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ABSTRACT
An extensive Elementary and Secondary Education act (ESEA). Title I data base was developed in order to study the distribution and effect of Title I funds in New Jersey. The information in this data base was then analyzed in conjunction with informátion concerning reading and mathematics achievement, prógram adoption, and denography, to deteraine correlations with ESEA Title I prograns. The following conclusions were draun from the analysis: Those school districts with-higher average staff-Title I.salaries usually reported poorer performing students in both reading and mathematics. (2) Those districts with a larger ratio (more students per instructor) were the poorer perforaing districts. (3) Those schools allotting more time per student. per instructor for Tiths I instruction were the better performing schoals. (4) There was generally no association between achievement and number of compensatory education programs adopted. (Author/si)

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The second publication of the "Occasional Papers in Education" series focuses upon the federally funded ESEA Title I compensatory education programs in existence in many school districts in New Jersey during the 1975-76 academic year.

This publication, tritled "An Analysis of ESEA Title I Data in New Jersey," and the research ${ }^{i t}$ is based upon are a result of a grant awarded to the New Jersey Department, of Education in 1976 by the National Insitute of Education. The purpose of the grant award, was to: 1) develop a comprehensive datibase containing all pertinent ESEA Title I information in New Jersey for the 1975-76 academic year; and 2) from that database, in conjunction with other relevant data, examine the relationship-between concentration and services of ESEA Title I programs in the state.

There are certain caveats to the research which must be conssidered. First, the study was primarily a correlational canalysis of the data; we must not lose sight of the principle that correlation does not imply causation, only that a relationship exists. Second, the interpretation of the analysis of data in this, study does not constitute a comprehensive evaluation of the effectiveness of the particular ESEA Title oI programs. The research presented in this publication provides a limited evaluation of: ESEA Title I. . - I-encourage other evaluations relating to the effectiveness of these programs.

This analysis of ESEA Title I data in New Jersey was
facilitated by the cooperation, assistance and expertise of Mr . Joseph Moore, Director of ESEA Title I in New Jersey and his entire staff. Both Joe Moore and I welcome your comments and reactions to thís research study:-


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Title.I. of the Elefmentary and Secondary Education Act of 1965 was enacted ..."to provide financial assistance to Local' Educational Agencies serving areas with conéntrations $\because$ of children from low-income families to expand and improve their educational programs by various mèans' which contribute particularly to meeting the special education needs of educationally deprived. chịldren."

New Jersey received for fiscal yoear. 1975-76 approximately $\$ 49$ million to be used for ESEA Title I projects. Presently, little is known concerning the distribution, and particularly the effect of the dispersal and usage of these Title $\bar{I}$ funds on educational achievement. To addrêss these problems, an extensive New Jersey ESEA Title I. database for 1975-76 was designed and developed.

The information in this database was then analyzed in conjunction with databases containing information concerning reading and mathematics achievement, program adoption³/adaption, and demographics to determine relationships involving ESEA Title I.
$\because$ The following conclusions were drawn from the analysis.

1. Those LEAs with higher average staff Title I jalaries were usually, the ones with the poorer performing -students in both reading and mathematics:

2: Those LEAs with a larger ratio (i.e., less instructors tọ serve the students) were the poorer performing

LEAs. Whis result when taken in context with the achievement-. salary per instructor correlation, may indicate that those LEAs with a small, but well paid Intle I staff, arè not adequately meeting the students needs. "There should be a harger s.taff, resulting in a smaller s.tudent-instructọ ratio.
3. The generally positive asscciation between achievement and time spent per instructor in Title I instruction indicates that those schools allotting more time per student per instructor' for Title I instruction were the better performing schools. The results indicaté that perhaps. more time allotted for these additional reading and mathematics programs could result in increased mastery levels for the students.
4.- Except for isolated instances, there was no association between achievement and number of programs adopted/ adapted. Thịs may, however, be an artifact of the data. There was not a large variability between achievement and number of programs; which may cause spurious correlations.
5. It is important to note all of the data obeainable from the ESEA Title I anylations were examined; conclusions drawn were based solely on the analysis of the available data. It is apparent that the Title I applications do not address all areas for analyses of ESEA Title I. ${ }^{\circ}$

This study analyzed the existing data in both $a$, , descriptive and correlational manner. It must' be remembered that correlation does not imply a causation, only that a relationship exists between certain entitias.

Titley of the Elementary and Secondary Education: Act of 1965 was enà "ted $\because$ ". to provide financial assistance
 tions of children from. low-income families to expand, añ improve their educational programs by various means which contribute particularly to meeting the special. education.". needs of educationally deprived children.". Each eligible local educational agency (LEA) is required to apply to the stạte èducational ageńcy (SEA) for the financial asisistance, • and, in so doing, is also required to describe. to the SEA the manner by which it will "expand an'd improve (its) educational program." The SEA is required to review the application of each LEA for the purpose of determining that the program described within the application complies" with Federal ${ }^{\circ}$ and state legarion requirements The purpose of these guidelines is to assist each eligible LEA in its efforts to design sound.'educational programs that will meet the needs of educationalíy deprived children that are in compliance with both Federal and state regulations. (NJ Dept, of Education, 1976)

ELEMENTARY AND SECONDARY EDUCATION ACT
OF 1965
Title I.- Financal assistance to local educational agencies for the education of children of lowincome families.

## DECLARATION OF POLICY.

Sec. 101. In recognition of the special educational needs of children of low-income families and the impact that concentrations of low-income families. have on the ability of local educational agencies to support adequate educational programs, the

Congress hereby declares it to be the Amerícän policy:of the United. States to provide Iinancial assistance. (as set forth in the following parts of this title, to local educational agencies sexving areas with concentrations of cnildren from lowin=ome families to expand and improve their educational programs, by various means (including presthool programs) which contribute particularly to meeting the special educational needs of educationally deprived childreq.
(20 U.S.C. 241a) Enäcted April 11, 1965, P.L. 89-10, Title 1, sec. 2, 79 Stat. 27; redesigned and amended January 2,1968 , P'.L. 90-247, Title I secs. 108(a)", 110, 81. Stat. 786, 787; amended.:April 13, 1270, P. . Lr: 91-230, sec," 113 (b).

## GENERAL GUIDELINES

The law itself and the criteria developed for
Title I'by the Offide of Education included some basic principles which must bollowed in plgoning a Title $I_{\sim} \because$ project.

The 1 aw (compilation, sectéien .141) says:

1. Projects must meet the special educational needs of educationally deprived childre in school attendance, areas having hi.gh concentrations of chudren from lowincome families.
2. Projects must be of sufficient. size., scop $\neq$, and quality to give reasonable promise of substantial progress toward meeting those needs

A Title 1 program should be part of an overall - compensatory education program involving the use of resources. - from a number of programs and agencies.'

The Title. I program should support the regularschool program and.. where necessary, change it.

Most' children who are educationally deprived are not responding positivély to the regular school program. . $\approx$ The Title I program should not only help these children overcome their-learning problems, it should also support changes in the régulare school program, making it more responsive to student needs. The regular school p\#ogram, the Title I program, and any other special'school programs should he planned together as a total educational package.

Basically; there are two criteria a child must 1 meet ${ }^{\prime}$ participate in. $3_{3}$.Title I program:

1. He mus̀̀ live in the Title I attendance `area. This does not mean he must attend the public school where Title I services may be offered; butt he must. be a resident of the area served by the public. school.
2. He must be educationally deprived. Most school districts consider a child educationally deprived if he is performing below the expected grade level for his age group..

## COMPARABLE SERVICES

No matter what services a Title I program provides for educationkly deprived, children, they will not be enough to: help these children overcome their learning problems if they are not. extra services. Title funds are meant to be used in addition to State and local funds, not instead of them.

This was always the intent of Title $\dot{I}$, but because some schools usually received less services from State "and * local funds than other schools in the same district, the, 'Federal Government has made its rules on providing equal or similar services to. children in Title I and nonTitle I schools stronger and more clear.

The first regulations issued about Title. I stated that this Federal money should be used to supplement and not supplant State and local funds. Supplement means on top of or in addition to; supplant means to replace or instead of:

## PARENT PARTICIPATION

Parental involvement at the local level is deemed to be an important means of increasing the effectiveness of programs under Title $I$ of the Act. $r$

The regulations for the Act further emphasize the

" "that the Title I program in each project area includes specific proyisions for informing and consuliting with parents concerning the services to be provided for their children under Title I of the Act and the ways in which such parents can assist their children under Title I of the Act and the ways In which esuch parents can assist their children in realizing the benefits those services are intended to provide."

