (Pages 76 and 77.)

This study represents an attempt to sophisticate evaluation of Title I programs by using achievement test scores within the context of nonequivalence of GE scores. The study also suggests that there are major problems in comparing the achievement of the disadvantaged child with his "normal" peer -- both across groups and across time or grade level.

## INTRODUCTION

Academic achievement tests have repeatedly been used as criteria for discovering not only what a child learns but also for evaluating the efficiency of the instructional program. The purpose of this study is to evaluate the effectiveness of Title I programs by comparing the academic achievement of pupils enrolled in special compensatory education programs, 1967-1968, with pupils who were not enrolled in special compensatory education programs, 1967-1968. Pupils enrolled in compensatory education programs during the 1967-1968 academic year are identified as Title I; pupils not enrolled in any special compensatory education programs during the 1967-1968 academic year are identified as non-Title I. Both groups were enrolled in Title I schools in Wisconsin.

For purposes of this study, academic achievement will be evaluated in terms of "rates of learning." Achievement within this context permits a comparison of not only Title I and non-Title I pupils but also the rate of learning of the Title I pupil prior to enrollment in the special compensatory program with his in-program rate of learning. Achievement of the non-Title I pupil prior to the current academic year, 1967-1968 is also compared with his achievement during 1967-1968. The study also sought to define factors affecting the rates of learning in both Title I and non-Title I pupils.

In Part II of this report, data revealed that the Title I pupil differed from the non-Title I pupil on a number of characteristics; these included absentee rate, family background, home environment, potential achievement level and observed classroom behaviors. Findings suggest that the Title I pupil is more representative of the disadvantaged school population than his non-Title I peer, even though both groups are enrolled in Title I schools. All comparisons subsequently lack comparability of experimental (Title I) and control (non-Title I) groups,

#### METHOD

Standardized achievement test scores were taken from the pupil forms of all previously identified Title I and non-Title I pupils in the initial sample.\* Achievement scores were reported in 4 categories; these were reading, arithmetic, language and a composite score representing the 3 categories combined. Sample size for this study was determined by the following criteria: a matched set of pre and post test scores was required for each pupil included in the study. It was also necessary that pre and post test scores correspond with the 1967-1968 academic year; only pupils with pre test scores dated within the time period of April 1 through October 31, 1967, and only post test scores in the time period following March 31, 1968, were used.

Months of achievement test gain were then adjusted so that all gains assumed equivalency as to time in or out of program and time between tests. It was felt that adjusting scores outside these time intervals introduced too much error to be considered useful. Means for scores by grade, Title I status and achievement test category were substituted for any subsequent missing data. Differential loss of data and sampling N were not found across grades or Title I status. A final sample of 368 2nd, 4th and 6th grade children was used in the current study.

Comparability among achievement tests could not be assumed as all achievement test scores fitting the above criteria were used with no selection or identification as to type of test.

In this study, achievement test rate of learning (ATRL) will refer to the

\*In Part II of this report, "a 15% stratified systematic random sampling of the population of 15,059 pupils forms established an initial sampling N of 2,114 respondents. Missing or unusable data reduced the N to between 1433 and 1702 subjects, depending upon the question or data used..." Achievement test scores were selected from the N of 1702.

actual grade equivalent (GE) scores a pupil receives on standardized achievement tests. ATRL is based on the a priori assumption that the average child learns at a rate of 10 equal GE units or months per academic year.

Pretest (PrT) will refer to achievement test pretest scores; post test (PsT) will refer to achievement test post test scores. Formulas will also use the abbreviation of T for Title I, NT for non-Title I. The learning curve (LC) will refer to the child's capacity to learn at any given age. LC is inversely related to chronological age and/or developmental maturity.

Pretest achievement test rate of learning (PrT-ATRL) will refer to the average rate of learning per year up to the time of the given pretest score. In-program achievement test rate of learning (IP-ATRL) will refer to in-program rate of learning based on the pupil's average rate of learning per year up to the time of the given post test score. For purposes of this study,  $PrT_{t,nt}$ -ATRL will refer to the rate of learning of the T and/or NT child up to the time that he enters 2nd, 4th or 6th grade in the academic year, 1967-1968.  $IP_t$ -ATRL will refer to the rate of learning of 2nd, 4th, and 6th grade Title I children during the time they were enrolled in special compensatory programs, 1967-1968.  $IP_{nt}$ -ATRL will refer to the rate of learning of 2nd, 4th, and 6th grade non-Title I children during the academic year, 1967-1968.\*

\*If 2 or more PrT-ATRL scores are compared with each other, PrT-ATRL  $\neq$  to IP-ATRL. If 2 or more IP-ATRL scores are compared with each other, PrT-ATRL = IP-ATRL  
IP-ATRL for all years = IP-ATRL for any 1 year.  
PrT-ATRL for all years = PrT-ATRL for any 1 year only in grade 2.

The following are formulas for deriving PrT-ATRL (pre-test rate of learning) and IP-ATRL (in-program rate of learning) scores for each grade and Title status:

Grade 2

$$\text{PrT-ATRL}_{t, \text{gr.2}} = \frac{\left( \frac{\text{PrT}_{t, \text{gr.2}, i=1 \dots 34}}{\text{Grade}} \right) \left( \frac{\text{PrT}_{t, \text{gr.2}, i=1 \dots 34}}{\text{Grade}-1} \right) \left( \sum_{i=1}^{34} X_i \right)}{\left( \sum_{i=1}^{34} X_i \right)}$$

PrT-ATRL<sub>nt, gr2, i=1...124</sub>  
Grade 4

PrT-ATRL<sub>t, gr4, i=1...29</sub>

PrT-ATRL<sub>nt, gr4, i=1...85</sub>

Grade 6

PrT-ATRL<sub>t, gr6, i=1...27</sub>

PrT-ATRL<sub>nt, gr6, i=1...69</sub>

Grade 2

$$\text{IP-ATRL}_{t, \text{gr2}} = \frac{\left( \frac{[\text{Pst}_{t, \text{gr2}} - \text{PrT}_{t, \text{gr2}}]_{i=1 \dots 34}}{10} \right) \left( \frac{[\text{Pst}_{t, \text{gr2}} - \text{PrT}_{t, \text{gr2}}]_{i=1 \dots 34}}{10} \right) \left( \frac{\text{Grade}+1}{\text{Grade}} \right) \left( \sum_{i=1}^{34} X_i \right)}{\left( \sum_{i=1}^{34} X_i \right)}$$

IP-ATRL<sub>nt, gr2, i=1...124</sub>

Grade 4

IP-ATRL<sub>t, gr4, i=1...29</sub>

IP-ATRL<sub>nt, gr4, i=1...85</sub>

Grade 6

IP-ATRL<sub>t, gr6, i=1...27</sub>

IP-ATRL<sub>nt, gr6, i=1...69</sub>

The rationale for use of rates of learning is based on the LC. Further, the nature of test construction of standardized achievement tests insists that learning rate over time is a function of grade level; rates of learning over time decrease as a simple mathematical function of increase in grade level even though the standardized achievement tests and standard 10 months or one GE per year are used as units of measurement.

Therefore, the main assumption underlying the use of rates of learning for measuring achievement is that achievement gain is measured in unequal rather than equal grade equivalent units. If this assumption is true, then the standard 10 months or one GE unit of achievement which is considered normative gain does not maintain equivalency across time. For example, one GE unit of gain between grades 2 and 3 becomes 1.5 units of gain when considered as the average rate of learning for that given year. However, one GE unit of gain between grades 5 and 6 becomes 1.20 units of gain when considered as the average rate of learning for that given year. Theoretically, the child must achieve more or maintain greater units of gain in the early grades than in the later grades to maintain the normative gain.

The logic underlying the above assumptions is contained in the following statements:

Standardized achievement tests establish 1 GE as the normative value for average achievement at the beginning of Grade 1.

It then follows that standardized achievement tests establish 2 GE as the normative value for average achievement at the beginning of Grade 2. At the beginning of Grade 2 the child has been in school 1 year. Therefore, 2 GE units represent 1 year of learning for the child with average achievement at the beginning of grade 2. Thus, the average rate of learning per year to grade 2 =

$$\frac{\text{GE units (2)}}{\text{Years in school (1)}}$$

and the average rate of learning to grade 2 = 2 PrT-ATRL.

The expected normative value for average achievement at the beginning of Grade 3 = 3. At the beginning of Grade 3, the child has been in school 2 years. Thus, the average rate of learning per year to grade 3 =

$$\frac{\text{GE units (3)}}{\text{Years in school (2)}}$$

therefore, PrT-ATRL to grade 3 = 1.50

It follows that:

- PrT-ATRL to Grade 4 =  $4/3$  or 1.33
- PrT-ATRL to Grade 5 =  $5/4$  or 1.25
- PrT-ATRL to Grade 6 =  $6/5$  or 1.20
- PrT-ATRL to Grade 7 =  $7/6$  or 1.16
- PrT-ATRL to Grade 8 =  $8/7$  or 1.14

The non-equivalency of GE scores is demonstrated in the following sample problem:

PUPIL X	(tested at beginning of grade 4)	PrT = 3.4 GE	
	(tested at beginning of grade 5)	PsT = 5.0 GE	1.6 GE gain
	(tested at beginning of grade 6)	PrT = 6.0 GE	
	(tested at beginning of grade 7)	PsT = 7.6 GE	1.6 GE gain

Therefore:

Actual gain for the "year's" achievement in grade 4 = (1.6) ( $5/4$ ) and  
 actual gain for the "year's" achievement in grade 6 = (1.6) ( $7/6$ ).

Therefore:

a gain of 1.6 GE has a PrT-ATRL value of 2.0 for achievement in grade 4 and  
 a gain of 1.6 GE has a PrT-ATRL value of 1.8 for achievement in grade 6.

The following is a hypothetical\* example of the use of "rates of learning" scores:

It is October 1st of the fall term. John and Peter have just entered the fifth grade. Achievement tests have been given; both boys received a reading score of 3.3 grade equivalents. This score is below the expected mean score of 5 grade equivalents for the entering fifth grader.

John's achievement test scores in reading were as follows: beginning grade 2--.6; beginning grade 3--1.3, beginning grade 4--2.3 and beginning grade 5--3.3.

After a poor beginning, John began to improve. Nevertheless, he was still far

\*This example is concerned only with the effects of rates of learning, per se. Variables such as time of testing, loss of achievement over summer months, etc., are not considered.

behind in overall achievement in reading.

Peter was a good student in first and second grade, achievement at the normal expected rate both years. At the beginning of grade 3, Peter's reading achievement score was 3.0 or grade level. Shortly after the achievement tests were given that fall, Peter became seriously ill and was subsequently absent almost the entire year. In fourth grade, Peter still has residual effects from the learning loss of the previous year. At the beginning of grade 5, reading achievement for Peter has advanced only .3 grade equivalents to 3.3.

In summary, John's rate of learning in grades 1 and 2 was approximately 50% the rate of learning of Peter's. In grades 3 and 4, John's rate of learning was 200% greater than Peter's rate of learning. The problem: which boy, John or Peter, had to have the higher rate of learning across time in order to reach the 3.3 level? The answer is in Table 46.

