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ABSTRACT

Congress has requested that the National Institute of Education (NIE) assess the current effectiveness of compensatory education programs in meeting their fundamental purposes, and examine a alternative methods by which the effectiveness of compensatory programs might be improved. These requests are included in the provisions of Section 821, Public Law 93-380. This paper describes the major research projects which have been designed and which together will enable NIE to respond to Congress' requests. The 35 research projects, organized into the four areas of funds allocation, compensatory services, student development, and administration, are described. (RC)

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The NIE Compensatory Education Study:
Major Research Projects¹

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The National Institute of Education

U.S. DEPARTMENT OF HEALTH,
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NATIONAL INSTITUTE OF
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The Education Amendments of 1974 (Public Law 93-380), the major education legislation considered in the 93th Congress, instructed the National Institute of Education (NIE) to conduct a study of compensatory education, including compensatory programs financed by States and those financed under authority of Title I of the Elementary and Secondary Act (ESEA). That title, the largest Federal education effort, provided \$2 billion in 1976. Most of these funds were used to improve educational programs for low-achieving students in school districts serving children from low-income families.

Specifically, Section 821 instructed NIE to conduct a study of compensatory programs which would:

- ° Examine the fundamental purposes and effectiveness of compensatory education programs
- ° Analyze the ways of identifying children in greatest need of compensatory education
- ° Consider alternative ways of meeting these children's needs

¹ This paper is based on Evaluating Compensatory Education: An Interim Report on the NIE Compensatory Education Study which was submitted to the President and the Congress on December 30, 1976. The Interim Report presents a comprehensive discussion of NIE's strategy in designing the Study and reports new data from the National Survey of Compensatory Education, one of the first projects commissioned by NIE. A second Interim Report is due in September, 1977, and the Final Report will be presented in September, 1978.

- ° Consider the feasibility, costs, and consequences of alternative means of distributing Federal compensatory education funds

NIE's research is intended to help Congress during its deliberations on the future of Title I of the Elementary and Secondary Education Act. NIE is required to examine compensatory education, in general, and to provide Congress with specific recommendations about the range of possible objectives, funding methods, administrative techniques, and educational programs.

The provisions of Section 821 can be seen as including two major requests from Congress. The first requires NIE to assess the current effectiveness of compensatory education programs in meeting their fundamental purposes, and the second charges NIE with an examination of alternative methods by which the effectiveness of compensatory programs might be improved. This paper describes the major research projects which have been designed and which together will enable the Institute to respond to Congress' requests.

The design of the NIE study illustrates how the evaluation of program effectiveness has developed in recent years. A decade of experience with evaluating social programs has made apparent to researchers the difficulty of performing any sort of straightforward "input-output" analysis of the effects. The characteristics of a Federal program can only very rarely be directly related to changes in, for example, average reading proficiency. Events and outcomes are instead influenced by a large number of independent factors, which both determine how the Federal program really operates and may themselves be changed by it so that it is difficult to separate out the "Federal" impact.

In assessing a program for purposes of improving it (or judging whether it can be improved), evaluators therefore cannot simply match a program's characteristics as conceived by its originators with summary outcome measures.

A large number of other factors which affect program implementation or jointly affect the program's ultimate concerns are also relevant. Thus in the case of Title I the extent to which the program in fact creates a net increase in the amount of money being spent on its target population or the extent to which funds are being used for instructional programs which generally have been found effective may be more sensible topics for a large-scale evaluation to examine than the overall impact of the program on children's achievement scores.

The NIE Compensatory Education Study therefore is concerned with a wide range of factors affecting the operation of Title I. For this reason a large number of separate but complementary studies were implemented, rather than a single large-scale evaluation. Moreover, this same research strategy follows from a second important consideration in the evaluation of social programs' effectiveness. Such programs can and generally do have multiple purposes; this, as well as the large number of independent factors affecting their implementation and impact, requires that programs be evaluated in terms of a number of different outcome measures.

To identify the fundamental purposes of compensatory education, NIE studied the provisions of Title I and its various amendments, accompanying House and Senate Reports, and Congressional debates. Those sources indicated that Title I of the Elementary and Secondary Education Act had three fundamental purposes:

- ° To provide financial assistance to school districts in relation to their numbers of low-income children and, within those school districts, to schools with the greatest numbers of low-income students
- ° To fund special services for low-achieving children in the poorest schools
- ° To contribute to the cognitive, emotional, social, or physical development of participating students

In its recognition that the program has several purposes, NIE's strategy for assessing compensatory education programs differs from the early national evaluations of Title I. They considered only the third fundamental purpose -- contributing to children's development -- and often rendered judgments on the efficacy of the program without accounting for the diverse ways in which Local Education Agencies (LEAs) had implemented it. The Institute's research is designed to provide clear information about what Title I is accomplishing toward achievement of each fundamental purpose. In addition, it examines the feasibility and effects of alternative ways of organizing Title I, with particular emphasis on alternative procedures for allocating funds.