## PARENT ADVISUCY COUNCILS

Section 141 (a) (2) requires that the local
educational agency shall establish an advisory council for the entire school district and shall establish an advisory council for each school of such agency served by a program or project assisted under section 143 (a) (2), each of which advisory councils:
".(A) has as a majority of its members parents of the children to be served,

(B) is composed of members seelected by the parents in each school attendance area.
(C) has been given responsibility by such agency for advising it in the planning for, and the implementation and evaluation of, such programs and projects, and
(D) is provided by such agency, in accordance with regulations of the Commissionter, with access to appropriate information concerning such programs and projects:"

## PROGRAMS AND PROJECTS

Programs for which assistance is requested shall be concentrated on a limited number of projects related to a limited number of educationally deprived children. so as to give reasonable promise of success.

Each application by a local educational agency for a grant must propose projects of sufficient size, scope and quality as to give reasonable promise of substantial" progress, toward meeting the special educational needs of educationally deprived children for whom. the projects are intended. : The projects must be developed in the instructional areas of language experiençe and computational skilis. ${ }^{1}$ In addition, there are programs in Non-Standard English and kindergarten/pre-kindergarten. The budget for a project shall avoid inprudent extravagent or wastful expenditures which would tend to defeat. the intent of the Act to meet the educational needs of educationally *deprived children. The project application mast justify any proposed expenditures above 'the level of expenditures by the applicant for other comparable activitiess (NJ Department of Education, 1976.)
${ }^{1}$ Language Experience programs ipclude' all types of reading programs (reading, oral, reading-readiness, Language Development, etc.) through - any LEA established method. Computation Skills program,include all types of mathematics programs established by the LEA.

New Jersey received for fiscal year 1975-76 approximately $\$ 49$ miliion to be used for ESEA Title I projects. Presently, little is known concerning the distribution and particularly the effect of the dispersal and usage of these Title I funds on educational achievement, especially "in terms of high concentration of federal monies and programs.

To address these problems, an extensive New Jersey ESEA, Tìtle. I database for 1975-1976 was designed and developed. This database was.then used in conjunction with ather existant databases to determine the effect of the Title I program: The project. consisted of two distinct segments: 1) data collection and 2) analysis and presentation of the information':

## DATA COLLECTION

Each fiscal year, LEAS who are applying for ESEA Title I funds ara required to submit to the New Jersey Depoartment of Educàtion an extensiye and detailed application form. . ${ }^{\circ}$ The Title I database was developed from information contained in these applications.

From the application form for EY 1975-1976, two types of coding sheets were developed--one for district wide, information and one for school information within the district. (The coding sheets and an instruction sheet appear in Appendix A).

Tḩe following information was obtained from the FY 1975-1976 title I applications:
A. District

1. County Name
2. "District Namé
3. Total expenditures FY 1973-1974
4. Total expenditüres FY 1974-1975
5. Federal funds FY .1973-1974
6. Federal funds FY 1974-1975.
7. Average daily attendance FY 1973-1974
8. Average daily attendance FY 1974-19.75.
9. Total Title I particìpants
a. publìc schools
b. private* schools
c. Neglected $\delta_{x}$ Delinquent institutions (N\&D)

- 10. For each program (Language Experience, Computational : Skills, Non-Standard English, KindergarteniPre-Kindergarten)
a. - grade levels. served
b. number of public school participants
c. number of private school participants
d. number of $N \& D$ participants
e. total participants
f. . number of full-time professionals. i
g. number of part-time professionals
h. number of full time non-professionals
i. number of part time non-professionals cost of the program
k. for each grade

1. distričt standard
2. eligible studentis.
3. number above standard
4. number below. standard
5. number NSE .
6. number eligible to participate
7. number selected to partịcipate
8. Is the Title I program a cooperative program among a number of LEA's? If so, which LEAs are involved and

- how many students from each participating LEA.

12. Grade Span, number of schools, and number of residing students in own LEA, other LEAS, private schools, and N\&D institutions.
13. Number of students not enrolled in any school but - eligible for Title I prograns.
14. Source of data used for determining the number of children from low-income families (Aid for Dependent Chilidren, Free School' Iunch, etc.)
15. Number of attendance areas.
'16. Number of children from low income families:
16. Number eligible students (public, private, N\&D).
17. Non-standard English enroliment (public, private, N\&D).
18. Number of types of supportive services and enrollment, (pu̧blic, private, N\&D).
19. Type of applicationi
a. basic grant or special incentive grant
b. regular school tèrm," summer s̀̀chool, total
c. 'impounded, carryover, or current year's funds
20. LEA budget
a. administration
b. instruction
c. operation
d. maintenance
e. fixed charges
f. student activities
g. other expenses
21. Title I salaries for each program.
22. Neglected \& Delinquent Institutions ${ }^{\circ}$ (number and enrollment, title I participation, staff).
23. Kindergarten, Pre-school. (number of participants)
B. School

## 1. School Name

2. District Name
3. Unduplicated Title I participants by grade

- 4. For each program (Language Experience, Somputational Skills, NSE \& Pre-Kindergarten/Kindergarten)
a. number of professional staff.
b. number of non-professional staff
c. particip̣ating children (public, non-public, N\&D)
d. numbèr of days per week program is in operation
e, minutes pèr week per student
f. - does" progràm function during school hours?
g. does program function after sichool hours?

Eight people performed the task of transferring the necessary information from the Titie I application to the district and schoól coding sheets. The task'required 378 man-hours to complete. In total $4 \dot{6} 2$ district coding sheets and $1 \dot{557}$ school coding sheets were completed. 4

Once the coding process was completed, the forms were keypunched and verified, and then developed into two operational. databases, one for district information and orie for school information.
'These databases were then merged with. the following existent Department of Education databases.

1. 1975 New Jeirsey Educational Assessment Program
'Annually, allistudents in grades 4, 7, and 10 (and every three years in grade 12) are administered a criterionreferenced instrument in reading and mathematics. . This
database contains the school lev́el and district levêl résults. --of the 1975 instruments for grades $4,7,10$ and 12.

## 2. Federal Programs Disseminated in New Jersey

This database contains the number of disseminated projects adopted/adapted by each LEA in eleven categories: mathematics, reading, special educatiǒn, classroom management, humanities; other, career education, affective education, alternaive schools, education management, and early childhood.
3. "District Demographic Datiabase

Based on information from the 1970 census, a measure of the socioeconomic status, (SES) of the LEAs was determined.

To obtain this measure of the socioeconomic
background of the school district, a factor analysis was performed on a series of 1970 census variabies known to contribute to a district's socioeconomic. status. The type of factor analysis used was an iterative principle. component analysis with a varimax rotation

There were eight variables used in the factor. analysis:

1. The education level of males ant females. .25 years old and older.
2. The occupation level of males and females 25 years old and older.

3, Average family income.
4. Percent of persons living in the same housing unit for at least the past ten years (mobility).
5. Number of people per housing unit (density)."
6. Percent urban population of the district.
7. Percent of experienced unemployed males and females 16 years old and older.
8. Percent of families below the poverty level. The factor analysis determined two significant factors. Based on the interpretation of the significant factors, the first factor was determined to be a measure"ment of socioeconomic status.

A factor score was then generated for each of the LEAs included in the analysis. The dis'tricts were ranked according țo their factor score and cut-points were established to divide the districts into 10 District Factor Groups (DFG). The cut-points were determined so that all District Factor Graups would be" comprised of approximately" the same number of LEAs: The DFGs range from $A$, the lowest SES group, to $J$, 客he highest. In addition, DFG $\dot{\text { V }}$ contains ali Vocational-Techphical schools districts and DFG $Z$ contains all shool districts for which no 1970 censuṣ information was av̂ailable (and hence, no SES determination attainabge.
'This database contains the DFG for each LEA as well as the type of community in which the LEA lies - (urban center, urban-suburban, suburban, suburban-rural, rural, rural-center-rural, vocational and regional). ${ }^{2}$

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## DATA ANALYSIS -AND PRESENTATION

## A: District

Of the 589 operating school districts in New Jersey, 462 (78.4\%) received funds for ESEA-Title I'programs. Table I illustratesethe number of operating districts and Title I districts by county, and the percent of LEAs $\because$ per county participating in ESEẢ Title I progmams. Tables 2 and 3 present the same information by SES and community type: Most of the low and middle SES districts are Title I districts. In addition all of the regional and most of the urban LEAs participate in Title I progràms.