TABLE 46

Grade Equivalent and PrT-ATRL Reading Scores  
for John and Peter in grades 1 through 4

	John			Peter		
	GE scores	gain	PrT-ATRL	GE scores	gain	PrT-ATRL
gr. 1	.60	.60	1.20	2.00	2.00	2.00
gr. 2	1.30	.70	1.01	3.00	1.00	1.50
gr. 3	2.30	1.00	1.33	0.00	0.00	0.00
gr. 4	<u>3.30</u>	<u>1.00</u>	<u>1.25</u>	<u>3.30</u>	<u>.30</u>	<u>.37</u>
Cumulative	3.30	3.30	4.79	3.30	3.30	3.87
Totals						

Table 46 shows that John's rate of learning over time was greater than Peter's. Since Peter had made good gains in achievement in first and second grade, he could almost stop learning in grade 3 and 4 and still maintain a minimal score. In contrast, John's marked deficit in grades 1 and 2 required strong rates of learning to achieve the same level as Peter by grade 5. In effect, the low student in the early primary grades is handicapped by lack of growth at this point in time far more than if he were to "stop learning" later in the grades.

Analysis of variance using the Scheffe approximation and a fixed effects model was used to establish essential patterns of difference between Title I and non-Title I PrT-ATRL scores and Title I and non-Title I IP-ATRL scores in reading, arithmetic, language and composite score categories.

Three models of covariance were used to examine the effects of previous learning on in-program achievement for both T and NT pupils and to define which variables within PrT-ATRL affect IP-ATRL. The formula for each covariant model are as follows:

Where u = constant  
 T = covariable (Title)  
 G = covariable (Grade)  
 b = coefficient  
 P = PrT-ATRL  
 E = error

and A = achievement, the models are written as follows:

#### Model I

$$A = u + T_{ij} + b_{ij}P + E$$

(Model I is used to test the differential effect of PrT-ATRL T & NT scores on IP-ATRL)

#### Model II

$$A = u + T_i + G_j + TG_{ij} + b_jP + E$$

(Model II tests the differential effect of PrT-ATRL Grade scores on IP-ATRL)

#### Model III

$$A = u + T_i + G_j + TG_{ij} + b_{ij}P + E$$

(Model III tests for the differential effect of PrT-ATRL Grade X Title scores on IP-ATRL)

### RESULTS

As expected, highly significant differences were found between the reading PrT-ATRL scores of Title I and non-Title I pupils across grade levels ( $P < .0001$ ); the assumption is met that units of gain decrease as grade level increases. Highly significant differences ( $P < .0001$ ) were also found between reading PrT-ATRL

scores of Title I and non-Title I pupils. Table 47 shows the analysis of variance of reading PrT-ATRL scores of 2nd, 4th, and 6th grade Title I and non-Title I pupils. Significant differences were not found between reading IP-ATRL scores of Title I and non-Title I pupils. The actual PrT-ATRL and IP-ATRL scores are shown in Table 48.

TABLE 47

Analysis of Variance for reading PrT-ATRL scores  
of 2nd, 4th, and 6th grade T and NT pupils

Source	Sum of Squares	Degrees of Freedom	Mean Square	F ratio
Uncorrected total	3.9870+000	368		
Correction for mean	3.4113+000	1	3.4113+000	
Corrected total	5.7572-001	367	1.5687-003	
Title	6.6397-002	1	6.6397-002	52.78****
Grade	5.3733-002	2	2.6867-002	21.36****
Title x Grade	1.9540-004	2	9.7702-005	.08
Within cells	4.5540-001	362	1.2580-003	

\*\*\*\*( $p < .0001$ )

TABLE 48

Reading PrT-ATRL & IP-ATRL scores for 2nd, 4th, & 6th grade T & NT Pupils; Academic Year 1967-1968

	GRADE 2		GRADE 4		GRADE 6	
	PrT-ATRL	IP-ATRL	PrT-ATRL	IP-ATRL	PrT-ATRL	IP-ATRL
(Expected gain)	(2.0)	(1.50)	(1.33)	(1.25)	(1.20)	(1.16)
Title I	2.2	1.50	1.20	1.00	.96	.93
non-Title I	2.8	1.50	1.60	1.00	1.32	.81

In Grade 2, Title I pupils appeared to maintain gains in achievement in reading; non-Title I pupils also maintained normal gain although their initial scores were higher than Title I pupils. In effect, the non-Title I child seemed to lose initial gains in achievement over time as a result of not being in the special compensatory program. In Grade 4, both Title I and non-Title I children had identical IP-ATRL scores, although the PrT-ATRL score for the non-Title I pupil was markedly above that of the Title I pupil and above the mean expected gain for Grade 4. A similar pattern of achievement was also evident in Grade 6.

Covariant models I, II, and III with Reading IP-ATRL as the dependent variable and Reading PrT-ATRL as the independent variable were all significant at the .01 level. Analysis of variance for covariant models I, II and III are seen in Tables 49, 50, and 51.

TABLE 49

Analysis of variance: Covariant Model I\* with Reading IP-ATRL as Dependent Variable and Reading Prt-ATRL as Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	.42	6	.07
Residuals	5.68	361	.02
Total	6.11	367	

F ratio = 4.47 with 6/361 Df. (P .01)

$$*A = (u + T_{ij} + b_{ij} PA + E)$$

TABLE 50

Analysis of variance: Covariant Model II\* with Reading IP-ATRL as Dependent Variable and Reading Prt-ATRL as Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	.79	8	.10
Residuals	5.31	359	.01
Total	6.11	367	

F ratio = 6.68 with 8/359 Df. (P < .01)

$$*A = (u + T_i + G_j + TG_{ij} + b_j PA + E)$$

TABLE 51

Analysis of variance: Covariant Model III\* with Reading IP-ATRL  
as Dependent Variable and Reading PrT-ATRL as Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	.81	11	.07
Residuals	5.30	356	.01
Total	6.11	367	

F ratio = 4.93 with 11/356 Df. ( $P < .01$ )

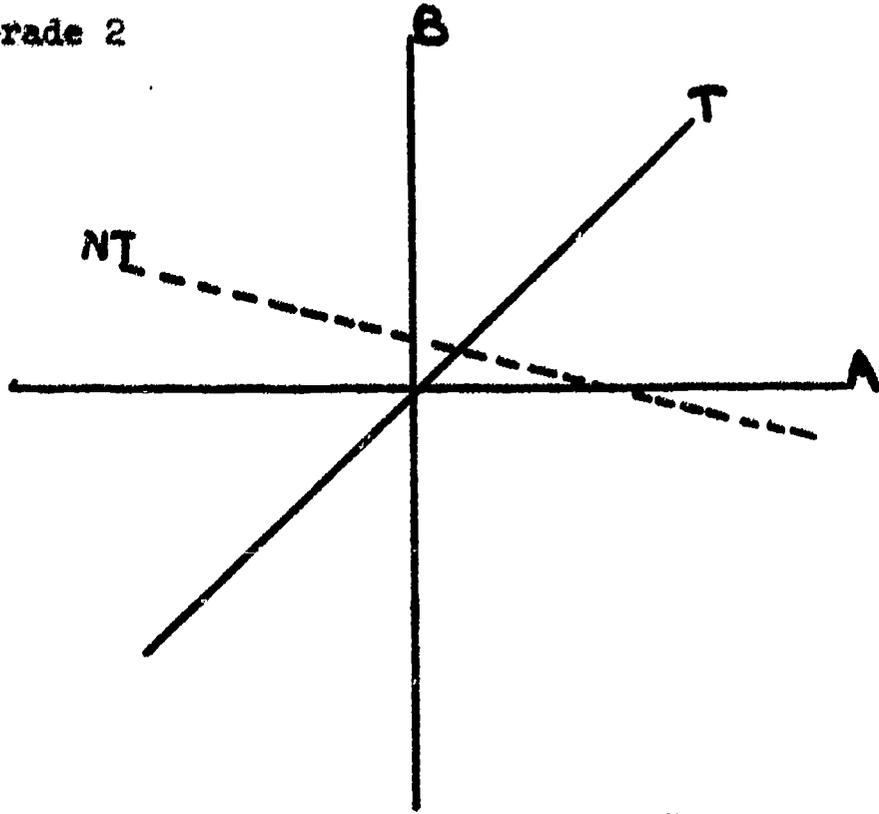
$$*A = (u + T_i + G_j + TG_{ij} + b_{ij}PA + E)$$

Differences between model I and II and models II and III were tested. Significant differences ( $P < .01$ ) were found between the effects of model I and II; differences in the effect of model II against model III were non-significant.

These findings suggest that while essential and significant differences were found when Title status was used as the covariate, the major effect is derived when PrT-ATRL grade levels are covaried. As shown in the analysis of variance for model II, the F ratio increased from model I to model II; more importantly, models I and II were differentiated at a statistically significant level. The fact that no differences were found between the effects of models II and model III suggests that Title status added to grade level as a covariate does not increase the efficiency of model III; rather, it lessens its discriminating power. These findings support the assumption that grade level has a differential effect on IP-ATRL.

Figure 10 shows the effects of Reading Grade x Title PrT-ATRL scores as covariates. In grade 2, grade and Title status have a marked effect upon the achievement of the Title I child. Effects of PrT-ATRL as covariates for Title I and non-Title I pupils are similar in grade 4 and essentially identical in grade 6. These data reveal that achievement scores in grade 2 account for nearly all the differences between Title I and non-Title I pupils.

Grade 2



A = title + grade + title x grade (scores)

B = covariable for Title status + grade (score)