The overall study consists of 35 research projects, organized into the four areas of funds allocation, compensatory services, student development, and administration. This paper describes the major research projects which NIE is conducting in each of these areas.

I. FUNDS ALLOCATION

NIE's research on funds allocation is designed to assess the ways in which the existing system for allocating compensatory education funds serves Title I's first fundamental purpose -- providing money for districts and schools serving low-income children. It also describes research on possible alternative allocation methods which were prominent in Congressional debate

about Title I in 1974. Following a brief review of the current funds allocation system, three principal research areas are discussed.

- ° Research on the funding patterns created by the current allocation system.
- ° Research on the effects of possible changes in the definition of poverty on the allocation of Title I funds.
- ° Research on the effects of changing the Title I eligibility criterion from poverty to achievement.

REVIEW OF CURRENT FUNDS ALLOCATION SYSTEM

At present, Title I funds are distributed using an allocation system which involves a number of calculations and types of data. The following section briefly reviews the process through which funds are allocated to school districts, and then to schools and students within these districts

Procedures for Allocating Funds to School Districts

Title I, which in Fiscal Year 1977 will provide over \$2 billion for elementary and secondary education, provides for grants to LEAs and to SEAs. The title has two sections: Part A, funded at \$2.05 billion in Fiscal Year 1977, which provides grants to LEAs, to State agency education programs, and to the Bureau of Indian Affairs; and Part B, funded at \$24. million, which provides grants to States with "high effort," and under which the States choose LEAs in which to fund special projects. (High-effort States are those in which the ratio of non-Federal expenditures on education to personal income is high.)

NIE's research focuses upon the allocation of Part A grants to LEAs. These grants account for 83.1% of total Title I expenditures.

An LEA's allocation under Part A is determined by formula. For each school-age child from a low-income family, the LEA is entitled to a Feder

grant worth 40% of the average per-pupil expenditure in that State. An LEA's entitlement, therefore, is computed by multiplying the number of formula-eligible children by the cost factor of 40% of the State's average per-pupil expenditure. However, the baseline from which the cost factor is estimated cannot exceed 120% and cannot fall below 80% of the national average per-pupil expenditure. Because the appropriations for Title I fall short of the level of authorization, LEAs do not receive full entitlements of 40%, but only about 16% of the State expenditure for each eligible child.

There are several categories of eligible children. For the sake of clarity, eligible children were referred to earlier as school-age children from low-income families. To be more precise, those eligible for counting in determining LEA grants include the following:

- ° Children aged 5 to 17, inclusive, from families below the Orshansky poverty level (a set of 124 poverty lines, each appropriate to a different family type)¹
- ° Two-thirds of the children aged 5 to 17 from families receiving payments under AFDC which total more than the current poverty level for a nonfarm family of four
- ° Children aged 5 to 17 being supported in foster homes with public funds or living in institutions for neglected or delinquent children, which depend on the Local Education Agency for educational services

The income and AFDC data required for the formula are readily available for the entire Nation only to the county level. As a result, the U. S. Office of Education applies the mandated formula only to this level, and

¹ The Federal poverty definition, named for its developer Mollie Orshansky, sets poverty-level incomes by estimating the costs of adequate diets for different sizes and types of families, and the typical costs of other goods and services. It was incorporated into the Title I formula in 1974.

it delegates to the States the responsibility for allocating county grants to LEAs, in cases where LEAs are not coterminous with counties. These subcounty allocations, which affect most LEAs, must be based on counts of low-income children, and States are required to use procedures and data approved by the Commissioner of Education.

Procedures for Allocating Funds Within School Districts

LEAs have considerable control over the Title I funds allotted to them. Although their use of money is governed by a number of Federal and State regulations and guidelines, these rules leave the LEAs latitude concerning which schools and pupils to select for Title I programs and how to distribute the federally funded resources among these schools and pupils.

The regulations have two major objectives: (1) to ensure that Title I services go to schools in the poorest areas and serve the lowest achieving students in them; and (2) to ensure that services paid for with Title I funds are additional to those that all students in the district receive or would receive in the absence of Title I.