All of the Title I FY 1974-75 applications were for the basic grant. Most of the applications ( 44 Y or $95.5 \%$ ) were for the Reguiar School year for current FY funds.

The selection of eligible students for participation in ESEA Title I programs is a two-step procedure, First public school attendance areas are selected ais. eligible based, upon the number (percent) of children from low-income families in that area. Then individual students are selected as eli'gible based ort educational need.

The majority of districts based their criteria for selection of eligible attendance areå for ESEA Titile I funds on Aid for Dependent Children ( 456 or $98.7 \%$ ). The Free Lunch Program was used by 59 LEAs ( $12.8 \%$ ); School St,ivey by 20 (4.3\%); Health Statistics by 13

TABLE 1
IUMBER OF ESEA TITLE I
.NEW JERSEY PUBLIC SCEOOL DISTRICTSS BY COUNTY


Table 2

Number of Operating and Title I Districts
by Socioeçonomic Status ${ }^{1}$

Operating. Districts.

$$
150^{\circ}
$$

Low (DFG A-C)
Middle ( DFG D-G)
High. (DFG H-J)

191
149
$\frac{1490}{490}$

Title I
Districts
Percent of.
Title I
Districts
$.94 .7 \%$
142
171
89.5
65.8
83.9
${ }^{1}$ The number of operating and Title $I$ districtis is not the same for Tabies. 1 and 2 because not all districts are categorized into SES levels. The determination of the socioeconomic groups has been explained previously.' The three lowest SES groups (DFG A, B, and C) comprise the low SES group, the four middle SES groups (DFG D, E, FF, and' G) comprise the middie SES group; the three highest SES groups (DFG H, I, and - J) comprise the high SES. group.

Number of Operatirg and Title I Districtes

(2.8\%); United Scates Census, 12 (2:4\%); empqyment_ staṭistics 2, (0.4\%); Housing Statistics 1 ( 0 . $2 \%$ ), and other, 14 (.3.0\%). ${ }^{3}$
"As previously mentioned, there are four types of Title I progtams: Language Experience, Computational Skills, Non-Standard English, and Yre-Kindergarten/Kindergarten. Of the 462 Title I districts 411 ( $89.0 \%$ ) used fundifitor Language Experience Programs, 156 (33.8\%) had Computiational Skills programs, 68 ( $14.7 \%$ ) had Non-Standard Eng1造S - programs and 146 (31.6\%) had Pre-Kindergarten/ Kindergaçten programs. Further, of the districts having Language Experience and Computational Skills programs 282 ( $61.0 \%$ ) hàd only Language Experience programs, 27 (5:8\%), 0.11y"Computational Skiphs programs and" 129 (27.9\%), both Language Experience and Computational Skills. Table 4 presents the number (and percentage) of LEAs having particular programs, by SES and Community type.

Because of the nature of the Title I projects, the remainder of the results will be discussed by program.

## Language Experience

Table 5 presents the total public school, non-public

[^1]TABLE 4
number of leas per program by SES AND COMMUNITY TYPE ${ }^{1}$

| SES | Language Experience | $\begin{gathered} \text { Computational } \\ \text { Skills } \end{gathered}$ | Non-Standard English | Pre-Kindergarten/ Kindergarten |
| :---: | :---: | :---: | :---: | :---: |
| Low | $135 \text { (32.9\%) }$ | 㢈 | $41 "(60.3 \%)$ | 53 (36.3\%) |
| Middle ${ }^{\text {- }}$ | 156 (38.0\%) | 65 (41.7\%) | 13 (19.1\%) | 47 ( $32.2 \%$ ) |
| . High | 73 (17.8\%) | 34 (21.5\%) | i1 (16.2\%) | 39 (26.7\%) |


| Community Type | Language Experience | $\begin{gathered} \text { Computational } \\ \text { Skil̂ls } \end{gathered}$ | $\begin{gathered} \text { Non-Standard } \\ \text { English } \\ \hline \end{gathered}$ | Pre-Kindergarten/ Kindergarten. |
| :---: | :---: | :---: | :---: | :---: |
| urban | 130 (31.6\%) ${ }^{\text {\% }}$ | $56(35.9 \%)$ | $44{ }^{\prime}\left(64: 7 \%^{\circ}\right)$ | 69 (4.7.3\%) |
| Suburbañ | 122 (30.0\%) , | 48 (30.8\%) | $\ldots 14(20.6 \%)$ | 45 (30.8\%) |
| Rural | $11^{\circ}(27.0 \%)$ | ${ }^{\prime} 30$ (19.2\%) ', | $\cdots \quad 7$ (10.3\%) | 27 (18.5\%) |
| - Vocational. | . 3 (0.4\%) | ${ }^{1}(0.1 \%)$ | $0 \quad(0,0 \%)$ | 0 (0.0\%) |
| Regional | $\therefore 45(11.0 \%)$ | $21 \text { ( } 13.5 \%)$ | $\therefore \quad \begin{array}{r} \quad \\ \hline \end{array}$ | $5 \quad(3.4 \%)$ |

${ }^{1}$ The percentages in the tabie refer to the percentage of those leas participating in each program. (i.c., 32،9s of all LEAs participating in Language Experience Programs are low SES districte.f Because not all districts are categorized into. SES groupings, the total percentage does not equal $100 \%$. The, total does, however, sum to $100 \%$ for the breakdown by community type.

TMBL: 5
Language Experience Participation, Staffing and Cost

|  | Public . <br> Students | Non- <br> Public Students |  | Total Students | Cost | Prof. Staff | $\left[\begin{array}{c} \quad \text { Non- } \\ \because \\ \cdots \\ \hline \end{array}\right.$ | Cost <br> $\because$ Per Student | Studetnts $\therefore \quad$ Per $\quad$ Prof. Staff | Students per non-jrof. Staff | Salary | $\begin{aligned} & \text { Salary } \\ & \therefore \text { Rer } \\ & \text { Staff } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 168 | 44,067 | 6,036 | 395. | 50,498 ¢ | \$15,022,000 | 1,154 | $1,100$ | - \$297.48 | 44.53 | 45.91 | \$12,572,000 | $55,627,57$ |
| Midele | 12,535 | 1,469 | 39 | 14,043 | 4,6े89,000 | 514 | 425 | - 33.90 | $27.32$ | .33.04 | 3,458,000 | $3,682.64$ |
| Hish | -"4,495 | - ${ }^{\text {\% }} 561$ | 4 | 5,057 | $\therefore 1,38400$ | $\because 248$ | - 118 | - $274.08{ }^{\text {a }}$ - | $\bigcirc{ }^{-6}$ | 42,86: | 1,072,000 | -2,928.96 |
| Vac. | $\because \quad 432$ | 21 | 0 | 453 | $\therefore$, 27,000 | -7 ${ }^{2}$ | - - 12 | 280.35 | 64.71 | 373.75 | 118,000 | $6,210.53$ |
| NO SES | -900 | 38 | 6 | , 944 | $\cdots \quad 241,000$ | -51. | - 4.12 | 255.304 | 18.51 | 78.67 | 169,000 | 2,682.54 |
| Total ${ }^{\circ}$ | 62,429 | 8,125 | 441 | 70,995 | 21,465,000 | 1,954 | 1,667 | 302.35 | 36.33 | . 42.59 | 17,389,000 | 4,802.26 |


|  | Percent of Public Participants | . Percent of ? <br> Nori-Public Participants | Percento of N\&D Partielpants | Percent of Tozal Participants |
| :---: | :---: | :---: | :---: | :---: |
| LOW | $.65 .4 \%$ | $\text { - } 75.6 \%$ | . ${ }^{\text {\% }} 8.0 \%$ | $+\quad 66.6 \%$ |
| MIDDLE | $78.3$ | .84.4 . ${ }^{\text {. }}$. ${ }^{\text {. }}$ | $\therefore \quad 24.7$ | $\cdots{ }^{-} \quad \therefore 1$ |
| * ${ }_{\text {\% }}$ | $62.9$ | . 70.5 | $1.6$ | 63.2 |
| VOCATIONAL V | $75.5$ | $56.8$ | $\because \quad 0.0$ | $74.4 x^{2}$ |
| NO SES | 83.3 | $\cdots 100.0$ | $\begin{array}{rr} \hline-i & \\ & 0.0 \end{array}$ | $82.4$ |
| TOTAL | 67.7 | 76.7. | $\therefore \quad 64.0^{\circ}$ | . ${ }^{\circ} 68.6$ |

school and Neglected and Delinquent ( $N \in D$ " students participating in this program, the percent of Title I`students , participating, as well as the cost of the program, per pupid costr," professional and non-professionnal staff and number of students per staff member for each SES Level. In total, 70.995 children participated in language experience programs utịlizïng 1954 professional and 1667. non-professional staff members at a total cost of $\$ 21,465,000$. There were 30.33 students per professional staff member and 42.59 students per nonprofessional staff member at a cost of $\$ 303.13$ per student.
"In total", \$17,389,000 was spent. for salaries for 'Language Experience programs ${ }^{\prime \prime \prime}$ Considering a total of 3621 instructional people, this amounts to $\$ 4,802.35$ iñ salary per, instructional, person. Òverall, 68.6\% of the Title $I$ students participated in Language Experience Program.