Grade 2  
 $T = A_{12} + B_{12}(\text{---})$

$NT = A_{22} + B_{22}(\text{-----})$

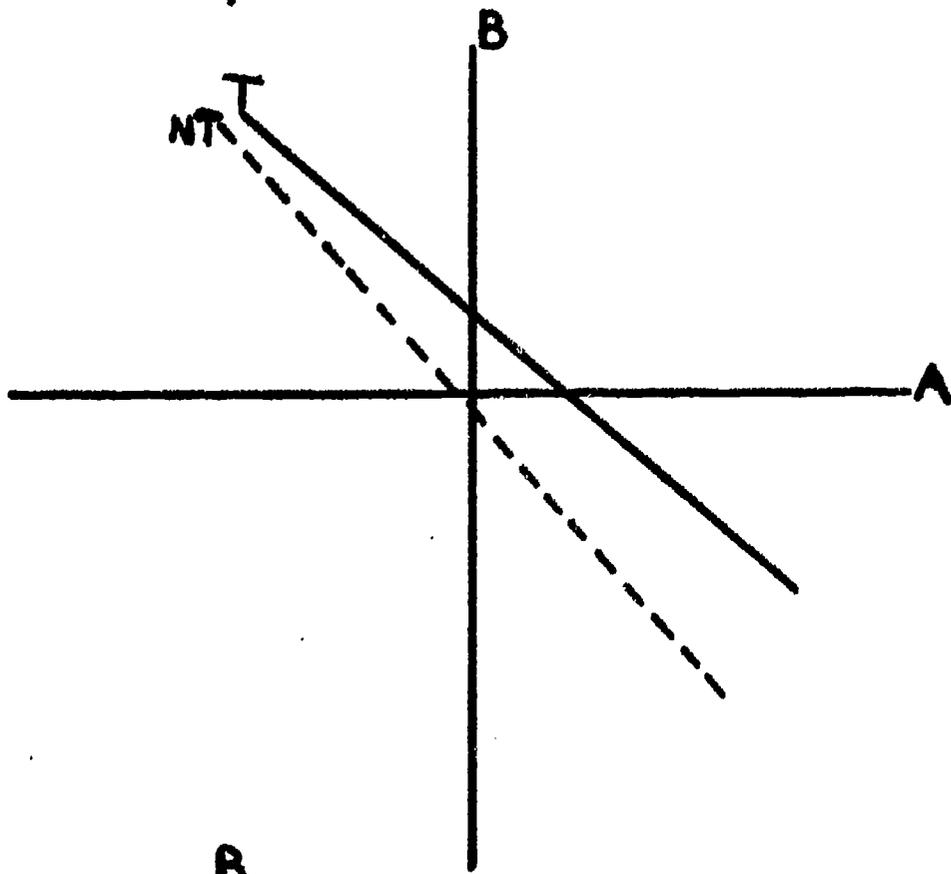
$Y = A + B_{t_{12}, NT_{22}}$

Grade 4

Grade 4  
 $T = A_{14} + B_{14}(\text{---})$

$NT = A_{24} + B_{24}(\text{-----})$

$Y = A + B_{t_{14}, NT_{24}}$



Grade 6

Grade 6  
 $T = A_{16} + B_{16}(\text{---})$

$NT = A_{26} + B_{26}(\text{-----})$

$Y = A + B_{t_{16}, NT_{26}}$

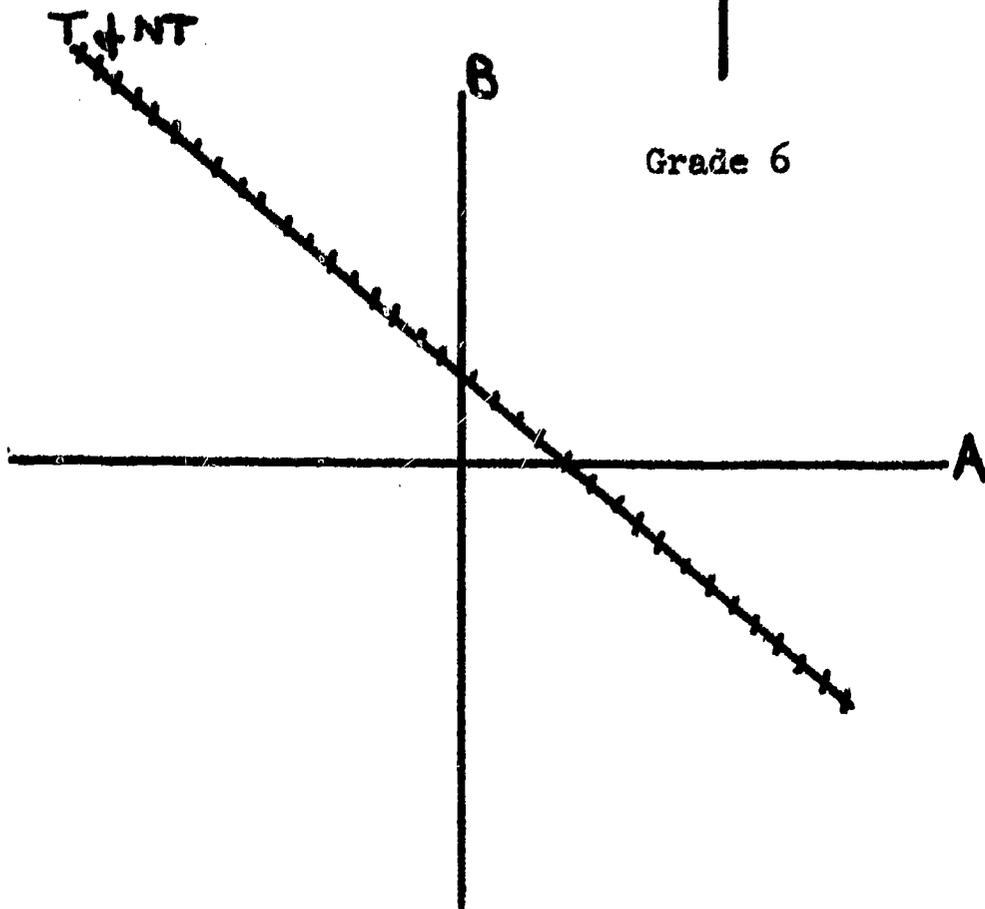


Fig. 10 Reading Achievement: Effects of grade x Title as covariants.

Highly significant differences ( $P < .0001$ ) were found between the Arithmetic PrT-ATRL scores of Title I and non-Title I pupils across grade levels. Highly significant differences ( $P < .0001$ ) were also found between Arithmetic PrT-ATRL scores of Title I and non-Title I pupils. Table 52 shows the analysis of variance of Arithmetic PrT-ATRL scores for Title I and non-Title I pupils.

TABLE 52

Analysis of Variance for Arithmetic PrT-ATRL scores  
of 2nd, 4th, and 6th grade T and NT pupils

Source	Sum of Squares	Degrees of Freedom	Mean Square	F ratio
Uncorrected total	3.6983+000	368		
Correction for mean	3.3088+000	1	3.3088+000	
Corrected total	3.8957-001	367	1.0615-003	
Title	4.0127-002	1	4.0127-002	47.93****
Grade	4.0661-002	2	2.0330-002	24.28****
Title x grade	5.7024-003	2	2.8512-003	3.41*
Within Cells	3.0308-001	362	8.3725-004	

\*\*\*\* ( $P < .0001$ )

\* ( $P < .05$ )

Significant differences were found ( $P < .05$ ) between Arithmetic IP-ATRL scores of Title I and non-Title I pupils and across grades 2, 4 and 6. A significant interaction was also found between Title I status and grade level. The analysis of variance for Arithmetic IP-ATRL scores is shown in Table 53.

TABLE 53

Analysis of Variance of Arithmetic IP-ATRL scores for  
2nd, 4th and 6th grade Title I and non-Title I Pupils

Source	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Uncorrected total	5.2655+000	368	1.9421+000	
Correction for Mean	1.9421+000	1	9.0557-003	
Corrected total	3.3235+000	367	4.3975-002	
Title	4.3975-002	1	3.1472-002	5.08*
Grade	6.2944-002	2	4.2384-002	3.64*
Title x Grade	8.4767-002	2	8.6513-003	4.90**
Within Cells	3.1318+000	362		

\* (P &lt; .05)

\*\* (P &lt; .01)

The PrT-ARTL scores are shown in Table 54.

TABLE 54

Arithmetic PrT-ARTL & IP-ATRL scores for 2nd, 4th &  
6th Grade T & NT Pupils: Academic Year 1967-1968

	Grade 2		Grade 4		Grade 6	
	PrT-ARTL	IP-ARTL	PrT-ARTL	IP-ARTL	PrT-ARTL	IP-ARTL
(Expected gain)	(2.00)	(1.50)	(1.33)	(1.25)	(1.20)	(1.16)
Title I	2.00	1.50	1.20	1.00	1.08	.23
non-Title I	2.80	1.36	1.46	1.12	1.20	1.16

Arithmetic achievement was at expected levels for the Title I pupil up to grade 2 and in grade 2. The non-Title I pupils, however, showed a drop in achievement in the second grade. The fourth grade Title I pupils showed less

than average growth in arithmetic skills up to grade 4 as well as in special compensatory education programs in grade 4. Again, the non-Title I pupils leveled slightly higher than average PrT-ATRL achievement and lower than average in-program achievement for grade 4. In grade 6, the Title I children revealed below average achievement prior to entering the program and extremely low in-program achievement. The non-Title I sixth graders showed average gain both PrT-ATRL and IP-ATRL.

Covariant models I, II and III with Arithmetic IP-ATRL as the dependent variable and Arithmetic PrT-ARTL as the independent variable were all significant at the .01 level. Analysis of variance for covariant models I, II and III are seen in Tables 55, 56 and 57.

TABLE 55

Analysis of variance: Covariant Model I with Arithmetic IP-ATRL as Dependent Variable and Arithmetic PrT-ARTL as the Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	.74	6	.12
Residuals	4.28	361	.01
Total	5.02	367	

F ratio = 10.46 with 6/361 df ( $P < .01$ )

TABLE 56

Analysis of variance: Covariant Model II with Arithmetic IP-ARTL as Dependent Variable and Arithmetic PrT-ARTL as an Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	1.14	8	.14
Residuals	3.89	359	.01
Total	5.02	367	

F ratio = 13.10 with 8/359 df ( $P < .01$ )

TABLE 57

Analysis of variance: Covariant Model III with Arithmetic  
IP-ATRL as the Dependent Variable and  
Arithmetic PrT-ATRL as the Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	1.21	11	.11
Residuals	3.82	356	.01
Total	5.02	367	

F ratio = 10.23 with 11/356 df ( $P < .01$ )

Significant differences ( $P < .01$ ) were found between the effects of models I and II; differences in the effects of model II against model III were nonsignificant.

Findings were essentially the same as those found in Reading although F ratios for Arithmetic were greater and generally more significant.

Figure 11 shows the effects of Arithmetic grade x title PrT-ATRL scores as covariates. The differential effect of the PrT-ATRL scores of Title I and non-Title I children was observed in both grades 4 and 6.