In selecting the recipients of Title I services, LEAs are expected to make the following decisions:

- ° Identify eligible schools from among the schools in the district by using a poverty criterion
- ° Select target schools (that is, decide which of the eligible schools will, in fact, receive Title I services) and distribute services among the schools
- ° Identify eligible students in target schools by using an educational achievement criterion
- ° Target students in greatest need of assistance

FUNDING PATTERNS CREATED BY THE CURRENT ALLOCATION SYSTEM

The first part of the research on funds allocation concerns the effects of the Title I funding procedures described above on the actual allocations of compensatory funds received by different states, counties and school districts. It also describes the relationships between Title I and other educational expenditures.

Analyses of the Distribution of Title I Funds Among Categories of States, Counties and School Districts

The primary concern of these analyses is the degree to which Title I is fulfilling its first fundamental purpose -- to provide financial assistance to school districts serving low-income students. The research therefore explores the relationship between the incidence of poverty in a school district and the size of its Title I grant. It also investigates whether social and demographic characteristics other than poverty are related to the sizes of grants.

To conduct these analyses, NIE has assembled data that enable researchers to categorize jurisdictions according to a number of indices, such as the size of Title I grants, numbers of eligible children, population size, school enrollment, racial/ethnic composition, family income, region, and urban-rural and metropolitan-nonmetropolitan status.

These data can provide a full picture of the allocation pattern created by the current Title I system of formulas and procedures. For example, NIE will determine what percentage of Title I funds goes to central city school districts. The Institute also will compare these figures to the percentage of the Nation's school children enrolled in these districts and to the percentage of all poor children who live in these districts. Similar analyses will be performed for each of the other demographic indicators.

In addition to describing the overall distribution of Title I funds, the study will examine the effects of, for example, the cost factor, the reduction procedure, and different definitions of eligible children on this distribution.

The elements of the Federal formula for allocating Title I funds do not fully control distribution of such funds. As the summary of funding procedures has indicated, States have some discretion in allocating funds to the large number of LEAs that are not perfectly coterminous with counties, and this process may affect the extent to which funding patterns parallel those implied by a description of the program's formal requirements and characteristics. For this reason, a study of subcounty allocation is being conducted to provide information on the procedures and data used by States for this purpose. For those States in which subcounty allocation procedures are significantly different from the Title I formula, the study can approximate the differences between the amount of money received by various types of LEAs under the current process and the amount that would be received if the formula were applied directly. It will also contrast the advantages and disadvantages of the flexibility created by the current, mixed Federal-State system that allows States to select data and update counts. Finally, the study will assess the feasibility and desirability of several different approaches to subcounty allocation.

The study has already provided information on the procedures and data used by states to allocate funds to LEAs. The majority of States use formulas that parallel the one used by USOE to allocate funds to counties. More than half the remaining States use formulas that attempt to overcome the age of the 1970 Census data by emphasizing total counts of AFDC children.

In addition, the study shows that, although more than two-thirds of the States use Census data, fewer than half of those States use school district Census data compiled by the USOE. Instead, States use their own matching of school districts with Census areas. Other practices were identified in several States which affect the subcounty allocation process, including such practices as (1) reallocating "unused" funds, (2) redistributing funds among counties, and (3) altering the "hold-harmless" procedures mandated in the Federal regulations.²

Title I Effects on the Distribution of Educational Expenditures

Federal compensatory education funds are intended to help determine how education resources are distributed among the Nation's children and to increase the level of educational resources available to children attending schools in low-income areas. When assessing the impact of the current Title I allocation system, it therefore is important to consider its effects on the overall distribution of educational resources among different types of school districts. In collaboration with HEW's Office of the Assistant Secretary for Planning and Evaluation, NIE is conducting analyses to examine how far Title I and other federal education programs currently are effective in changing the distribution of educational resources among different types of districts. The focus is on whether funds are redistributed in favor of

2 NIE is also conducting a study of the poverty measures used by districts to allocate funds to schools. The study will provide information about the relationships between a school's poverty level and the amount of funds it receives and will also assess the extent to which funding patterns differ as a function of the particular poverty measure used.

districts which can be considered poor in terms of their median income, number of poor children, tax base, or expenditures per pupil.

NIE is also studying the impact of Title I spending on total educational spending by LEAs. In establishing Title I, Congress intended that there should be an increase in the real level of educational spending in recipient districts. It did not intend that the funds should serve merely as a form of tax relief, allowing LEAs to cut back on local spending. Therefore, Title I regulations include a "maintenance of effort" provision whereby LEAs must maintain their previous levels of expenditure.

Although these provisions make it impossible for an LEA simply to replace local funds with Title I money, a district receiving funds from an outside source may raise less additional money from local sources than would otherwise have been the case. During a period of inflation, when additional local funds are needed simply to maintain a given level of expenditure, Title I funds may be used to replace additional local taxes that would otherwise have to be raised.