To assess interconnections between LSEA Title I involvement, educational achievement, and reading projects adopted/adapted, certain corrè ational relationships w'ere analyzed.

The program dissemination criterion was the number.of reading programs adopted/adapted by the LEAs. The educational achievement criteria was based on an agg'regated score from the New. Jersey 'Educational Assessment Program's 1975 Statewide readiṇg instrument, administered to all public school studentsin grades

4, 7, 10 and 12 in October, 1975. The instruments are criterion referenced tests méasúring basic.skill concepts in reading.

The Title I variables analyzed wére cost of language experience program per student, average instructional saíary, number of students per instructional staff, and percent Title I participants (of thé toṭal district enroilment) ${ }_{i}$
$y^{T o}$ control for the relationship between socioeconomic status and educational achievement, all analyses were performed within SES groupings. Fílither, not all districts have a fourth, seventh, tenth, and twelfth -.grade. Additionally, most of the Title I districts did not service students in all grades (kinderg̀artén through twelve). Therefore, the analyses were performed only for those districts having the particular grade and also servicing that grade in its ESEA Titlee I program.

The relationship between Ti,tle $I$, áopted programs and educational achievement varied according to the socioeconomic levels of the participating LEAs.
.Of the 411 districts who had language experience programs, 352 LEAs ( $85.7 \%$ ) serviced students who took, the fourth grade 1975 NJEAP instrument. The correlation coefficients for the Title I, adopted programs, and NJEAP datả appeà in Table $6^{4}$. For the ${ }^{6}$

[^2]TABL̇E 6
?. FOURTH GRADE GORRELATIONS BETWEEN ESEA TIILE I, EDUCATIONAL ACHIEVEMENT AND PROGRAMS ADOPTED/ADAPTED

| SES " | Reading Test | Math Test | $\begin{array}{ll}  & \text { Reading } \\ \therefore \text { Programs } \\ \hline \end{array}$ | $\cdots \because$Math <br> Programs |
| :---: | :---: | :---: | :---: | :---: |
| Low <br> Cost per student | $\therefore$-0.172* | $-0.203$ | $0.143$ | $0.120$ |
| Salarý per instructor | $\cdots$ " 0 -0.027 | -0.012 | 0.0898 | $0.083$ |
| Students per instructor | -0.0006 | -0.295* | $0.036$ | - $0.158^{\circ}$ |
| Percent Enrolled Students in Program | -0.513** | -0.296* | -**** | -*** ${ }^{\text {\% }}$ |
| Middle. <br> - Cost per student | - 0.026 | $-0.130$ | -0.063 | 0.139 |
| Saláry per instructor ' ' | . 0 0.260* | $\therefore-0.198-$ | -0.058 | 0.525* |
| Students per instructor | - $0.168 *$ * | $\cdots$ | 0.068 | 0.408* |
| Percent Enrolled Students in Program | -0.274* | $\cdots\}_{1} 0.010$ | —***. "' | —**** |
| High Cost per student | . 0.053 | $0.117^{*}$ | -0.233 | $0.360 *$ |
| Salary per instructor | - -0.362* | $=-0^{i} .204$ | -0.034 | 0.270 |
| Students per instructor | -0.382* | -0.233 | 0.171 | - 0.176 |
| Percent Enrolled <br> If Students in Program | - $-0.288 *$ | 0.027 | -1*** | - ${ }^{\text {a** }}$ |

* *significant. $p<.05$
**significant $p<.01$
***not done ${ }_{i}$ see explaination in text.
low SES districts, the NJEAP result was significantly negatively correlated $(p<.05)$ with the per pupil cost of the Language Experience program. Therefore, as the per pupil cost of the program increased, the average district reading assessment score decresed. Additionally, there was a significant negative coxrelation between the NJEAP and the percent of enrolled students participating in the program. This result indicates that those LEAs with a greater majority of participation in Title I programs had lower achievement levels'. That this relationship is true is intuitive because the selection process of eligible students for Title $I$ is based on education levels. There were not significant relationships involving the Title $I$ variables with number of reading programs

For both the middle and high SES groups of districts there were different relationships present. For both groups the NJEAP reading aggregated score was signifieantly negatively correlated (p<.05) with both salary per instructor, number of students per instructor, and percent of eṇrolled students participating.
in general, these results tend to suggest that there was a negative, relationship between Title I related. variables and the average educational achievement of the LEAs. The results indicate that those dis ficts which have large pupil-teacher ratios and large per instructor average salaries are performing poorest $\}$ This result might infer that by increasing the number of staff
members involved in Title I. programs for Langua $e_{\text {e }}$ Experience, the educational attaịnment of students in those districts may increase.

There was no relationship between Title $I$ and the number. of reading programs adopted/adapted by the LEA.

The results based on the relationships concerning number of programs disseminated may be an artifact of the, data, rather than a valid relationship. The number of programs ${ }_{4}$ adopted/adapted did not vary considerably, among districts throughout the state (i.e., the range of programs adopted/adapted is.small). Thexefore, "since the correlational relationships are highly dependent upon the variations of. the variables.involved, the correlation coefficients concerning the programs adopted/adapted may b"e spurious ${ }^{5}$.

- Only 45 of the 411 districts ( $10.9 \%$ serviced students who were $\dot{\text { widministered the } 7 \text { th grade NJEAP reading }}$ instrumert. Table 7 presents the correlation coefficient for the various data items ${ }^{6 \prime \prime}$; Because of the small numbers of LEAs in each SES categóry, non-parametric Spearman rank order correlations was used in place of the more customary Pearson Product Moment correlations.

[^3]

Although in some instances, the correlation coefficients were relatively large in magnituce, they were not significant ( $p<.05$ ) because of the small ${ }^{\circ}$ sample sizes.

There were not sigṇifica.ıc relationships for any of the SES groupings, except for achievement vs. percent of enroilment participating in the program (for the low and middle SES groups). Based on these results there was no relation between Title I programs and educational achievement or disseminated programs adopted/adar sed.for the seventh grade.

Only 19 LEAS' ( $4.6 \%$ of the 411 LEAs who participatey in Language Experíence programs) tested students in grades 10 and 12 and served these students with Title $I$ programs. Therefore, there was not a sufficient number of LEAs per SES group to analyze the relationship.

## Computational Skills

Computational Skills programs wère utilized in 156
(33. $8 \%$ ) of the Title I LEAs. In total, 18,381 public school sstudénts, 2,455 non-public students and $123 \mathrm{~N} \& D$ students $(20,959$ students in total or $20.2 \%$ of the total Title $\bar{I}$ students) participated in Computational Skills programs, at a total expenditure of $\$ 5,231,000$. The students were instructed by a staff of $46^{\prime}$, prófessionals and 567 non-professionals, or an average of $45: 3 \overline{7}$ students per. professional staff person and 36.96 students per nonprofessional staff person. The cost of tiee program per pupil wias $\$ 249.58$. In total, $\$ 3,568,000$ was. spent on
salaries for the Computational Skilis program or $\$ 3,468$ per staff, person.

Table 8 presents this descriptive information for Computational Skills prògrams by SES crouping.