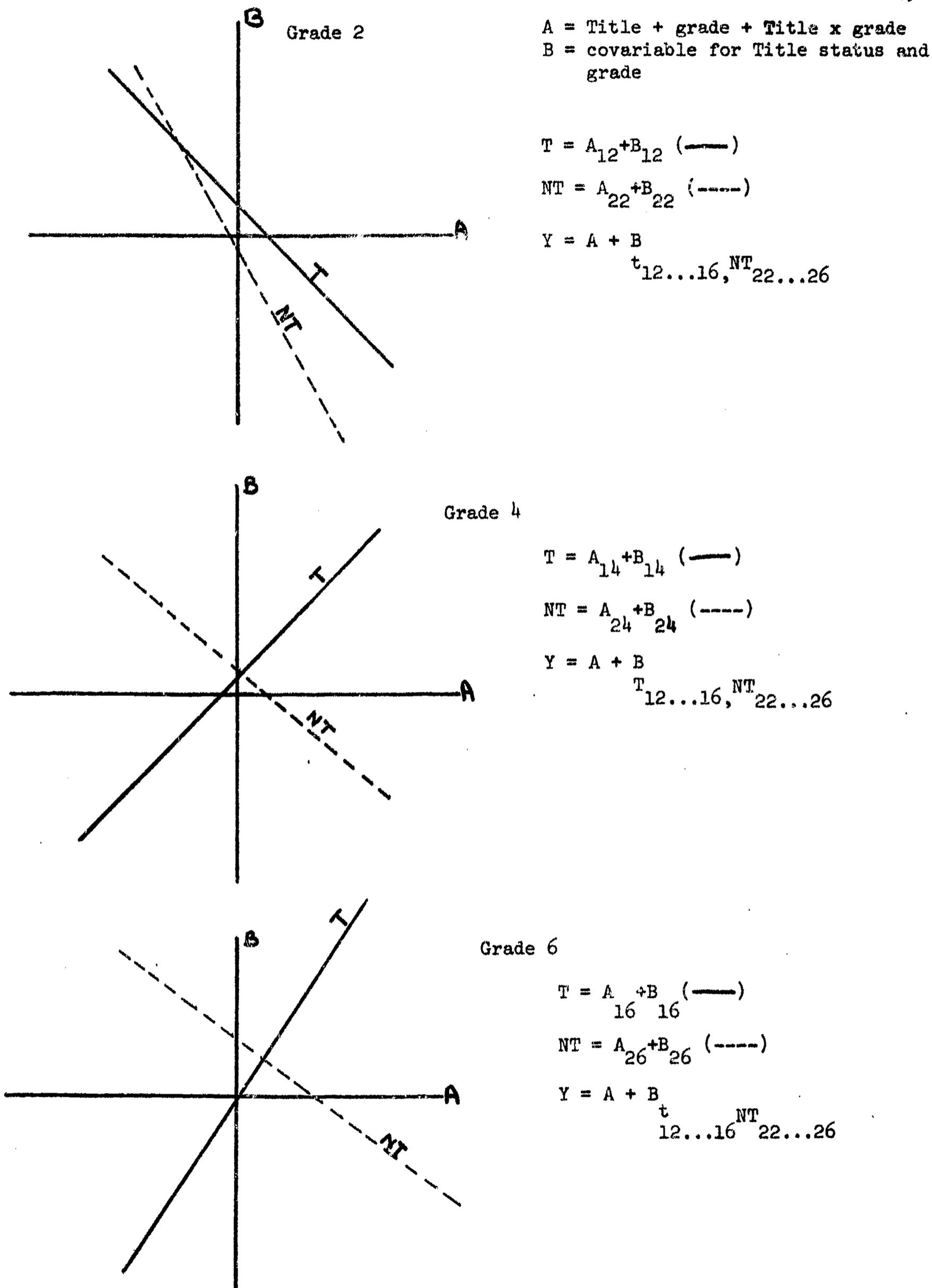


Fig. 11 Arithmetic Achievement: Effects of grade x Title as covariants

Highly significant differences were found between the Language PrT-ATRL score of Title I and non-Title I pupils across grade levels ( $P < .0001$ ) and between groups (T and NT). Table 58 shows the analysis of variance for Language PrT-ATRL scores for Title I and non-Title I pupils.

TABLE 58

Analysis of Variance of Language PrT-ATRL  
Scores for Title I and non-Title I Pupils

Source	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Uncorrected total	3.4391+000	368		
Correction for mean	3.1193+000	1	3.1193+000	
Corrected total	3.1985-001	367	8.7152-004	
Row effects (Title)	8.1257-002	1	8.1257-002	132.26****
Column effects (Grade)	1.3491-002	2	6.7455-003	10.98****
Interaction	2.7032-003	2	1.3516-003	2.20
Within cells	2.2240-001	362	6.1436-004	

\*\*\*\* ( $P < .0001$ )

Although no significant differences were found between Title I and non-Title I IP-ATRL Language scores, differences were highly significant ( $P < .0001$ ) when IP-ATRL Language scores for all 2nd, 4th and 6th grade pupils were compared according to grade level in which they were enrolled. The analysis of variance for Language IP-ATRL scores for Title I and non-Title I pupils is reported in Table 59.

Language PrT-ATRL and IP-ATRL scores for 2nd, 4th and 6th grade Title I and non-Title I pupils for the academic year, 1967-1968, are shown in Table 60.

TABLE 59

Analysis of Variance of Language IP-ATRL  
Scores for Title I and non-Title I Pupils

Source	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Uncorrected total	6.8905+000	368		
Correction for mean	2.3958+000	1	2.3958+000	
Corrected total	4.4947+000	367	1.2247-002	
Title	2.9491-003	1	2.9491-003	.25
Grade	2.0145-001	2	1.0072-001	8.58****
Interaction (Title X Grade)	4.1063-002	2	2.0531-002	1.75
Within Cells	4.2492-000	362	1.1738-002	

\*\*\*\* (P < .0001)

TABLE 60

Language PrT-ATRL & IP-ATRL Scores for 2nd, 4th &  
6th Grade T & NT Pupils; Academic Year 1967-1968

	Grade 2		Grade 4		Grade 6	
	PrT-ATRL	IP-ATRL	PrT-ATRL	IP-ATRL	PrT-ATRL	IP-ATRL
(Expected Gain)	(2.00)	(1.50)	(1.33)	(1.25)	(1.20)	(1.16)
Title I	1.80	1.65	1.20	.87	.96	.93
non-Title I	2.60	2.10	1.60	1.00	1.32	.58

As shown in Table 60, in-program achievement in Language for Title I pupils in second grade exceeded the rate of learning prior to entering the program. Language achievement for second grade non-Title I pupils was above average both prior to the current 1967-1968 school year and during the current 1967-1968 school term. In fourth grade, language achievement for Title I

pupils was below average both prior to entering the program and in program. It is interesting to note, however, that the rate of learning for the non-Title I pupils dropped even more sharply from over-all PrT-ATRL to IP-ATRL. In grade 6, the same pattern was evident; there was a sharper drop in learning rates in the non-Title I pupils than in the Title I pupils.

Covariant models I, II, and III with Language IP-ATRL as the dependent variable and Language PrT-ATRL as the independent variable were all significant at the .01 level. Analysis of variance for covariant models I, II, and III are seen in Tables 61, 62 and 63.

TABLE 61

Analysis of variance: Covariant Model I with Language  
IP-ATRL as the Dependent Variable and Language  
PrT-ATRL as the Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	1.55	6	.26
Residuals	5.12	361	.02
Total	7.27	367	

F ratio = 16.28 with 6/361 df ( $P < .01$ )

TABLE 62

Analysis of variance: Covariant Model II with Language  
IP-ATRL as the Dependent Variable and Language  
PrT-ATRL as the Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	1.73	8	.22
Residuals	5.54	359	.02
Total	7.27	367	

F ratio = 13.99 with 8/359 df ( $P < .01$ )

TABLE 63

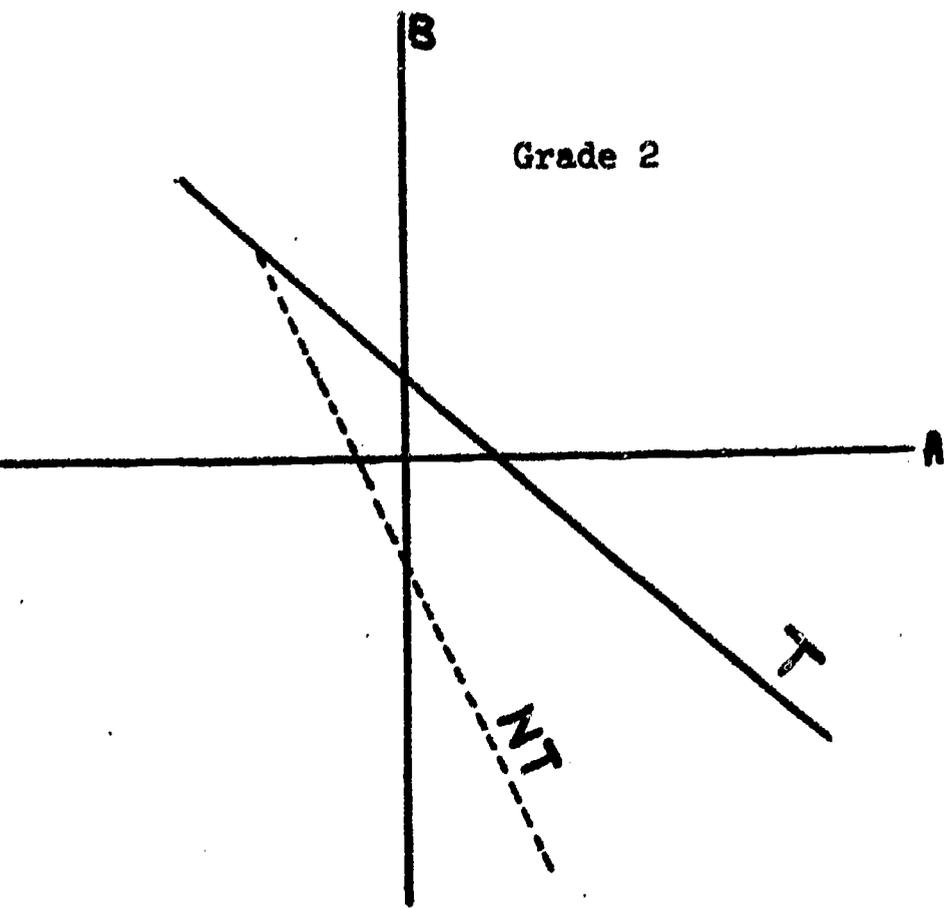
Analysis of variance: Covariant Model III with Language  
 IP-ATRL as the Dependent Variable and Language  
 PrT-ATRL as the Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	1.87	11	.17
Residuals	5.40	356	.02
Total	7.27	367	

F ratio = 11.21 with 11/356 df ( $P < .01$ )

Differences at the .05 level were found between the effects of models I and II; differences in the effects of model II against model III were non-significant.

Figure 12 shows the effects of Language grade x title PrT-ATRL scores as covariates. The differential effect of the PrT-ATRL scores of Title I and non-Title I pupils was observed only in grade 4.



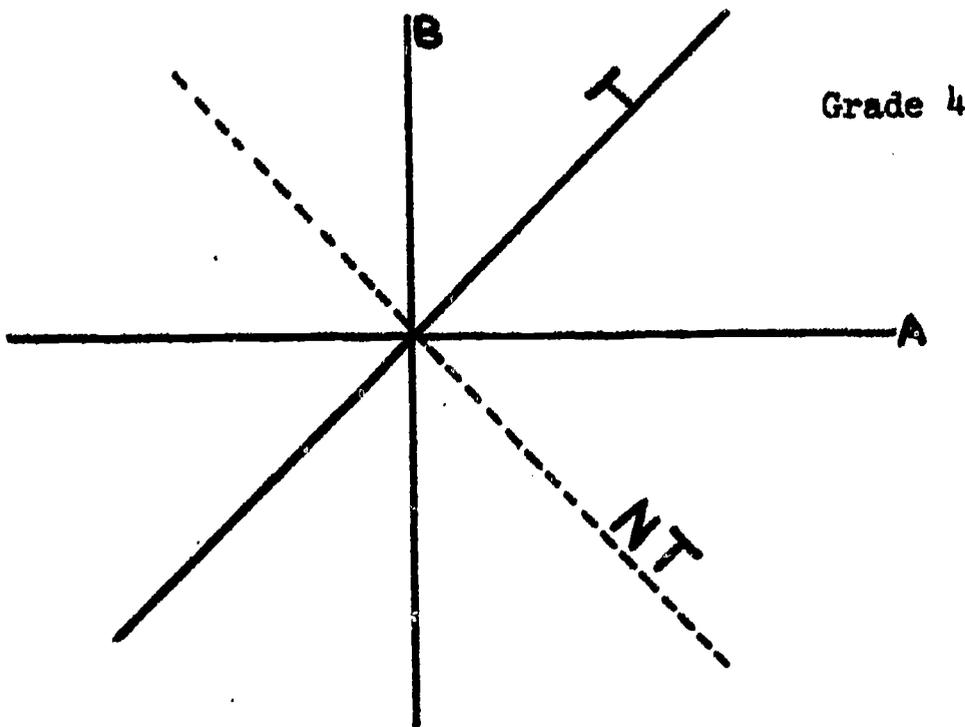
A = title + grade + title x grade (scores)