In light of these possibilities, a study was initiated to determine the degree to which Title I has succeeded in raising levels of educational expenditures. Although the analyses are incomplete, it appears that Title I funds have been effective in raising expenditures on education. Approximately two-thirds of Title I funds are spent on truly additional educational services that would not have been purchased in the absence of these funds. Compared to noncategorical State grants programs, Title I funds have been more effective in increasing total expenditures, and far less likely to be used to support tax relief.

ALTERNATIVE MEASURES OF POVERTY

Dissatisfaction with the existing pattern of funds allocation was a major reason for the 1974 changes in the Title I formula. The most important of these changes was the adoption of the current "Orshansky" method of identifying poor families from Census figures.

Previously, a single-family income of \$2,000 a year had been used to define poor families for program purposes, and the children living in such families were counted in order to determine the size of Title I grants. By adopting the Orshansky index, which distinguishes different types and sizes of family, and is regularly updated, Congress both refined the definition of poverty in use and brought about substantial shifts in the pattern of funds allocation.

The adequacy of counts based on the Orshansky poverty index continues to be questioned. For this reason, the Educational Amendments of 1974 mandated three studies related to a poverty-based allocation formula. One is a study of methods of updating poverty counts, currently being conducted by the Secretaries of Commerce and Health, Education, and Welfare. A second closely related study is the Survey of Income and Education, which will produce accurate counts of children in poverty in 1975 for each State. The third is a study of The Measure of Poverty, supervised by the Assistant Secretary of Education.

NIE is currently conducting research on a number of alternatives for measuring poverty. These alternatives derive from the study of The Measure of Poverty, and also from recent work by Orshansky. The purpose of the work on alternative poverty measures is to determine the degree to which they have differential effects on the allocation of Title I funds.

Several measures will be studied. NIE is first examining a set of variations in the Orshansky poverty matrix which have the effect of shifting the current poverty definition up and down. Second, it will examine several variants of the Orshansky definition; although they use the same general standard of poverty, these variants reduce the number of family categories and employ different data and methods for updating the poverty income level. Two measures based on more recent definitions of, and data about, the cost of adequate diets will be studied. Finally, the analysis will include two definitions that differ substantially from the current definition: one uses a single cutoff for all families, and one uses the Orshansky cutoffs but applies them to "pretransfer" income (income excluding transfer payments like AFDC and public assistance).

ALLOCATION OF FUNDS BASED ON ACHIEVEMENT SCORES

Of the changes currently proposed for the allocation of Federal compensatory education funds, a shift from poverty measures to achievement scores is potentially the most far-reaching. Prior to the passage of the Education Amendments of 1974, there was intensive discussion of the desirability and consequences of allocating funds to States, districts, and schools on the basis of their numbers of low-achieving students. Although no such procedure was adopted, the Congressional mandate for this study instructs the Institute to explore alternative methods for allocating compensatory education funds.

NIE is conducting two studies to examine the potential effects of a change to achievement criteria. However, the choice between allocation using achievement scores and allocation using poverty counts cannot be made on the basis of research results alone. It depends ultimately on a political choice

about the characteristics of places and persons who are to benefit from funds the program provides. NIE's research can illuminate the practical consequences of a change in methods of funds allocation, but it cannot determine which method is "best" in a philosophical or an ethical sense.

To advocates of achievement-based funding, the appropriate way to distribute education funds is on the basis of children's educational performance. Since the ultimate aim of compensatory education is, they argue, to increase children's achievement, the best formula for distributing funds must be one which targets money directly to the children whose academic performance is low. Supporters of achievement-based funding regard poverty measures as proxies for low achievement; hence they argue that these measures do not efficiently identify low-achieving children. They favor using numbers of low-achieving children to distribute Title I funds, instead of numbers of children in poverty.

This view contrasts with the opinions of others who favor the use of a poverty criterion. They do not see poverty measures solely as proxies for a measure of low achievement, nor do they believe that using poverty as the Title I eligibility criterion must be justified in terms of its ability to identify the States, districts, or schools which contain most low-achieving pupils. Some advocates of a poverty-based allocation formula believe that the major role of a compensatory education program is to channel additional resources into areas where children are poor. Others believe that the purpose of compensatory education programs is to help low achievers, but they argue that the low-achieving pupils in poor areas must be given priority.

Though the philosophical differences between these two points of view are clear, the practical consequences of the choice between poverty and achievement may be less dramatic. A change in eligibility criteria will

make a difference in Title I only if it produces a different distribution of funds. Although the individual level correlation between poverty and achievement is far from perfect, the correlation between the numbers of poor and low-achieving children in a State, LEA, or school could be high, even if the individual level correlation were low. A school, district, or State could have high numbers of poor and of low-achieving students, even if very few students were both poor and low achieving. At the present time, the degree of overlap between counts of poor and of low-achieving students at the levels of States, districts, and schools is not known.