To assess interconnections between ESEA Title Iinvolvement, educational achievement, and mathematics projects adopted/adapted, certain correlational relationships were analyzed. The program dissemination criterion was the number of mathematics programs adopted/adapted by the LEAs.

The: educaticnal achiévement criteria was based on an aggregated score from the New Jersey Educational Assessment Program's 1975 Statewide mathematics instrument. This instrument was administered to all. public school students in grades $4,7 \times, 10$ and ${ }^{\prime} \dot{12}$ in October, 19.75. The instruments are criterion referenced rtests measuring basic skill concepts in mathematics.

The Title $I$ variables analyzed were cost of computlational. skills program per student, averagè instructọional salary, number of students per instrucrional staff, and percent Title I participants (of the total district enrollment).

Because of the relationship between socioeconomic status and educational achievement, all analyses were performed by SES grouping. Further, not, all districts have a fourth, seventh, tenth, and twelfth grade. Additionally, most of the Title $I$ districts did not service students in all grades (kindergaren through twelve). Therefore, the

analyses were performed only for those districts having the particular grade and servicing that grade in its ESEA Title I program.

There were 127 LEAs ( $81.4 \%$ of the 156 LEAs who participated in Computational Skills program) who administered the fourth grade 1975 NJEAP mathematics instrument and administered Title I Computational*Skills programs to students in grade four.

The correlations for grade 4 Computational Skills programs for each SES level are included in Thìle 6 with the results for Language Experiences programs.

For the Iow SES districts, the NJEAP average district İesult was significantly negatively correlated ( $\mathrm{p}<, 05$ ) with the sent-teacher ratio, and with the percent of enrolled student'participants. in the program; no other correlation was significant ${ }^{7}$. For the middle and high SES groups of districts, whereas the NJEAP reading, there existed a significant reiation with salary per instructor and students per instructor there is no significant relations between NJEAP math and Title $I$ variables.

[^4]There did exist relationships between the number of ${ }^{\prime}$ mathematics programs adopted/adapted and Title I. For the middle SES groups of districts, there were strong positive relationships (p<.01) with salaly per instructor, and students per instructor. For the high SES group, there was a strong negative relationship with the "cost per 'student. However, these results concerning relationships with programs adopted/adapted should be used judiciously. The variability of programs adopted/ adapted among districts is not large. (Liow SES mean $=$ 0.195 ; standaṛd deviation 0.459 ; middle SES ${ }^{\prime}$ mean $=0.041$; s.d. $=0.200 ;$ high SES mean $=0.10 ; ~ \dot{s} . \dot{d} . \doteq 0.305)$ Therefore, these forrelations may be spurious.

The low SES finding of a negative relationship between NJEAP math and studențs per instructor was also -discovered for NJEAP reading for middle and.high SES groups. Those districts for which there were a smaller, number of instructors per stiudent, achieved at, a higher ${ }^{*}$ level.

There were 27 LEAs ( $17.4 \%$ of the 156 LEAs with Computational Skilis programs) who both administered the seventh grade 1975 NJEAP and had Title I programs in that grade. The correlational results concerning. ESEA Title I, educational achievement and programs adopted/adapted are presented with similar information for Language Experience in Table 7.

There was no results for the high SES group because only two LEAs were in that categury. For the middle SES group, there were no results for correlations concerning prog'ram ädoption/adaption because there was no variability among LEAs in`number of adoptions/adaptions.

The only significant correlation for any of the SES groups concerned the NJEAP and the average salary per Title I instructor. This result indicated that the better performing LEAs were those with a smaller average Title I instructor salary". This may indicate (especially with the negative correlation between pupil-téacher ratio and NJEAP) that. the better. performing LEAs are those with a greatier number"of instructors.

Only 9 LEAs (5.8\% of the 156 LEAs participating in Computational Ski11s programs) tested students in tenth and twelfth grade and administéred Title I programs to those students: There was not a sufficient number of LEAs per SES group to analyze the telationstips.

## Pre Kindergarten/Kindergarten

Title IT programs for Pre Kindergen/Kindergarten were initiated ${ }^{\prime}$ in' $137^{\prime}(29.1 \%)$ of the 462 participating LEAs. A total * ${ }^{\prime}$ ' 15,005 children ( 14342 pbblé, 656 non public and 7 N' $\& D$ ) were serviced by 594 professional staff members and 619 nonprofessional staff members. (25.26 students per professional'staff person and 24.24 stôdents per non-professional staff person). In total
the projects cost $\$ 5,815,000$ of which $\$ 3,948,000$ was used for salariss. ( $\$ 3,255$ per instructional staff person). A total of $14.5 \%$ of the Title I students participated in these programs. Table 9 presents pertinent descriptive information by SES.

## Non-Standard English

Non-standard Engl'ish programs were funded for 68 ( $14.7 \%$ ) of the Title I LEAs. In total 11,969 students ( $8.7 \%$ of the Title I stưdents) were (gerved by 241 professional and 209. non-profes'sional staf势 members ( 49.66 students per. professional staff member and 57.27 students per nonprofessional staff person). The total cost of the project was $\$ 3,713,000$. Of this total $\$ 2,407,000$ was spent for salaries ( $\$ 5,348.89$ per instructional person) : The NSE information is presented in Table 10.
'An additional facet of the study concerned an examination of the relationship between each district's ESEA Title I per pupil expenditures and its total budget per pupil expenditure.

Overall, there was no significant correlation ( p <.05) between Title I per pupil expenditures and the total per pupil expenditures ( $r=0.002$ ). Observing the relationship by SES groups, it was also determined that for the o middle SES group ( $x=-0.001$ ) and high SES group ( -0.106 ), the correlations were not significant (p<.05): However, for the low SES group there was abignificant positive correlation ( $\mathrm{p}<.01, \mathrm{r}=-.227$ ) between the two types of expenditures.

TABLE 9 :
Pre-Kindergarten/Kindergarten larticipation, Staffing and Cost

| SES | Public Students | Non- <br> Public <br> Students | ND <br> Students | Total <br> Students | Cost | Prof. Staff | $\begin{array}{r} \text { Non- } \\ \text { Prof } \\ \times \quad \text { Staff } \\ \hline \end{array}$ | Cost <br> Per <br> Student | Students Per Prof. Staff | $\left\|\begin{array}{c}\text { Students } \\ \text { per } \\ \text { non-p } . \text { of } \\ \text { Staff }\end{array}\right\|$ | Salary | Salary Per Staff Member |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Low | 10,676 | 466 | 0 | T; 142 | S4, 293,000 | 36.3 | 474 | \$385.30 | 30.69 | 23.51 | $\$ 2,85 \dot{4}, 000$ | \$3,409.80 |
| بiddle | 2,077 | 126 | 7 | : 2,210 | 933,000 | 116 | 79 | 422.17 | 19.05 | 27.91 | 618,000 | .3,169:23 |
| High | 1,519 | 64 | - 0 | 1,583 | 563,000 | 108 | 60 | 355:65 | 14.66 . | ${ }^{8} 26.38$ | 458,000 | 2,726, 29 |
| Voc. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $\cdots$ |
| No ṠES | * 70 | - 0 | 0 | 70 | 26,000 | 7 | 6 | 371.43 | 10 | 11.67 | 18,000 | 1,384.62 |
| Total | 14,342 | 656 | 7 | 15,005 | 5,815,000 | 594 | 619 | 387.54 | 25.26 | 24.24 | 3,948,000 | 3,254.74 |


| SES ' | Percent of <br> Public Particidants | Percent of Non-Public Participants | Percent of N\&D Particıpants | Percent of Total Participants |
| :---: | :---: | :---: | :---: | :---: |
| LOW. | $15.8 \%$ | $5.8 \%$ | $\begin{array}{r}  \\ \hline \end{array}$ | 14.7\% |
| MIDDLE | $13.0$ | 7.2 | 4.4 | $12.3$ |
| HIGH: | 21.2 | $8.0$ | $0.0 \ldots$ | $19.6 .$ |
| VOCATIONAL | $0.0$ | 0.0 | $0.0$ | 0.0 |
| No SES | 68 | 0.0 | 0.0 | 6.4 |
| TOTAL | 15.6 | 6.2 | '1.0 | 14.5 |

Non-Standárd English Participation, Staffing and Cost


| SES | Percent of Public Participants | Percent of Non-Public Participants | Percent of N\&D Participants | Percert of Total-Participants |
| :---: | :---: | :---: | :---: | :---: |
| LOW | - $11.8 \%$ | . $8.1 \%$ | $\therefore \quad 30.9 \%$ | $11.5 \%$ |
| MILDLE | 1.1 | 0.4 | . ${ }^{\circ} 0.0$ | $1.0$ |
| HIGH | 0.7 | $0: 4$ | 0.0 | 0.7 |
| VOCATIONAL | 0.0 | $0.0$ | 0.0 | 0.0 |
| NO SES | 0.3 | 0.0 | 0.0 | $\cdots \quad 0.3$ |
| TOTAL | 8.8 | 6.2 | 19.9 | - 8.7 |

B. School

For the academic year 1975-76 there were 3,300 elementary and.secondary schools in New Jersey ( 2,464 public ànd 838 nor-public). Of this total,. $1,55.7$ ( $47.2 \%$ ) participated in $\operatorname{ESEA}$ Title I programs.