B = covariable for Title status + grade (scores)

$$T = A_{12} + B_{12} \text{ (—)}$$

$$NT = A_{22} + B_{22} \text{ (---)}$$

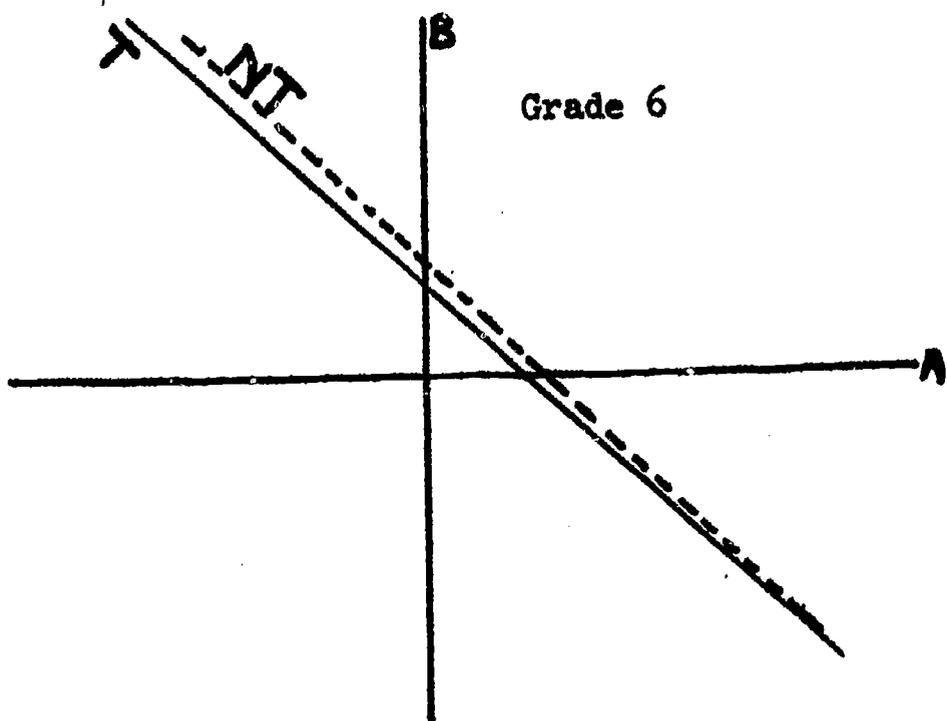
$$Y = A + B_{t_{12}, nt_{22}}$$



$$T = A_{14} + B_{14} \text{ (—)}$$

$$NT = A_{24} + B_{24} \text{ (---)}$$

$$Y = A + B_{t_{14}, nt_{24}}$$



$$T = A_{16} + B_{16} \text{ (—)}$$

$$NT = A_{26} + B_{26} \text{ (---)}$$

$$Y = A + B_{t_{16}, nt_{26}}$$

Fig. 12 Language Achievement: Effects of grade x title as covariants.

Highly significant differences ( $P < .0001$ ) were found between PrT-ATRL Composite scores of all pupils enrolled in grades 2, 4 or 6. Highly significant difference ( $P < .0001$ ) were also found between Title I Prt-ATRL Composite scores and non-Title I PrT-ATRL Composite scores.

Table 64 shows the analysis of variance for Composite PrT-ATRL scores for Title I and non-Title I pupils.

TABLE 64

Analysis of Variance of Composite PrT-ATRL  
Scores for Title I and non-Title I Pupils

Source	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Uncorrected total	3.7031+000	368		
Correction for mean	3.4227+000	1	3.4227+000	
Corrected total	2.8045-001	367	7.6417-004	
Title	5.0731-002	1	5.0731-002	99.28****
Grade	4.2131-002	2	2.1065-002	41.22****
Title X Grade	2.6099-003	2	1.3049-003	2.55
Within Cells	1.8498-001	362	5.1099-004	

\*\*\*\* ( $P < .0001$ )

Although no significant differences were found between Title I IP-ATRL Composite scores and non-Title I IP-ATRL Composite scores, differences were highly significant ( $P < .01$ ) when IP-ATRL Composite scores for all 2nd, 4th and 6th grade pupils were compared according to grade level in which they were enrolled.

Analysis of variance for Composite IP-ATRL scores for Title I and non-Title I pupils reported in Table 65.

TABLE 65

Analysis of Variance of Composite IP-ATRL  
Scores for Title I and non-Title I Pupils

Source	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Uncorrected total	4.3491+000	368		
Correction for mean	2.6853+000	1	2.6853+000	
Corrected total	1.6638+000	367	4.5334-003	
Title	2.2317-003	1	2.2317-003	.50
Grade	4.2336-002	2	2.1168-002	4.75**
Title X Grade	4.7964-003	2	2.3982-003	.54
Within Cells	1.6144+000	362	4.4597-003	

\*\* (P < .01)

Composite PrT-ATRL and IP-ATRL scores for 2nd, 4th, and 6th grade Title I and non-Title I pupils are shown in Table 66.

TABLE 66

Composite PrT-ATRL and IP-ATRL Scores for 2nd,  
4th and 6th grade Title I and non-Title I Pupils

	Grade 2		Grade 4		Grade 6	
	PrT-ATRL	IP-ATRL	PrT-ATRL	IP-ATRL	PrT-ATRL	IP-ATRL
(Expected gain)	(2.00)	(1.50)	(1.33)	(1.25)	(1.20)	(1.16)
Title I	2.20	1.65	1.20	.87	.96	1.16
non-Title I	2.80	1.65	1.60	1.12	1.32	1.05

In grade 2, Title I pupils exceeded average gain during both PrT-ATRL and IP-ATRL although scores showed a general decrease for IP-ATRL. Non-Title I pupils, however, showed greater loss from PrT-ATRL to IP-ATRL. In grade 4, learning loss was again greater for the non-Title I pupil than for the Title I

pupil. In grade 6, composite scores for the Title I pupil gained from below average to average gain; while the non-Title I pupil again showed loss.

Covariant models I, II, and III for Composition IP-ATRL as the dependent variable, and Composite PrT-ATRL as the independent variable were all significant at the .01 level. Analysis of variance for covariant models I, II and III are seen in Tables 67, 68 and 69.

TABLE 67

Analysis of Variance: Covariant Model I with Composite IP-ATRL as the Dependent Variable and Composite PrT-ATRL as the Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	.38	6	.06
Residuals	2.16	361	.01
Total	2.54	367	

F ratio = 10.63 with 6/361 df ( $P < .01$ )

TABLE 68

Analysis of Variance: Covariant Model II with Composite IP-ATRL as the Dependent Variable and Composite PrT-ATRL as the Independent Variable

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	.59	8	.07
Residuals	1.95	359	.01
Total	2.54	367	

F ratio = 13.59 with 8/359 df ( $P < .01$ )

TABLE 69

Analysis of Variance: Covariant Model III with Composite IP-ATRL as the Dependent Variable and Composite PrT-ATRL as the Independent Variable

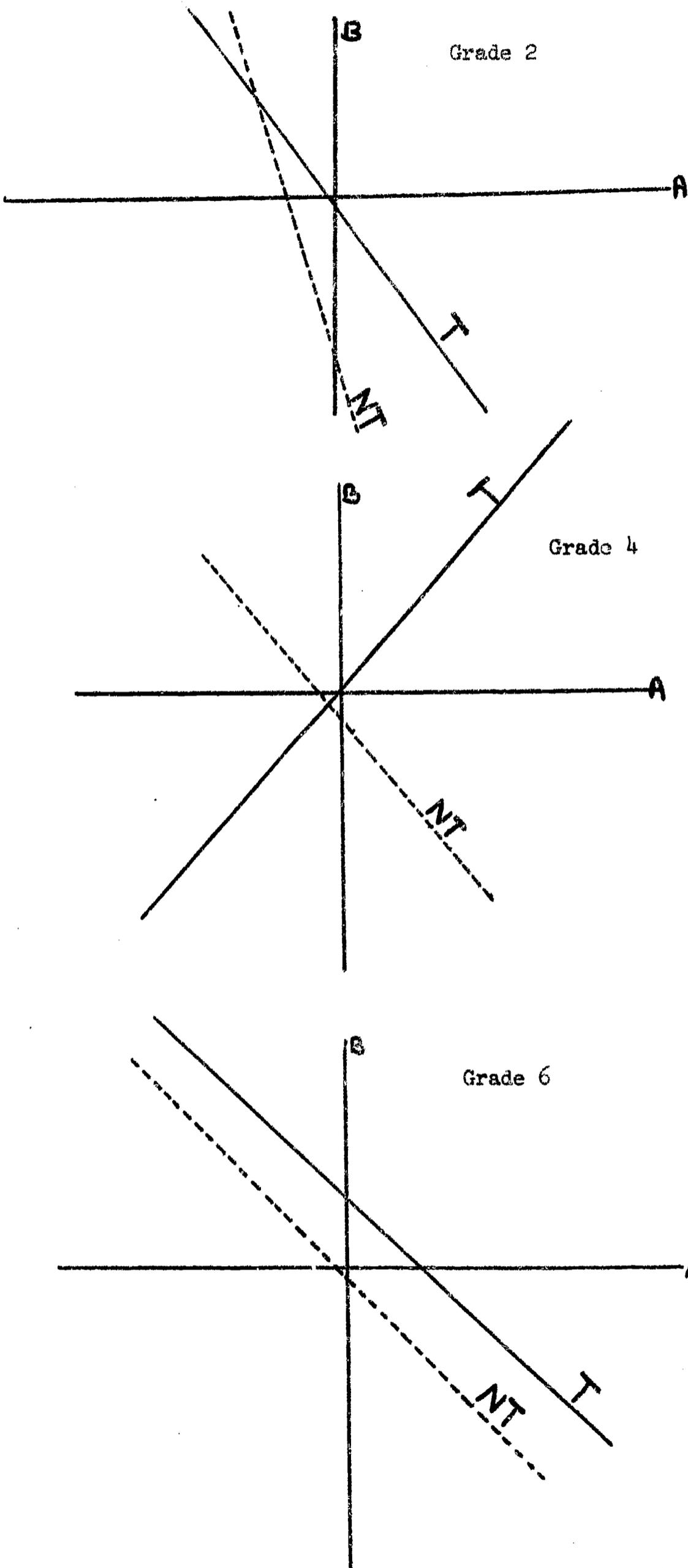
Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square
Due to regression	.65	11	.06
Residuals	1.89	356	.01
Total	2.54	367	

F ratio = 11.15 with 11/356 df ( $P < .01$ )

Differences between models I and II and models II and III were tested. Significant differences ( $P < .01$ ) were found between the effects of models I and II; differences in the effect of model II against model III were non-significant.

In summary, these findings suggest that while significant differences were found when Title status was used as the covariate, the major effect is derived when PrT-ATRL grade levels are covaried. As shown in the analysis of variance, the F ratio increased from model I to model II (as it did with all categories, Reading, Arithmetic and Language); more importantly, models I and II were differentiated at a statistically significant level. The fact that no differences were found between the effects of models I and III suggest that Title status added to grade level as the covariate does not increase the efficiency of model III, rather it appears to lessen its discriminating power. These findings support the assumption that grade level has a differential effect on PrT-ATRL and IP-ATRL.

Figure 13 shows the effects of Composite grade X Title PrT-ATRL scores as covariants. These data reveal that achievement scores in grade 4 account for nearly all the major differences in Composite scores between Title I and non-Title I pupils.