The purpose of NIE's research on achievement scores is to explore the practical consequences of the choice between poverty and achievement as criteria for allocating Title I funds. One part of the research focuses on the degree to which a change to an achievement criterion would, in fact, affect the distribution of Title I funds among States and LEAs. Another part of the research concerns the availability of the kinds of data needed to support an achievement-based funding system. A third part of the research explores the effects of adopting the achievement criterion on the operation of Title I within school districts -- on the identification of students to be served and the services received by students.

Because the technical problems of allocation of funds to States and districts are different from those of within-district allocation, the research on achievement-based funding is divided into two parts: (1) allocation to States and school districts, and (2) allocation within school districts.

Allocation to States and Districts

NIE's work in this area comprises three efforts: (1) obtaining comparable achievement data for as many States and their constituent school districts as possible, for estimating the distribution of low-achieving pupils among States

and districts; (2) estimating the patterns of funds allocation which would result from a change to achievement-based funding; (3) assessing the costs and feasibility of several strategies for obtaining data to permit a change to achievement-based funding to States and school districts.

Under the first effort, all States were surveyed and all potentially usable data collected. Both State aggregate and district-by-district achievement data were obtained where available. Because the States and districts use a variety of achievement tests -- and administer them to different samples of pupils at different times in the academic year -- the data files obtained from the States generally are not comparable with one another. The various files have now been adjusted using the Anchor Test tables (procedures for equating results of different tests) and similar techniques developed especially for this study. Though some of the State and district achievement score files may prove impossible to equate with others, it appears that statewide achievement data should be available for more than half the States, and district-by-district data for about one-third of the States.

The second effort will compare patterns of Title I eligibility and funding under achievement-based funding with the results of several poverty-based Title I funding systems, including the one now in force.

Under the third effort, five alternatives are being examined:

- ° A national norm or criterion-referenced testing program that would provide completely standard student achievement data for every school district
- ° A simpler national testing program which would produce national and statewide achievement figures (possibly from a very short "screening" test or other device reducing the test burden on students and teachers) with sub-State allocations relying on separate (e.g., State-run) testing programs

- ° A national data base obtained by collecting, equating, and standardizing diverse State testing programs
- ° Combinations of the above, which may use one data base for funds allocations among States and others for sub-State allocations
- ° The use of poverty or other Census-based data to allocate funds among States, and the use of the respective States' achievement testing programs to allocate funds to their constituent school districts

These alternatives are being evaluated according to their cost, accuracy, freedom from bias, and public acceptability, by a national panel of experts in the field of achievement testing.

Intra-District Allocation

The question of alternatives to current intra-district allocation procedures is addressed by the Demonstration Studies. The mandate offered an opportunity to study changes in intra-district allocation in action. The wording and history of Sections 821(a)(5) and 150 indicate that Congress intended these studies to be "working models" of types of allocation changes which had been proposed during deliberations on the Education Amendments of 1974. Through these demonstrations being conducted by 13 school districts across the country, NIE will gather information of practical use to Congress in considering changes in the process of intra-district funds allocation. The research will provide information about the effects of new ways of allocating Title I funds on the kinds of schools and students served under alternative allocation strategies, the numbers of students served, the instructional services they receive, the programs and delivery systems developed by school districts, the extra costs (or efficiencies) associated with different allocation patterns, and community support for the Title I program.

In designing the study to respond to these concerns, NIE focused on two major policy options. Specifically, districts were asked to consider changes in:

- School eligibility criteria--districts were asked to select either alternative poverty criteria for school eligibility, or a criterion based on achievement rather than poverty.
- Concentration--districts were asked to consider serving more or fewer schools, and more or fewer students within schools

The most popular alternative allocation procedure selected by the demonstration districts was allocation by achievement measures rather than by poverty, and most districts elected to serve more schools and/or more students than previously. The major reason offered was a desire to serve low-achieving students directly regardless of their attendance area or the school in which they are enrolled.

To observe the effects of those changes, NIE designed a 3-year study in the demonstration districts. Under the design, districts continued to operate Title I programs using standard allocation procedures in the 1975-76 school year, while planning the specific details of the changes they would make. During that year pre-change data on all outcome measures were collected, against which effects of the demonstrations would be measured. During school years 1976-77 and 1977-78, the demonstration districts are operating under the new allocation procedures, and data on the same measures are being collected.