Individualized schools have not been, classified accnrding to socioeconomic status; however, by assuming a homogentef ${ }^{\text {fity }}$ of SES throughout a school district, SES levels and community type levels can be assigned to each school. In this manner it was determined that 298 ,schools ( $19.1 \%$ ) were from high SES LEAs; 521 schools ( $33.5 \%$ ) were from middle SES LEAS; 676 schools ( $43.4 \%$ ) from low SES LEAs; ' 12 schools ( $0.8 \%$ ) were from Vocational-Technical' LEAs; and 50 schools ( $3.2 \%$ ) were from LEAs with no socioeconomic status level.

Of the 1557 schools participating in. ESEA Title.I, $1413^{\prime}(90.8 \%)$ administered Language Expèri.ence programs, 508 ( $32.6 \%$ ) Computational Skillis programs, 530 ( $34.0 \%$ ) Kindergarten/Pre-Kindergarten programs, and 362 ( $23.3 \%$ ) NSE programs. Of the schools participating, in Language Experience and Computational Skills programs, 465 schools administered both programs, 948 only, Language Experience, and 43 only Computational Skills. Table 11 presents information coñcurning the number of schools in each SES category who participated in each of the four ESEA Title I programs.

Number. of Schools Per Program by ${ }^{\text {S }}$ SES $^{1}$ :

| SES | $\begin{array}{ll}\because & \text { Language } \\ \because & \text { Experience }\end{array}$ | Computational Skills | Non-Standard English | Pre-Kindergarten Kindërgarten |
| :---: | :---: | :---: | :---: | :---: |
| . . Low | ${ }^{\circ} \mathrm{C} 46$ (45.7\%) | 240 (47:3\%) | $315^{\circ}(86.4 \%)$ | 241 (45.5\%) |
| Middle | 474 (33.8\%) | 159 (31.3\%) | $32(8.8 \%)$ | 157 (29.6\%) |
| High. | $236{ }^{\text {\% }}$ (16.78) | -94 (18.5\%) | 17 (4.7\%) | 123 (23.2\%) |
| Vocational | ${ }^{12}(0.9 \%)$ | $4 \quad(0.8 \%)$ | $0 \quad(0.0 \%)$ | 3 (0.6\%) |
| No SES | $45 \quad(3.2 \%)$ | 1.1 (2.2\%) | $0 \quad(0.0 \%)$ | 6 (1.1\%) |
| Total | 1413 | 508 | 362 | 530 |

${ }^{i}$ The percentages in the table refer to the percentage of those schools. participating in each program (e.g., $45.7 \%$ of all schools participating in Language Experience Programs, were from low SES districts.)

The school-wide information obtainable for each of the four programs concerned numbers of students participating; number of professional and non-professional staff, number of days the program,was in operation, when the programs was in operation (during schơol hours and/or after), and the number of minutes per student per, week. From this information, it was then possible to obtain, for each program, an average student-staff ratio, an average minutes per week per instructor and finally an average minutes per week per student per instructor. This information (obtained for each program) was then correlated with NJEAP' fourth and seventh grade 1975 aggregated school resultés to assess pertinent relationships (there were not enough schools for which the NJEAP was administered and programs offered in tenth or twelfth grades to obtain meaningful relationships). Again, because of the effect of socioeconomic status, these. analyses were performed according to SES group.

It was not feasible to analyze relationships concerning programs adopted/adapted because the variability betweer. schools concerning number of adoptions, was very " small.

The remainder of the results for this section will be ánalyzed by progṛam.

## Language Experience

There were 1407 schools ( $99.6 \%$ of the schools participating in Language Experience programs) whose programs were administered during school hours. On the average the
programs were :administered $4 . \widehat{05}$ days per week. Each participating student had 148.54 minutes of ESEA Title I'instruction per week; while the average time per week per student\%per staff member was 53.76 minutes. The average pupil-staff mémber ratio was 24.02 students per staff member. This information by SES groù, is presented in Table 12.

Table 13 presents the correla ion coefficients between selected ESEA Tityle I variables and 1975 NJEAP reading resưlits for each SES grouping. For all three SES * categories, there was a significant negative correlation between achievement. and numberaf students per instructor: This relationship indicates that for those schools having a smaller ratio (i.e., more instructors per • student), the average educational achie wement level was higher. This result supports similar results found in the district wide comparisons.

Additional sighificant results ( $\quad(<, 01$ ) were present for the iow SES group between achievement and minutes per week per student per instructor añd minutes per week per student ( $\mathrm{p}<.01$ ). The correlations indicated that 1 ) = these . low socioeconomic schools, more instructional time for each 'student.per instructor was related to a higher average achievemeric level; and 2) the poorer performing. students were receiving more.instructional time. These results were not present for the middle or high SES groups for fourth grade.

| SES. | ${ }^{1}$ Average Days Per Week of̂-Program | Áverage Minutes per Teek per Student | : Average Students per Instructor | Average <br> Minutes për Week per <br> Student per Tinstručtor |
| :---: | :---: | :---: | :---: | :---: |
| Low. | - . 4.79 | $\cdots i 62.10=$ | $29: 34$ | 46.37 |
| Middle | $4.51-$ | $\cdots \quad 128.81$ | 17.28, | 55.96 |
| High | $4.54^{\circ} \cdot<$ | 149.88 | $16.19{ }^{\circ}$ | $\cdots 75.74$ |
| Vocational ! | $\therefore \quad 5.00{ }^{\prime} \therefore$. | " 199.17 | 24.13 | 79.67 |
| No SES | 4.56 | 145.18 | 11.24 | 93.33 |
| . Total | 4.65 | 148.54 | 24.02 | 53.76 |

TABLE 12
LANGUAGE EXPERIENCE SCHOOL INFORMATION

FOURTH GRADE SCHOOL CORRELATIONS OF ESEA TITLE I
AND EDUCATIONAL ACHIEVEMENT

| SES . - n | Reading <br> Test | Math Test |
| :---: | :---: | :---: |
|  | $\dot{\sim}$ |  |
| Students per instructor | -0.254** | -0.251** |
| Minutes per week prr student per instructor | 0.422** | 0.236** |
| Minutes per student per week | -0.194** | -0.421** |
| Middle . ${ }^{\text {. }}$ | . |  |
| Students per instructor | -0.247** | -0.089 |
| - Minutes per. week per student per'instructor | 0.123 | 0.188 |
| Minutes per student per week | -0.116 | -0.061 |
| High |  |  |
| $\cdots \quad$ Students per instructor | -0.289* | -0.401* |
| $\therefore \quad$ Minutes per week per student per instructor | -0.103 | -0.365* |
| - Minutes per student per week | -0.194 | -0.365* |

* significant $p<.05$
** significant $p<.01$

Table 14 presents the same correlational relationssinips for those schools administering the seventh grade ín NJEAP and servicing students with ESEA Title I programs in that grade. The only significant relation ( $p<01$ ) for seventh grade concerned student-instructior ratio and. achievement for the low SES groups of schools. Similar to other results obtained, a smaller student-staff-ratio was related to a hìgher reacíño achievement level. No other significant relationship existed.

## Computational Skills

Students in Computational Skills programs received instruction on an average of 4.63 days per week for 157.05 minutes per week. There were 14.22 pupils per staff person and the mean time for each student per instructor wàs $57 ; 32$ minutes per week. Table 15 presents this information by SES groups.