A = title + grade + title x grade (scores)

B = covariables for title status + grade (scores)

$$T = A_{12} + B_{12} \text{ (—)}$$

$$NT = A_{22} + B_{22} \text{ (----)}$$

$$Y = A + B_{t_{12}^{nt} 22}$$

$$T = A_{14} + B_{14} \text{ (—)}$$

$$NT = A_{24} + B_{24} \text{ (----)}$$

$$Y = A + B_{t_{14}^{nt} 24}$$

$$T = A_{16} + B_{16} \text{ (—)}$$

$$NT = A_{26} + B_{26} \text{ (----)}$$

$$Y = A + B_{t_{16}^{nt} 26}$$

Fig. 13 Composite Score Achievement: Effects of grade x Title as covariants.

Although achievement test scores assert equivalence in their assumption that the average child learns at a rate of 10 equal GE units or months per year, when evaluated as a rate of learning across time, all such GE units become non-equivalent. The early primary child must accumulate many more GE units in order to be able to achieve at or near the same rate of learning of the older, more advanced student. In effect, when the disadvantaged "slow starting" child is tested at a later date and these achievement test scores are compared with his earlier rate of learning, such comparisons, if made only on the face validity of the GE score per se, would appear to be misleading, especially if rates of learning are taken into consideration.

For example, one may find the typical Headstart child or child with a marked language deficit to have made little progress from early to later grades or in comparison to his peer group. If the learning deficit were present in the first and second grade, then evaluating by standard achievement tests places the burden of learning at this level. If the child makes little progress in these early years, it is "mathmatically" and/or statistically impossible for him to make as rapid gains as would be possible if the learning loss were to occur in the later grades. Learning capacity is highest in the very young child but high learning capacity "does not compute" for the disadvantaged child who not only learns less but learns in a different way than the average child from the middle-class suburb.

Thus, if rates of learning are used, valid comparisons can actually only be made across groups in the first grade. After the first year, the earlier loss or gain provides a differential effect on any two or more groups that may be compared. Nevertheless, in order to establish some basis for measuring the effects of learning, rates of learning (PrT-ATRL and IP-ATRL) scores were averaged over time and Title I and non-Title I pupils were compared on this

basis.

Findings from the present study appear to emphasize the achievement loss in the non-Title I child in the Title I school. The Title I child did not show exceptional progress in any of the categories; however the non-Title I child in the Title I school showed less progress than the Title I child in several of the categories. These findings are surprising, especially in view of the findings of Section II of this study which pointed up the effectiveness of selection of Title I children for inclusion in the Title I programs. On closer examination, the contradiction is found to be a function of the greater achievement gains of the Title I child, observed as normal expected gain, in comparison to the lesser gain of the non-Title I child, observed as "normal" expected decrease in rate of learning over time or grade level. In effect, the Title I child overcame the effects of the expected decrease in rate of learning by the fact of his marked gains in achievement.

The experimental design of the present study contains several problems; seen as an "after the fact" study, the groups of Title I and non-Title I pupils were not randomly selected, thus could not be considered truly comparable groups of students. The final N was greatly attenuated from the initial N; however, because of the statistical methods used, validity of the findings is asserted. The effects of rates of learning are not examined in depth; for example, there is no accountability for loss of learning over summer months.

It is hoped, however, that the current study provides a paradigm for new approaches to evaluating the effectiveness of learning programs with the Title I child.

APPENDIX A

U.S. OFFICE OF EDUCATION

SURVEY INSTRUMENT

PRINCIPAL INFORMATION FORM

004612

State Code

School Code

School Name \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

School Principal Information Form

Enrollment Information

1. Enrollment Data (include figures for Kindergarten and Pre-Kindergarten where applicable).

	(1) Total of all Students in all grades	(2) (3) (4) Total in Grade		
		2	4	6
01 A. Fall Membership (Oct. 1, 1967)				
B. Average Daily Attendance for Nov., 1967	A			
C. Average Daily Attendance for April, 1968	B			
D. Average Daily Membership for Nov., 1967	C			
E. Average Daily Membership for April, 1968	D			
02 F. Number of Pupils (Public School Only) Participating in Compensatory Programs	E			
G. Total Number of Pupils (Public and Nonpublic) Participating in Compensatory Programs	F			
	G			

2. How many pupils enrolled in this school after the school year began? (October 1, 1967 to the present date) \_\_\_\_\_
3. How many pupils withdrew or transferred from the school after the school year began? (October 1, 1967 to the present date) \_\_\_\_\_
4. Indicate the total enrollment and all grades in this school for each of the following years: (Mark each grade that applies.)

Total Enrollment	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Special	Ungraded
1967-68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1966-67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03 1965-66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1964-65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5. What proportion of the pupils attending this school belong to the following groups? (Estimate)

	(1) None	(2) 1-25%	(3) 26-50%	(4) 51-75%	(5) 76-100%
A. Children of professional or managerial workers	0	0	0	0	0
B. Children of skilled workers	0	0	0	0	0
C. Children of semi-skilled workers	0	0	0	0	0
D. Children of non-skilled workers and laborers	0	0	0	0	0
E. Children of agricultural workers	0	0	0	0	0
F. Children of the disadvantaged -welfare or unemployed	0	0	0	0	0

Budgetary Information

6. Estimate the total amount, from Federal and State funds, that will be spent in your school for compensatory education during this academic year. \$ \_\_\_\_\_

7. Estimate the amount spent in your school for each of the categories listed below. Information is requested for each academic year.

	I Approximate Total Expenditures from both regular and compensatory budgets for the academic year. (The total budget for your school.)	II Approximate expenditures from State and Federal funds for compensatory education. (This column should be a subtotal of Column I.)
04 1967-1968	A. Salaries . . . . . \$ _____	\$ _____
	B. Instructional supplies . . . \$ _____	\$ _____
	C. Library books and library materials . . . . \$ _____	\$ _____
	D. All other current operating expenses . . . \$ _____	\$ _____
	E. Total . . . . . \$ _____	\$ _____
1966-1967	A. Salaries . . . . . \$ _____	\$ _____
	B. Instructional supplies . . . \$ _____	\$ _____
	C. Library books and library materials . . . . \$ _____	\$ _____
	D. All other current operating expenses . . . \$ _____	\$ _____
05	E. Total . . . . . \$ _____	\$ _____
1965-1966	A. Salaries . . . . . \$ _____	\$ _____
	B. Instructional supplies . . . \$ _____	\$ _____
	C. Library books and library materials . . . . \$ _____	\$ _____
	D. All other current operating expenses . . . \$ _____	\$ _____
	E. Total . . . . . \$ _____	\$ _____
06	A. Salaries . . . . . \$ _____	\$ _____
	B. Instructional supplies . . . \$ _____	\$ _____
1964-1965	C. Library books and library materials . . . . \$ _____	\$ _____
	D. All other current operating expenses . . . \$ _____	\$ _____
	E. Total . . . . . \$ _____	\$ _____

8. Estimate the approximate number of pupils in this school who have received compensatory services from State and Federal funds during this *academic year*, at each of the dollar levels shown below. These numbers should account for *all* pupils in your school this academic year.

_____	None or less than \$5 a year per pupil	_____	\$100 to \$200 a year per pupil
_____	\$5 to \$50 a year per pupil	_____	\$200 to \$400 a year per pupil
_____	\$50 to \$100 a year per pupil	_____	More than \$400 a year per pupil

07 9. Of the total State and Federal funds expended for *compensatory education* for the pupils enrolled in this school during this academic year, approximately what proportion was expended for each grade? (These proportions should total 100%)

Pre K _____ %	3 _____ %	7 _____ %	11 _____ %
K _____ %	4 _____ %	8 _____ %	12 _____ %
1 _____ %	5 _____ %	9 _____ %	Special Classes _____ %
2 _____ %	6 _____ %	10 _____ %	Ungraded _____ %

10. Indicate for each of the following years the *starting annual salary* in your district for a beginning elementary school teacher with a Bachelor's degree.

1965-66	1966-67	1967-68
\$ _____	\$ _____	\$ _____

### School Facilities Information

11. How old is the main classroom building of your school plant?
- A. Less than 1 year old       D. 10-19 years       F. 30-39 years  
 B. 1-4 years       E. 20-29 years       G. 40 years or older  
 C. 5-9 years
12. a. Is there a centralized library in your school?  
 A. Yes       B. No
- b. How many catalogued volumes, excluding textbooks, are there in your school?  
(Include centralized and decentralized library facilities.)
- A. None or less than 249       F. 1,500-2,499  
 B. 250-499       G. 2,500-4,999  
 C. 500-749       H. 5,000-7,499  
 D. 750-999       I. 7,500-9,999  
 E. 1,000-1,499       J. 10,000 or more
13. Is free or reduced-price food (at a price less than that charged most pupils) provided for any pupils in grades 1 through 12 in this school?  
(Mark as many answers as apply.)
- A. No       C. Yes, lunch       E. Yes, snack  
 B. Yes, breakfast       D. Yes, milk

### School personnel information

14. What is your sex?  
 A. Male       B. Female
15. Is there an assistant principal position in your school?  
 A. No       B. Yes, and the position is filled       C. Yes, but the position is vacant
16. In addition to your administrative duties do you also teach?  
 A. No       B. Yes, one or more regularly       C. Yes, but only in emergency scheduled classes       D. Yes, but only in emergency situations
17. Indicate in full-time equivalents the number of the following types of professional staff members available to pupils in your school:
- A. Regular Classroom Teachers \_\_\_\_\_  
B. Special Instructional Personnel (speech, physical education, art, music, reading, etc.) \_\_\_\_\_  
C. Health Personnel (school nurse, school physician, etc.) \_\_\_\_\_  
D. Psychological Personnel, Social workers, Counselors, School-community personnel \_\_\_\_\_
18. Since July 1, 1967, has your school officially sponsored or participated in a formal inservice training program for professional instructional staff?  No  Yes  
If your answer to 18 is "Yes", how many members of your professional instructional staff participated? (Count each participant only once) \_\_\_\_\_
19. Since July 1, 1967, has your school officially sponsored or participated in a formal inservice training program for supportive instructional personnel? (teacher aides, etc.)  No  Yes  
If your answer to 19 is "Yes", how many supportive instructional personnel have participated? (Count each participant only once) \_\_\_\_\_
- 08 20. Does this school have mid-year promotions for pupils?  
 A. No       B. Yes, in the following grades (mark all that apply)
- K       2       4       6       8       10       12  
 1       3       5       7       9       11

### Socio-Economic Information

21. In your judgment, has the average socio-economic status of the student body in this school changed substantially since 1964-65?  
 A. No       C. Yes, it has dropped  
 B. Yes, it has risen       D. School did not exist in 1964-65 school year
22. Which of the following best describes the location of this school?  
 A. Large city (over 500,000)       E. Suburb of a middle-size city  
 B. Suburb of a large city       F. Rural area near a middle-size city  
 C. Rural area near a large city       G. Small city or town (less than 50,000)  
 D. Middle-size city (50,000 - 500,000)       H. Rural area, not near a large or middle-size city
23. Which best describes the neighborhood or attendance area served by this school?  
 A. Rural       C. Both residential and commercial/industrial  
 B. Primarily commercial/industrial       D. Primarily residential

APPENDIX B

U.S. OFFICE OF EDUCATION

SURVEY INSTRUMENT

TEACHER INFORMATION FORM

506895

State Code

School Code

Teacher Sub-code

MAKE NO MARKS HERE

TEACHER INFORMATION FORM

OPEN FLAT FOR MARKING

- Use black lead pencil only (#2½ or softer).
- Make heavy black marks that fill answer circles.
- Erase completely any answer you wish to change.
- Make no stray marks on either side of form.