The major objective of the demonstration study is to examine the impact of the districts' changed allocation policies on a number of outcome measures. The primary research questions are as follows:

- What effects do changes in Title I allocation policy have on the organization and administration of compensatory programs and the instructional services delivered within the demonstration districts?
- What effects do changes in Title I allocation policy have on the instructional and support services experienced by students of different types within the demonstration districts?
- What effects do changes in Title I allocation policy have on the composition (preservice achievement level, economic status, ethnicity, etc.) of the schools and students served by Title I within the demonstration districts?
- What effect does achievement-based allocation have on teaching and testing practices within the schools? Is there any evidence of negative incentives created by a school's awareness that success in raising students' achievement levels could decrease the school's funding in following years?
- What are the administrative costs and/or savings associated with changes in Title I allocation policy? What costs are nonrecurring, such as costs associated with planning; and what costs are recurring, such as costs associated with testing?
- What is the reaction of the community (especially parents) to changes in Title I allocation policy within the demonstration districts?
- What effects do changes in allocation policy have on the achievement of selected students within the demonstration districts? (This outcome variable will be explored for a subsample of districts depending upon the availability of adequate data for such an analysis.)

II. SERVICES

One of the largest of the research projects conducted for the Compensatory Education Study is the National Survey of Compensatory Education. This survey reflects NIE's strategy of evaluating compensatory education through a number of complementary studies concerned with the different purposes of compensatory programs and with the many factors affecting how well these purposes are attained. The survey is designed to assess the effectiveness of compensatory programs in achieving one of their purposes; providing improved services to children with special educational needs. An evaluation of how well Title I is succeeding in funding special services related to such needs is crucial because unless a compensatory program can provide for services effectively, it clearly cannot be of direct help to children.

Under Title I, the Federal Government does not deliver services directly; it does so through the actions of LEAs. Individual LEAs therefore assume a major responsibility for the quality of Title I services and the same is true for compensatory services funded by individual states. The National Survey of Compensatory Education is providing information about the characteristics of services funded by Title I and by state compensatory programs in a national random sample of Title I school districts. Districts which included some grades in the ranges from kindergarten through 8th grade were selected for the survey. Data were obtained from interviews conducted during the 1975-76 school year with State and district administrators, school principals, regular classroom and compensatory education teachers, and parent advisory council chairpersons.

The survey was designed to provide information on:

- ° the kinds of instructional and supportive services which school districts provide with compensatory education funds
- ° the characteristics of students receiving these services
- ° the characteristics of the instructional services provided
- ° whether the services are sufficient to have a reasonable chance of accomplishing their goals.

Analysis of the data will provide a comprehensive picture of the current operation of compensatory programs by school districts.

Preliminary results are already available, and they are described in a complementary paper by NIE Compensatory Education Study staff.

(The Structure and Content of Compensatory Education Programs: Joy Frechtling and Margot Nyitray).

III. STUDENT DEVELOPMENT

The NIE Compensatory Education Study is also concerned with the effectiveness of compensatory programs in contributing to the overall development of participating students. This third of Title I's fundamental purposes has received far more attention in previous evaluations than have the provision of financial assistance to school districts or the examination of how effectively improved services are being delivered to children with special educational needs. However, it is these evaluations, with their emphasis on children's development, which have made apparent the impossibility of establishing a direct link between federal compensatory funds and measured gains in students' cognitive, emotional, social or physical growth. They have shown that the topic is complex, that national evaluations are difficult to do well, and that useful information can be gathered only when studies are properly focused.

NIE has therefore not attempted to provide summary evaluations of the overall effects of Title I on student development. Instead the studies focus on the relationship between children's academic performance and important characteristics of instructional programs which can be controlled by educators and policymakers. They examine the prevalence of these characteristics in compensatory education programs, and how the adoption of the most effective of these can be promoted by the design and administration of a Federal compensatory program.

One important reason for adopting this strategy in examining Title I's third fundamental purpose is that the program funds a variety of different instructional and support services. Earlier national evaluations were structured as if Title I funded very similar services to children across districts, which could be assessed using a single outcome measure — student achievement. However, the assumption collides with an important truth about Title I: it does not provide one service, but many. For example, Title I funds breakfast programs for students. This use of Title I funds might, in the long run, enhance achievement. Nevertheless, immediate gains in achievement through such expenditures are unlikely, and the use of achievement tests to measure the short-term impact of such programs is inappropriate.

Second, the art of measurement is not uniformly well advanced in all areas of student development. Although Title I is intended to improve not only achievement but also the emotional and social growth of participating students, there are no generally accepted and broadly applicable definitions of such growth, and measures of outcomes in these areas are correspondingly unsatisfactory. Generally accepted

measures for assessing outcomes currently are available only in the area of cognitive development, and even in that area some important abilities such as creativity and independent thinking cannot adequately be measured. Achievement outcomes, particularly in reading and mathematics, remain the only area in which satisfactory measures are available for formal research, and NIE's work on student development therefore focuses on achievement outcomes. This approach is valid so long as it remains clear that the research reflects neither the full range of services intended to help children develop nor all the possible impacts of services on children.