The correlations between Title I information and fourth grade mathematics achievement appears in Table 13, along with similar data for Language Experience:

The results for mathematics resemble those for reading. For the low SES group, there was a strong nerative. correlation ( $\mathrm{p}<.01$ ) between achievement and studentinstructor ratio and achievement and minutes per student while a strong positive relationship existed ( $\mathrm{p}<.01$ ) between achievement and minutès per student per instructor. As for the Language Experience program, thid combination of significant correlations indicate that those schools with more individualized

TABI.E -14
SEVENTH GRADE CORRELAIIONS OF ESEA TITLE I
AND EDUCATIONAL ACHIEVEMENT

| SES . | Reading Test | Math Test |
| :---: | :---: | :---: |
| Low | $\begin{array}{rr}\cdot \\ & \\ & \end{array}$ |  |
| Students per instructor | -G.709*:* | -0.714** |
| Minutes per week per student per instructor | -0.141 | 0.004 |
| Minutes per student per week | 0.165 | 0.143 |
| $\bigcirc$ Middle | * |  |
| Students per -instructor | $-0.409$ | -0.517 |
| Minutes per week per student per instructor | 0.292 | 0.617 |
| Minutes per student per week | -0.129 | -0.163 |
| High |  |  |
| Students per instructor ' . | -0:200 | - |
| - Minutes per week per student per instructor | -0.738 | - |
| Minutes per student per week | - 00.738 | - |

* significant p<. 05
** significant $p<.01$

| SES | Average Days P̀er Week of Program | Average Minutes per Week per Student | Average Students per Instructor | Average <br> Minutes per Week per <br> Student per Instructor |
| :---: | :---: | :---: | :---: | :---: |
| Low | 4.71 | 170.92 | 14.74. | 51.14 |
| Middle | 4.44 | $131.68{ }^{\text {. }}$ | 12.60 | 60.23 |
| High | 4.66 | 152.82 | 14.59 | 87.33 |
| Vocational | 5.00 | 210.00 | 19.33^ | 93.33 |
| No SES | 4.55 | 136.82 | 9.43 | 71.67 |
| Total | 4.63 | 157.05 | 14.22 | . 57.32 |

TABLE 15
COMP UTATIONAL SKILLS SCHOOL INFORMATION
attention for a longer period of time were the schools in which the students performed best on the mathematics test.

There were no significant correlations for the middle SES group. For the high socioeconomic group, there were significant ( $p<.05$ ) negative correlations for all the relationships with achievement. The negative correlation for time of instruction per week with achievement indicates that the better performing schools are administeriry the Computational Skills program. for a lesser amount of time; or conversely, those schools which need the Title $I$ instruction most (i.e., poorest average achieving schools), are administering the program, on the average, for a longer amount of time.

T'able 14 presents the same correlations for seventh grade mathematics achievement. Because of small sample sizes, the Spearman rank-order correlation coefficient was used. Further, bécause of small sample sizes, correlations could not be calculated for the high SES group.

The only significant relationship (p<.01) was a negative correlation between NJEAP math and students per staff person for the low SES group.

Non-Standard English
Of the 362 schools participating in Non-Standard English programs, 348 (96.1\%) administered their program during
school hours. Overall, NSE programs were administered 4.72 days per week, during which students spent 169.66 minutes per week in NSE programs and the average time per student per staff member was" 53.20 minutes per week. There were 21.36 students" per staff member in NSE programs. Table 16 presents this information, by SES group.

## Pre-Kindergarten/Kindergarten.

There were 530 schools who participated in Pre-Kindergarten/ Kindergarten programs. Of this total, 526 , (99.2\%) administered their program during school hours. Information, by SES, pertaining to the Pre-Kindergarten/Kindergarten programs is presented in Table 17.

In general, these programs were administered 4. 7.5 days per week. Each child received an average of 257.27 minutes per week of instruction (or 80.56 minutes per week for each student per instructor). There were 8.78 students per staff member.

| SES | Average Days Per Week of Program | Average Minutes per Week per Student | Average students per Instructor | $\|$Avnrage <br> Minutes per Week per <br> Student per Instructor |
| :---: | :---: | :---: | :---: | :---: |
| Low | 4.93 | 173.60 | 22.22 | 49.51 |
| Middle | 3.22 | 127.66 | 8.50 | 95:00 |
| High | 3.82 | 179.12 | 6.11 | 167.17 |
| Vocational | 0 | 0 | 0 | 0 |
| No SES | 0 | 0 - | 0 | $0$ |
| Total - | --7.72 | ${ }^{\circ} 169.66$ | 21.36 : | 53.20 |

TABLE 16
. NON-STANDARD ENGLIISH SĊHOOL INFORMATION

64


TABLE 17
PRE-KINDERGȦRTEN/KINDERGARTEN SĆYOOL INFORMATION

## Conclusions

Certain general relationships between ESEA Title I and educational. achievement were evidenced throughout the socioeconomic groupings.

Those LEAs with higher average staff Title I salaries were usually the ones with the poorer performing students in both reading and mathematics. The key to this: relationship lies in the definition of a large average salary figure. If a high average salary figure represents high pay to few staff: members, then it may be concluded that a small Title I staff is not effectively meeting. the academic needs of the students.

The inverse relationship between achievement and studentinstructor ratio strenghtens the conclusions drawn from. the relationship between achievement and salary per instructor. Those LEAs with a larger ratio (ie., less instructors to serve the students) were the poorer performing LEAs. This result when taken in context with the a,hievement;salary per instructor correlation, may indicate that those LEAs with a small, but we 'I paid Tickle I staff, are not adequately meeting the students needs. There should be a larger staff, resulting in a smaller student-instructor ratio.

The generally positive relationship between achievement and time spent per instructor in Title I instruction indicates that those schools allotting more time per student per instructor for Title. I instruction were the better performing schools. The results indicate
.that perhaps more time allotted for these additional. reading and mathematics programs could result in increased mastery levels for: the students:

Except for isolated insțancæs, there-was no relationship between achievement and number of programs adopted/ adapted. This may; however, be an arifact of the data., : There was not a large vaitability between achievement and : number of oprograms, which may. cause spurious correlations. It is important to note all of the data obtainable from the ESEA Title I applications were examined; thôse conclusions drawn were based solely on the analyisis of . the available data. It is apparent that the Title I applications do not address all areas of concern for - analyses of ESEA Title I for New Jersey.

This study analyzed the existing data in both. a descriptive manner and a correlational manner. It must be remembered that correlation does not imply a causation, only that $a^{\prime}$ relationship exists between certaint eqntities.

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$$

APPENDIX A

1975-76 Title I District Data Sheet

## Appličation Page

1
District Name
County Number**
County Name .
District Number*


1 Total Expenditures
FY 1973-74
\$ $\qquad$
FY 1974-75
\$ $\qquad$ (56-63)

1 Federal Funds

FY 1973-74
FY 1974-75
$\$$
$\$$
1

District Number*
Average Daily Attendance
FY 1973-74 $\qquad$
FY 1974-75 $\qquad$
1" Preliminary Allocation


1 Amount of Request $\$$ (23-30)

1
Title I Participants
Public $\qquad$
Nonpublic $\qquad$ (36-40)
$N \& D$
1
Language Experience

## Grade Levels:*:



Public $\qquad$

Nonpublic

$N \& D$
Total


Full Prof
Part Prof
Full Non-prof


Part Non-r rof

District Number* Cost.

Non Standard English
Erade Levels\%\%
Public
Nonpublic
$N \& D$
Total
Full Prof
Part Prof
Full Non-prof
Part Non-prof:
Cost
1 Computational Skills Grade Levels**

## Public

Nonpublic
N\&D

## Total



Add H1.1 Amount of Funds
(A) $\$$ (15-22)
(B) $\$$ (23-30)
(C) $\$$ (31-38)

1 . Total. Allocation
Preliminary
\$ (39-46)

Final
$\$$ (47-54)

1 Total Requested
Preliminary
$\$$
Final.
$\$$ (63-70)

1 Total Approved
Preliminary
$\$$ $\qquad$ (71-78)

5

District Number**
Total Approved
Final
$\$$
4. Enrolled in Public Schools own School District

Grade Span** $\qquad$ (13-14)

Number schools $\qquad$ (15-16)

Number of Residing Children $\qquad$
Other School District (s)
Grade Span** $\qquad$ (22-23).