BUD. BUR. No. 51-568003 O.E. 4434-1 EXP. DATE 12/31/68

What grade do you teach? 2 4 6

1. What is your sex? Male Female

2. How many years of full-time teaching experience (public and nonpublic), including this year, have you had?

- One year or less
- At least three years but less than 6 years
- More than 1 year but less than 3 years
- At least six years but less than 10 years
- Ten years or more

3. How many years, including this year, have you taught in this school?

- One year or less
- At least three years but less than 6 years
- More than 1 year but less than 3 years
- At least six years but less than 10 years
- Ten years or more

4. What is the highest earned college degree you hold? Do not report honorary degrees.

- No degree or less than Bachelor's
- A Bachelor's degree
- A Bachelor's degree plus 30 semester hours or a Master's degree
- A Master's degree plus 30 semester hours or 6th year degree
- A Doctor's degree

5. Compare the school where you did most of your undergraduate work with the nation's other colleges and universities. How would you rate your own school for academic quality as it existed when you were there?

- Top 10% (Among the best)
- 21-30%
- 31-40%
- 41-50%
- 51-60%
- 61-70%
- 71-80%
- 81-90%
- 91-100% (Among the lowest)

6. During the school year, how many teachers have held your particular teaching assignment with your class for at least two consecutive weeks? (Do not count the following: student teachers; other team teachers; specialist teachers such as teachers of music, art, or gym.)

- None except myself
- Myself and two others
- Myself and one other
- Myself and three others
- Myself and more than three others

7. Do you have the services of a non-certified aide or assistant in your classroom? (Do not count student teachers or your students.)

- No
- Yes, part-time or less than the equivalent of one person full-time
- Yes, one person full-time or the equivalent
- Yes, more than one person full-time or the equivalent

8. What type of state teaching certificate do you have?

- The highest certification offered in this state (e.g., life, permanent, or long term)
- Certification, but less than the highest certification in this state
- Some form of temporary or emergency certification
- I am not certified

9. Do you reside within the attendance area or neighborhood of this school?  Yes  No

10. Are you a member of one of these minority groups?

- Yes, American Indian
- Yes, Negro
- Yes, Oriental

Yes, Spanish-surnamed American of:

- Cuban descent
- Mexican descent
- Puerto Rican descent

No

11a. How many pupils were enrolled in your class on each of these two dates?

October 1, 1967      April 1, 1968

0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

b. How many pupils were added to your class enrollment between October 1, 1967 and April 1, 1968?

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

c. How many pupils were removed from your class enrollment between October 1, 1967 and April 1, 1968?

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Listed below are several terms which describe ways classes may be organized. Mark "Yes" if the numbered statement describes your class; mark "No" if it does not. Be sure to mark each numbered statement.

- |  | Yes                   | No                    |
|--|-----------------------|-----------------------|
| 12. One or more specialist teachers comes in to assist me with my whole class. ....                                  | <input type="radio"/> | <input type="radio"/> |
| 13. I am the only teacher who teaches my whole class. ....   | <input type="radio"/> | <input type="radio"/> |
| 14. Team Teaching. ....  | <input type="radio"/> | <input type="radio"/> |
| 15. Pupils from my class and one or more other classes are ability grouped for one or more subjects. ....            | <input type="radio"/> | <input type="radio"/> |
| 16. Tracking or ability grouping: Pupils are assigned to my class by ability or achievement level. ....              | <input type="radio"/> | <input type="radio"/> |
| 17. Departmentalized: I regularly meet with several classes each day to teach in a limited subject matter area. .... | <input type="radio"/> | <input type="radio"/> |
| 18. My class is an ungraded special class enrolling only mentally retarded pupils. ....                              | <input type="radio"/> | <input type="radio"/> |
| 19. Ungraded: My class is made up of pupils who would, in most schools, be in two or more different grades. ....     | <input type="radio"/> | <input type="radio"/> |

20. Are the pupils for whom you have supplied information typical, in their academic performance, of most of the pupils you now teach? Yes No

21. Estimate the proportion of the pupils in your class who came from the following groups. (Mark one answer in each line.)

	None	1-25%	26-50%	51-75%	76-100%
Children of professional or managerial workers.....	<input type="radio"/>				
Children of skilled workers.....	<input type="radio"/>				
Children of semi-skilled workers.....	<input type="radio"/>				
Children of non-skilled workers and laborers.....	<input type="radio"/>				
Children of agricultural workers.....	<input type="radio"/>				
Children of the disadvantaged--welfare or unemployed.....	<input type="radio"/>				

22. Estimate the proportion of the pupils in your class who come from families in which the head of the household has education at the following levels: (Mark one answer in each line.)

	None	1-25%	26-50%	51-75%	76-100%
Probably little or no education.....	<input type="radio"/>				
Probably less than 8th grade.....	<input type="radio"/>				
Probably completed 8th grade education.....	<input type="radio"/>				
Probably some high school.....	<input type="radio"/>				
Probably completed high school.....	<input type="radio"/>				
Probably some post-high school training or college.....	<input type="radio"/>				
Probably completed college.....	<input type="radio"/>				

23. What proportion of the pupils in your class are members of the following minority groups? (Mark one answer in each line.)

	None	1-10%	11-30%	31-70%	71-90%	More than 90%
American Indian.....	<input type="radio"/>					
Negro.....	<input type="radio"/>					
Oriental.....	<input type="radio"/>					
Spanish-surnamed American of:						
Cuban descent.....	<input type="radio"/>					
Mexican descent.....	<input type="radio"/>					
Puerto Rican descent.....	<input type="radio"/>					

24. What proportion of the pupils in your class have participated in academic compensatory education programs in the following subject areas during this academic year? Refer to principal's list of programs. (Mark one answer in each line.)

	None	1-25%	26-50%	51-75%	76-100%
Reading.....	<input type="radio"/>				
Arithmetic.....	<input type="radio"/>				
English Usage.....	<input type="radio"/>				
Other Academic Programs.....	<input type="radio"/>				

25. When do pupils in your class usually participate in the compensatory education programs listed by your principal? (Mark one answer in each line.)

Type of Program	Before school, after school, or weekends	During regular school day	Do not participate in this type of program
Reading.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arithmetic.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
English Usage.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Academic Programs.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

26. How many Pupil Information Forms are you completing for this survey? (Write and grid the number)



APPENDIX C

U.S. OFFICE OF EDUCATION

SURVEY INSTRUMENT

PUPIL INFORMATION FORM

667908

**PUPIL INFORMATION FORM**

**OPEN FLAT FOR MARKING**

- Use black lead pencil only (#2½ or softer).
- Make heavy black marks that fill answer circles.
- Erase completely any answer you wish to change.
- Make no stray marks on either side of form.

BUD. BUR. No. 51-568004 O.E. 4434-2 EXP. DATE 12/31/68

STATE CODE	SCHOOL CODE	TEACHER SUB-CODE	PUPIL SUB-CODE	DO NOT MARK HERE
00	0000	00	00	0000
11	1111	11	11	1111
22	2222	22	22	2222
33	3333	33	33	3333
44	4444	44	44	4444
55	5555	55	55	5555
66	6666	66	66	6666
77	7777	77	77	7777
88	8888	88	88	8888
99	9999	99	99	9999

**PART ONE**

- What grade is this pupil in?  
 2.....○  
 4.....○  
 6.....○  
 Ungraded.....○  
 Special class for mentally or physically handicapped.....○
- What is this pupil's sex?  
 Male...○ Female...○
- What is this pupil's month and year of birth?
- How many days has this pupil been absent since the first day of this school year?  
 Less than 5 days.....○  
 5 to 10 days.....○  
 11 to 20 days.....○  
 21 to 30 days.....○  
 31 to 40 days.....○  
 More than 40 days.....○

- Is this pupil's father employed?  
 ○ Father is deceased / no father in the home  
 ○ Yes, part-time, seasonal or intermittent work  
 ○ Yes, full-time steady work  
 ○ No
- Is this pupil's mother employed?  
 ○ Mother is deceased / no mother in the home  
 ○ Yes, part-time, seasonal, or day work  
 ○ Yes, full-time steady work  
 ○ No

Mo.	Yr.	15:
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

- What is your best estimate of how many people, including the pupil, live in the pupil's home? Count the pupil, his mother, father, brothers, sisters, relatives, and other individuals.  
 ○ 4 or less                      ○ 7 to 10  
 ○ 5 or 6                            ○ More than 10
- What is your best estimate of the educational level of this pupil's father?  
 ○ Little or no education  
 ○ Probably less than 8th grade  
 ○ Probably completed 8th grade  
 ○ Probably some high school  
 ○ Probably completed high school  
 ○ Probably some post high school training or college  
 ○ Probably completed college
- What is your best estimate of the educational level of this pupil's mother?  
 ○ Little or no education  
 ○ Probably less than 8th grade  
 ○ Probably completed 8th grade  
 ○ Probably some high school  
 ○ Probably completed high school  
 ○ Probably some post high school training or college  
 ○ Probably completed college
- Is an adult or teenager usually at home in the afternoon when this pupil gets home from school?  
 ○ Most of the time  
 ○ Some of the time  
 ○ Seldom or never  
 ○ Don't know

- In your opinion, were this pupil's absences due primarily to illness?  
 ○ Yes    ○ No    ○ Don't know
- In what month of this school year did this pupil enroll in this school?  
 ○ Jan.    ○ Apr.    ○ July    ○ Oct.  
 ○ Feb.    ○ May    ○ Aug.    ○ Nov.  
 ○ March    ○ June    ○ Sept.    ○ Dec.
- In what month of this school year did you first become this pupil's teacher?  
 ○ Jan.    ○ Apr.    ○ July    ○ Oct.  
 ○ Feb.    ○ May    ○ Aug.    ○ Nov.  
 ○ March    ○ June    ○ Sept.    ○ Dec.
- What is the occupation of the head of this pupil's household? Mark the most appropriate option. (See opposite page or manual for list of occupations.)  
 A ○    D ○    G ○    J ○  
 B ○    E ○    H ○    K ○  
 C ○    F ○    I ○
- What is your best estimate of the yearly income of this pupil's family?  
 ○ Under \$3,000                      ○ \$6,000 - \$9,000  
 ○ \$3,000 - \$5,999                      ○ Over \$9,000

16. Is an adult usually home with this pupil in the evening?

- Most of the time
- Some of the time
- Seldom or never
- Don't know

17. Which of the following best describes the neighborhood in which this pupil lives?

- Primarily residential
- Primarily commercial or industrial
- Both residential and commercial/industrial
- Primarily rural, farm or open country

18. In your opinion which of the following best describes the dwellings in the neighborhood where this pupil lives?

- Well-kept single family houses
- Well-kept multi-family dwellings
- Run-down single family houses
- Run-down multi-family dwellings
- Don't know

19. What kinds of communication have you had with a parent of this pupil? (Mark all that apply)

- No communication
- Written or telephone communication on this pupil's academic progress, which I initiated
- Written or telephone communication on this pupil's behavior, which I initiated
- Written or telephone communication on this pupil's academic progress, which a parent initiated
- Written or telephone communication on this pupil's behavior, which a parent initiated
- Discussion of this pupil's academic progress or behavior with his parent at a meeting of a parent-teacher organization or at a school open house
- A meeting on this pupil's academic progress or behavior, requested by his parent
- A meeting on this pupil's academic progress or behavior, which I requested

20. What educational aspirations do this pupil's parents hold for him? (Mark the most appropriate response)

- They told me that they want him to be near the top of his class
- They told me that they want him to pass this grade
- I feel that they want this pupil to be near the top of his class
- I feel that they want this pupil to pass this grade
- I feel that they are not concerned with their child's educational achievement
- I don't know

21. Have this pupil's parents failed to communicate with you about his school progress or problems when you requested it?