Finally, although programs designed to increase achievement in reading and mathematics are the instructional services most frequently delivered to Title I children, these programs vary considerably, and evaluations designed to assess their average effect on achievement can be misleading. School districts use a variety of instructional methods, some of which may be more effective than others. The application of a summary measure across different types of reading and mathematics programs is likely to mask this variation in effectiveness. Such an evaluation, therefore, may show no significant increase in overall achievement, even if particular programs or parts of programs are producing dramatically superior results. To conclude from such data that Title I has failed to increase achievement — a frequent conclusion of summary evaluations conducted in the past — seriously underestimates the ability of properly conceived and implemented services to raise student achievement. Further, the summary data offer little information for educators and policymakers who are looking for ways to provide more effective instruction.

On the basis of these considerations, NIE concluded that the most useful type of study would be one specifically designed to examine the relationship between achievement on the one hand, and variations in program features on the other. This approach makes it possible to examine the extent to which compensatory funds are being used for the kinds of instructional programs which have proven to be successful. The results can also provide Congress with information about whether Title I program requirements promote the adoption of effective instructional approaches, and provide educators with additional help in planning compensatory programs.

The resulting studies of the relationship between selected program characteristics and achievement focus on four features of instruction which appear to be especially important in determining children's learning. These are: individualized instruction, instructional setting, time spent in instruction, and teacher training.

The major research examining the relationship of these variables to student achievement is the Instructional Dimensions Study which includes 12,000 first and third grade students in 440 classrooms. The study's major purpose is to assess the effects on achievement in reading and mathematics of variations in individualized instructional methods and in instructional setting (mainstream versus pullout instruction).³ Effects of instructional time and teacher training will also be examined, as will the impact of different program characteristics in such areas as students' attitudes toward reading and mathematics and their class attendance.

³ The definition of individualized instruction used in the study includes only specially structured curricula with the following four characteristics: specific learning objectives assigned to individual children; small group or individual pacing; diagnosis and individual prescription and alternative learning paths and sequencing for individual children.

IV. ADMINISTRATION

The earliest evaluations of Title I tended to ignore the existence of the complex educational hierarchy lying between the design of legislation and appropriation of funds in Washington, and the student outcome measures which the evaluations were designed to measure. However, the administrative decisions made at each level of government profoundly affect the implementation of compensatory education programs, and therefore their ultimate effectiveness. The importance of studying such influences on program effectiveness is, as this paper has stressed, increasingly apparent to evaluators; and the NIE Compensatory Education Study therefore addresses directly the issue of program administration.

Title I is implemented through a complex administrative structure involving Federal, State, and local levels of government. The Department of Health, Education, and Welfare and State Education Agencies carry out a number of responsibilities in administering Title I: funds distribution, rulemaking, monitoring, enforcement, technical assistance, and evaluation.

In performing these responsibilities, they interpret the wishes of Congress and communicate their interpretations to LEAs about who will receive Title I services and about how, and under what circumstances, these services are to be delivered. LEAs, in turn, use this information in determining how best to provide Title I services.

The way in which these administrative responsibilities are carried out can influence Title I's effectiveness in a number of direct and important ways. For example, clear articulation of the allocation regulations and procedures, and the collection and use of up-to-date

data can increase the probability that funds are indeed targeted to the appropriate schools and students. Timely funding can improve the ability of LEAs to plan and implement Title I programs. Good technical assistance from States to LEAs can help keep district personnel in touch with recent findings on program design.

Given the administrative structure that has been established, the success of the Title I program in achieving its objectives depends on the quality of management at each level of government and on the nature of the interactions among the levels. The complexity of the administrative structure also places very real limits on the ability of Congress to bring about modifications in Title I. Although Congress is in a position to exert fairly extensive influence on Federal administrative behavior, it has less direct control over States and even less over LEAs. Therefore, in order to make recommendations for improvements in Title I that have any real chance of affecting local district practice, more information about the ways in which HEW and the States administer Title I and about the effects of those administrative activities on local districts is needed.

In order to address these issues, NIE is conducting several research projects on the administration of Title I. They have three major objectives:

- ° To describe the process by which administrators transform the provisions of the Title I statute into educational services
- ° To identify, to the extent possible, the factors that affect the way in which the Title I program has been implemented
- ° To determine whether (and in what ways) Congress may be able to influence local Title I services through efforts to modify administrative practices.

The major research projects are summarized below.