Number of Residing Children $\qquad$ (24-28)

4 Enrolled in Private Schools own School District

Grade Span**
Number of Schools


Number of Residing Children
$\qquad$ (31-32) (33-37)

Other School Disțrict(s)
Number of Residing Children
4 Neglected and Delinquent
Grade Span**
 (43-44)

Number of Schools


Number of Residing Students $\qquad$ (47-51)

Not Enrolled but Eligible


4 Data SourcejLow Income
( 1 if checked; 0 if not checked)
Aid for Dependent Children
Free Schad 1 Lunch
School Strívéy
Health -Statistics
Housing Statistics
Employment Statistics $\qquad$
U.S. Census $\qquad$
Other.
Total Number of Attendance Areas
$\qquad$
$\qquad$

11 Number Eligible Nonpublic


District Number**"
$N \& D$

Nonpublic
.N\&D
$\qquad$ Total N\&D
Total Public
 (30-31)
$\qquad$ $(32-36)$

Total Nonpublic $\qquad$ (37-41).
$\qquad$ (42-46)
Combinations of Fiscal Data ( $1=y e s, 2=n o$ )
Reg, A, Realloc $\qquad$
Reg, A, Carry $\square$
Reg, A, Current
Reg, B, Reailloc
$\theta$ .
$\qquad$
Reg, B. Carry $\ldots$

Summer, A, Real $\qquad$
Summer, A, Carry $\qquad$
Summer, A, Current $\qquad$
$\qquad$
Summer: B, Carry $\qquad$
Total, A, Realloc $\qquad$
Total, A. Carry $\square$(58)

Total, A, Current(59)

Total; B, Realloc
Total, B, Carry
Total", B. Current $\qquad$
Budget Breakdown (Part A)
Line 100 Administration
$\$$


Line 200 Instruction
\$
 (71-78)


Number participants
N\&D Participants
Add \#4. 1 Kindergarten

Public
Nonpublic
$N \& D$

(62-66)
(67-71)
(72-76)

- $-9 \ldots .(80)$

Distrift Number*
(1-4)
A.
(80)

Language Experience

| P 11 |  |  |  |  |  |  | : ${ }^{\text {a }}$ |  | (7-34) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $01(5-6)$ | 1 | $\begin{aligned} & \text { District } \\ & \text { Standard } \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { Eligible } \\ & \text { Students } \\ & \hline \end{aligned}$ | Above Standard | $\begin{gathered} \text { Below } \\ \text { Standard } \\ \hline \end{gathered}$ | NSE | Eligible to participate | Selected to participate |  |
|  |  |  | , | - |  |  |  |  |  |
|  | 2 | $\bullet$ |  |  |  |  |  |  | (35-62) |
| 02 (5-6) | 3 | - |  |  | $\therefore$ |  |  |  | $(7-34)$ |
|  | $4 \beta$ |  |  |  |  |  | , |  | (35-62) |
| 03 (5-6) | 5 |  | . |  |  |  |  | , | (-54) |
|  | 6 |  |  |  |  |  |  |  | (35-62) |
| $04 \cdot(5-6)$ | 7 |  |  |  | - * |  |  | , | (7-34) |
|  | 8 |  |  |  |  |  |  | . | (35-62) |
| $05(5-6)$ | 9 |  |  |  | $r$ |  |  |  | (7-34) |
|  | 10 | , |  | . |  |  |  | - | (35-62) |
| $06(5-6)$ | 11 |  | ; | - |  |  |  |  | (;-34) |
|  |  |  |  |  |  |  |  |  |  |
|  | 12 | . |  |  |  |  |  |  | 35-6:" |

District Number*

P12


*


7

Computational Skills

(one must be completed for each school within the district).
Application
page

|  | Sistrict Number* |
| :--- | :--- |
| $\because$ | School Number* |
| P. 13 | Unduplicated Participants |



## District Number*

'School Number*

P. 13 Unduplicated Participants 9

$\qquad$ (12-15)
 (16-19)

12

$(20-23)$
$(24-26)$
Nonprofesiional Staff
(27-29)

## Participating Children

Public
Nonpublic
N\&D
Number of Days Project in Operation
During School Hours (1=yes, 2=no)
Other Hours (1=yes, 2=no)
Minutes/students/week (convert to minutes)
P. 27 NS

Number Professional Staff
Non-proféssional Staff
(30-33)
(34-37)
(38-40)
(44-46)
(47-49)
$(50-52)$
Participating Children
Public
Nonpublic
$\mathrm{N} \& \mathrm{D}$
Days Project in Operation $\qquad$
$\qquad$ (57-60)
i (61-63)

During School Hours
Other Hours
—__
$\qquad$ (67-69)
Minutes/students
Add 3.7 Computational Skills


During School Hours

## Other Hours

Minutes/student
Add 4.4 Pre K/Kindergarten
Number of Professionals $\qquad$ (21-23)

Non-professionals $\qquad$ (24-26)

Public $\qquad$ (27-30)

Nonpublic
$\mathrm{N} \varepsilon_{\mathrm{D}} \mathrm{D}$
$\qquad$ (31-34)

Days of Week
 (35-37)
$\circ$

During School Hours
Other Hours
Minuites/student (41-43)

2

## Instructions for Title I Data Collection

1. District number is a four digit number to be obtained from the computer printouts (Add leading zeros if the number is less than four digits).
2. School number is a three digit number obtained in the same manner as district code.
3. County Code - use the following codes:

Atlantic - 01
Bergen - 03
Burlington - 0
Camden - 07
Cape May - 09

- Cumberland - 11

Essex - 13
Gloucestèr - 15
Hudson - 17
Hunterdon - 19
Mercer - 21
Middlesex - 23
Monmouth - 25
Morris - 27
Ocean - 29
Passaic - 31
Salem - 33
Somerset - 35
Sussex - 37
Union - 39
Warren - 41
4. Round all numbers to nearest whole number.
5. Use the following code for Grade level

> P - pre kindergarten
> K - kindergarten
> $1-9$ - 1st to 9 th grade
> A - 10th grade
> B $-11 t h$ grade
> $C$ - 12th grade

For all items marked Grade Level, record the code for the lowest grade level and the code fol the highest"grade. For example, if the Grade levels are 2.3,4, and 10. use the following code

6. On page 6, for the number of different types of supportive scryices, you will have to count the number of types of services: and place that number on the sheet.
7. For the Budget breakdown on Page 6 and 7 , use only Part A budget
8. In'the schnol data sheet, page 2 and 3 , for the entry marked Minutes/Stude: $t$, if the data in the Title I application is not given in minutes, you must convert the time to minutes.

0
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-
$\qquad$

APPENDIX. B
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ERIC
8;

- Urban C'enter (UC) -. densely populated with extensive development.
- Urban-Suburban (US) - near an urban center but not as highly developed, with larger residential areas.
:- Suburban (S) - predominantly single family residential with a short distance $c$ an urban area.
- Suburban-Rural (SR) - rapidly developing area, but still large tracts of open land available for development.
- Rural (R) - scattered small communities and isolated singlefamily dwellings.
- Rural Center (RC) - highly density core area with surrounding rural municipalities.
- Rural Center Rural (RCR) - small developed core area surrounded by rural areas.
- Vocational (V) - primary emphasis on vocational training under a separate educational jurisdiction.
- Regional District (R) - an educarional jurisdiction established to serve coveral surrounding communities.


[^0]:    ${ }^{2}$ A definition of each community type appears in Apperidix. $B$.

[^1]:    LEAs may use a combination of data, sources. Hence, the total is mare than the 462 LEAs.

[^2]:    ${ }^{4}$ Correlations for Computational Skills are also included in Table 6. The computational Skills information will be discussed in that section.

[^3]:    5 The larger the variability, the morë stable and meaningful the. correlation coefficient wlll become.
    ${ }^{6}$ Correlations for Computational skills are also included in Table 7. The Computational Skills information will be discussedin that section.

[^4]:    ${ }^{7}$ Aithough the correlation between NJEAP reading and cost per student ( -0.172 ) is significant and the correlation between NJEAP mathematics and cost per student ( -0.203 ) is greater in absolute magnitude, it does not necessarily follow that that correlation be significant (at the same level). The significance of the correlation coefficient is a function of the sample size. For a smaller sample size, a larger correlation coefficient is necessary to be.significant. the correlation for NJEAP reading is based on a larger sample size than for NJEAP math. Hence, to obtain a significant correlation, a larger coefficient is.needed. for math than for reading. .