- Yes
- No

22. Which school experiences did this pupil have before entering first grade? (Mark all that apply)

- None
- Kindergarten
- Nursery school
- Head Start, school year
- Head Start, summer
- Head Start, but I don't know whether it was summer or school year
- Other Preschool Program
- Don't know

23. Does this pupil belong to any of these minority groups?

- Yes, American Indian
- Yes, Negro
- Yes, Oriental

Yes, Spanish-surnamed American of:

- Cuban descent
- Mexican descent
- Puerto-Rican descent
- No

24. Considering his present attitude, how far do you think this pupil will go in school?

- 8th grade or less
- 9th or 10th grade
- 11th or 12th grade but not high school graduation
- Graduate from high school
- Enter college

25. Considering his ability, how far do you think this pupil could go in school?

- 8th grade or less
- 9th or 10th grade
- 11th or 12th grade but not high school graduation
- Graduate from high school
- Enter college

26. Do you think there is a language other than English spoken in this pupil's home?  
 Yes    No    Don't know
27. Does this pupil speak a language other than English that he learned out of school?  
 Yes    No    Don't know
28. Has this pupil attended any school other than this one? (Do not include schools which normally feed pupils into this school.)  
 No  
 Yes, one other school  
 Yes, two other schools  
 Yes, three other schools  
 Yes, four or more other schools  
 Yes, but I don't know how many other schools
29. Would this pupil be classified as any of these?  
 From an institution for neglected children.....  Yes    No  
 From an institution for delinquent children.....  Yes    No  
 From an agricultural migrant family.....  Yes    No

**PART TWO**

**Pupil's Participation in Compensatory Education Programs**  
 Academic year 1967 - 68

- I. Has this pupil participated in academic compensatory programs (1 or more) during the academic year? Consider only those programs on the list provided by your principal.  
 Yes    No  
 (If "Yes", please mark the appropriate circles in the following tables for each type of program in which this pupil has participated. If the answer is "No", go on to Section II. Cultural Enrichment.)

Type of Program	Average Size of Instructional Group					Number of Instructors or Tutors per Instructional Group		
	1	2-	6-15	16-25	26 or more	1	2	3 or more
Reading.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arithmetic.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
English Usage.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Academic Programs.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Type of Program	Weeks per Year				Hours per Week		
	less than 6	6-12	13-24	25 or more	less than 5	5-10	11 or more
Reading.....	<input type="radio"/>						
Arithmetic.....	<input type="radio"/>						
English Usage.....	<input type="radio"/>						
Other Academic Programs.....	<input type="radio"/>						

- II. **Cultural Enrichment.** Has this pupil participated in any programs (1 or more) for enriching his experience with 1) the community in which he lives, 2) the world of nature, or 3) the arts? (See program list from your principal.)  
 Yes    No



III. Physical Health.

1. Has this pupil received help during the past year (since July 1, 1967) in the diagnosis or correction of physical deficiencies of any kind? (e.g., bad teeth, poor eyesight, poor hearing, malnutrition, physical deformities).

- Yes, as a part of the health services provided to all children in this school district
- Yes, as a part of a special compensatory health program (See program list from your principal)
- Yes, but I don't know the source of the help
- No

(If answer is "Yes" complete 2 and 3; if answer is "No" skip to Section IV. Pupil Personnel Services.)

2. Did the health program for this pupil provide some type of physical, dental, eye or other examinations?

- Yes
- No

3. Did the health program for this pupil provide any form of treatment or therapy?

- Yes
- No

IV. Pupil Personnel Services.

1. Has this pupil participated in any programs (1 or more) for treating social, emotional or disciplinary problems? (e.g., individual counseling with a psychologist, group counseling, home visits by social worker, etc.)

- Yes, as a part of the regular pupil personnel services provided to any pupil in this school district.
- Yes, as a part of a special compensatory pupil personnel service. (See program list from your principal)
- Yes, but I don't know the source of the help
- No

(If "Yes," answer 2; if "No," skip to Section V. Summer Programs.)

2. What form or forms did the services take? (Mark as many as apply)

- Individual counseling with a psychologist
- Group counseling
- Counseling with the pupil's parents
- Special testing and diagnosis

V. Summer Programs.

1. Did this pupil participate in a summer academic program during the summer of 1967?

- Yes
- No
- Don't know

(If "Yes," please mark the appropriate circles in the following tables for each type of program in which the pupil participated.)

Type of Program	Length of Program			Hours per Week		
	1-2 weeks	3-5 weeks	6 or more weeks	1-5	6-15	16 or more
Reading.....	<input type="radio"/>					
Arithmetic.....	<input type="radio"/>					
English Usage.....	<input type="radio"/>					
Other Academic Programs.....	<input type="radio"/>					

**PART THREE**

This Pupil's Performance on Standardized Achievement Tests

1. Has a standardized achievement test/battery been administered to this pupil since January 1965?

- Yes
- No (Skip to PART FOUR)

**PRE-TEST RESULTS**  
See Manual for Instructions

2. Test/battery Code

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

3. Mark month test was administered.

- |                             |                                 |
|-----------------------------|---------------------------------|
| <input type="radio"/> Jan.  | <input type="radio"/> July      |
| <input type="radio"/> Feb.  | <input type="radio"/> August    |
| <input type="radio"/> March | <input type="radio"/> September |
| <input type="radio"/> Apr.  | <input type="radio"/> October   |
| <input type="radio"/> May   | <input type="radio"/> November  |
| <input type="radio"/> June  | <input type="radio"/> December  |

4. Mark year test was administered.

- |                            |                            |
|----------------------------|----------------------------|
| <input type="radio"/> 1965 | <input type="radio"/> 1967 |
| <input type="radio"/> 1966 | <input type="radio"/> 1968 |

5. Have this pupil's test scores (for the test/battery coded in 2 above) been reported to this school?

- Yes       No (Skip to POST-TEST RESULTS)

6. In the appropriate boxes below, record the available achievement test scores for this pupil. CAUTION: The scores must be only for the achievement test which you coded in 2 above, and only for the month and year you have indicated in 3 and 4 above.

READING		
Grade Equivalent	Grid Score and mark	Type
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

ARITHMETIC		
Grade Equivalent	Grid Score and mark	Type
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

LANGUAGE		
Grade Equivalent	Grid Score and mark	Type
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

COMPOSITE OR TOTAL		
Grade Equivalent	Grid Score and mark	Type
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

7. The test information which you have provided was obtained from: (Mark appropriate answer)

Tests regularly given to all pupils in this grade throughout this school system.

Tests administered in relation to compensatory education

**POST-TEST RESULTS**  
See Manual for Instructions

8. Test/battery Code

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

9. Mark month test was administered.

- |                             |                                 |
|-----------------------------|---------------------------------|
| <input type="radio"/> Jan.  | <input type="radio"/> July      |
| <input type="radio"/> Feb.  | <input type="radio"/> August    |
| <input type="radio"/> March | <input type="radio"/> September |
| <input type="radio"/> Apr.  | <input type="radio"/> October   |
| <input type="radio"/> May   | <input type="radio"/> November  |
| <input type="radio"/> June  | <input type="radio"/> December  |

10. Mark year test was administered.

- |                            |                            |
|----------------------------|----------------------------|
| <input type="radio"/> 1966 | <input type="radio"/> 1968 |
| <input type="radio"/> 1967 |                            |

11. Have this pupil's test scores (for the test/battery coded in 8 above) been reported to this school?

- Yes       No (Skip to PART FOUR)

12. In the appropriate boxes below, record the available achievement test scores for this pupil. CAUTION: The scores must be only for the achievement test which you coded in 8 above, and only for the month and year you have indicated in 9 and 10 above.

READING		
Grade Equivalent	Grid Score and mark	Type
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

ARITHMETIC		
Grade Equivalent	Grid Score and mark	Type
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

LANGUAGE		
Grade Equivalent	Grid Score and mark	Type
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

COMPOSITE OR TOTAL		
Grade Equivalent	Grid Score and mark	Type
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

13. The test information which you have provided was obtained from: (Mark appropriate answer)

Tests regularly given to all pupils in this grade throughout this school system.

Tests administered in relation to compensatory education.

**PART FOUR**

1. Please rate this pupil relative to most other school children of this grade and age group whom you know. Rate this pupil on the behaviors listed below for two different points in time: (A) when you first knew the pupil this academic year, and (B) now.

Pupil Behaviors	A. Earlier This Year					B. Now				
	Far Below Ave	Average			Far Above Ave	Far Below Ave	Average			Far Above Ave
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Takes care in handling school property.....	<input type="radio"/>									
Shows responsibility in completing class assignments .....	<input type="radio"/>									
Is alert and wide awake in class .....	<input type="radio"/>									
Shows healthy curiosity.	<input type="radio"/>									
Shows interest in learning new material.....	<input type="radio"/>									
Relates effectively to adults in school .....	<input type="radio"/>									
Works well with other pupils in group assignments ..	<input type="radio"/>									
Understands oral instructions.....	<input type="radio"/>									
Understands written instructions.....	<input type="radio"/>									
Is able to solve arithmetic problems .....	<input type="radio"/>									
Is able to express himself in oral recitation.	<input type="radio"/>									
Pupil's participation and cooperation are sought by classmates.....	<input type="radio"/>									
Is responsive to your questions in class ...	<input type="radio"/>									
Works diligently on classroom tasks .....	<input type="radio"/>									

2. If you were relieved of all other teaching duties for one hour per school day for the purpose of working exclusively with this pupil, in what area would you initially concentrate? Please choose one answer only in each group.

- | Group One                                       | Group Two                                       |
|---|---|
| <input type="radio"/> Number concepts           | <input type="radio"/> Classroom behaviors       |
| <input type="radio"/> Arithmetic computations   | <input type="radio"/> School citizenship        |
| <input type="radio"/> Other arithmetic material | <input type="radio"/> Child-child relationships |
| <input type="radio"/> Reading vocabulary        | <input type="radio"/> None of the above         |
| <input type="radio"/> Reading comprehension     |   |
| <input type="radio"/> Another reading area      |   |
| <input type="radio"/> Speech                    |   |
| <input type="radio"/> None of the above         |   |

3. Which of these do you consider to be this pupil's most immediate school-related need?

- |   |  |
|---|--|
| <input type="radio"/> More adequate diet                      | <input type="radio"/> Individual instruction in reading    |
| <input type="radio"/> Physician's services                    | <input type="radio"/> Individual instruction in arithmetic |
| <input type="radio"/> Psychological or psychiatric counseling | <input type="radio"/> Individual academic instruction      |
| <input type="radio"/> Eye examination                         | <input type="radio"/> None of the above                    |
| <input type="radio"/> Dental care                             |  |