STUDY OF LEGAL STANDARDS

The Federal Government's administration of Title I is based on the legal framework under which States and LEAs must operate. The framework includes the Title I statute, regulations, guidelines, program directives, and formal letters of advice, all of which elaborate on and provide more concrete meaning to the statute. This study treats all of these elements of the Federal legal framework. It will provide a complete account of the existing legal framework and an analysis of its implications for the operation of Title I. It has five basic objectives:

- ° To analyze the Title I statute and regulations in order to identify areas in which they may be unclear or inconsistent
- ° To analyze the guidelines, program directives, and advisory letters in light of the regulations to assess the clarity and consistency of the overall Title I legal framework
- ° To examine various ways the Federal Government has chosen to communicate and disseminate the legal framework to States and to local districts
- ° To analyze the ways in which State interpretations and elaborations of the Federal legal framework alter the requirements placed on LEAs
- ° To identify ways in which the overall framework may restrict the delivery of educational services by LEAs

STUDY OF FEDERAL ADMINISTRATION

In order to understand the direction provided by the Federal Government, NIE is conducting a study of the Federal administration of Title I. Its objectives are as follows:

- ° To identify the areas in which the guidance and direction given to States and LEAs may be unclear

- ° To identify organizational factors that may account for any lack of clarity in the Federal direction provided to States and LEAs
- ° To assess the likely effects of possible modifications in Federal administrative activities

To achieve these objectives, the study will describe Federal management activities, including the various procedures that HEW uses to provide direction to SEAs and LEAs. It will also analyze the contribution that each relevant HEW office makes to the composite effect of this direction. Several specific areas of Federal management are being examined. Among HEW's important responsibilities are monitoring and enforcement, which it performs by conducting annual program reviews of each State and by auditing a sample of States. An analysis of program reviews, audit reports, and interviews with appropriate officials will provide information about the effects of such activities on SEAs and LEAs. Federal officials can also exert considerable influence on States and school districts through the ways in which they provide technical assistance and evaluation. In these areas, research efforts similar to those described for monitoring and enforcement are being conducted. Again, the emphasis is on evaluating the clarity and consistency of the directions given, the ways in which the directions are communicated, and their effects on SEA and LEA practices.

STUDY OF STATE ADMINISTRATION

The Study of State Administration has three objectives:

- ° To identify differences in the ways that various States administer Title I
- ° To ascertain whether these differences in State administrative activity have any impact on the ways in which LEAs provide Title I services

- ° To determine whether and with what effect Congress can influence the ways in which States administer Title I

One component of the research is a national survey of State administrative activities to study the specific ways in which States perform their responsibilities for rulemaking, monitoring, enforcement, technical assistance and evaluation. This survey will also examine the degree to which several State characteristics (e.g., SEA organizational patterns, SEA recruitment practices for Title I, and customary SEA interactions with the Federal Government and with local jurisdictions) affect how States administer Title I.

Differences in the ways States carry out their responsibilities are important because of their potential impact on the way LEAs implement programs. In order to examine this impact, NIE is conducting case studies to determine how selected districts treat a number of program requirements, such as comparability and program design, in the delivery of services to Title I children, and the extent to which State administrative activity has directly affected the approaches taken by the districts in response to those requirements.

STUDY OF STATE COMPENSATORY EDUCATION PROGRAMS

In over one-third of the States, local districts receive funds for compensatory education through State-initiated and State-funded programs separate from Title I. These programs have their own legislative purposes, are typically subject to different rules and regulations, and are frequently administered by other units within the SEA.

The Study of State Compensatory Education Programs examines the following questions:

- ° What are the differences between the State compensatory programs and Title I?
- ° What impact do these differences have on the types of compensatory services LEAs provide to children and on the types of children served?
- ° What modifications can be made in the overall Title I administrative system that will facilitate coordination between Title I and the State programs?
- ° From the ways in which States administer their own programs, what inferences can be drawn about how States might react if the regulatory structure of Title I were reduced or if Title I funds were available on a bloc-grant basis?

A comparison of State programs with Title I will identify differences between the two in such areas as program objectives, student eligibility, number of students served, types of program services delivered, and administrative practices both at the State and the local levels.

The study also includes an examination of the effects of these differences on the delivery of services at the local level. For example, it will provide information on whether State funds are being used to deliver more intensive services to children already receiving Title I services, to nontargeted children eligible under Title I, or to children not eligible under Title I. The study also will show whether the existence of a State program results in conflicts between the regulations for Title I and the State program that create difficulties in implementation at the local level.

In one sense, an examination of State compensatory programs may indicate how states might administer Title I if the Federal Government were not involved. Therefore, some judgments about how States might administer Title I if the Federal legal standards for the program were

relaxed may be possible. This examination could also clarify the possible impact of making Title I funds available on a bloc-grant basis.