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ABSTRACT

This report describes the comprehensive evaluation study of the California State Preschool Program which involved elementary school children in educationally disadvantaged areas throughout California. Various test scores of approximately 6000 children in kindergarten, first, and second grade who had previously participated for at least a year in the State Preschool Program were compared to the scores of two other groups of children, those who were not graduates of any identifiable preschool program and those who had attended a Children's Center Program. Evaluation was based on student scores on the Entry Level Test, Cooperative Primary Test, Attitude to School Questionnaire, Student Productivity Index, and attendance records. Comparisons were made between the performance, motivation, and productivity test scores of students. A detailed discussion of the results is included in the report. (CS)

EVALUATION STUDY OF THE CALIFORNIA STATE PRESCHOOL PROGRAM

CENTER FOR THE STUDY OF EVALUATION

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EVALUATION STUDY OF THE CALIFORNIA STATE PRESCHOOL PROGRAM

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SUMMARY

Evaluation Study of the California State Preschool Program

This comprehensive study of the California State Preschool Program has reached mixed conclusions about the success of the program in meeting its goal of improving the performance, motivation, and productivity in school of educationally disadvantaged children.

The study involved 35,286 children at 148 selected elementary schools in educationally disadvantaged areas throughout the state. It was conducted for the office of the state's Legislative Analyst, by the Center for the Study of Evaluation (CSE) at UCLA.

The Legislature voted in 1973 (AB 451) to require a study of the Preschool Program. The study was intended to assist the legislators in determining whether or in what form to provide for future funding of the program, whose federal support runs out June 30, 1975.

In the report of their study, CSE concluded that the Preschool Program "probably" was successful in spurring performance and motivation of students. However, no evidence was found to justify a statement that the program "definitely" fostered improved performance and motivation. Moreover, CSE concluded that the Preschool Program probably did not improve the productivity of its graduates.

In addition, CSE found no significant difference between the performance, motivation, or productivity of students who had been enrolled in the Preschool Program and that of students who had been enrolled in the less costly California Children's Center program.

For their study, the CSE researchers selected children currently in kindergarten, first grade, or second grade who previously had participated for at least a year in the State Preschool Program. They then compared scores that these children registered on various tests with scores of two groups of other children; those who were not graduates of any identifiable Preschool Program and those who had attended a Children's Center program.

In no case did the graduates of the Preschool Program score significantly better on tests of performance, motivation, or productivity in kindergarten, first grade, or second grade than the children who had not been enrolled in a Preschool Program. However, on most of the tests of performance and all of the tests of motivation, the scores registered by the graduates of the Preschool Program also were not significantly lower than those registered by the children not exposed to the program. That is, on these tests there was no statistically significant difference between the average scores of the Preschool graduates and those of the children who had received no Preschool training.

The CSE researchers judged this finding to indicate that exposure to the Preschool Program probably -- but not definitely -- was associated with some improvement in student performance and motivation.

The researchers acknowledged that the decision to evaluate in this way the lack of significant difference between the test scores of the two groups could be viewed as generous to the Preschool Program. But they noted that there was

reason to believe that the backgrounds of the students who were enrolled in the Preschool Program might have been even more educationally disadvantaged than those of their current elementary school classmates. If that were true, then the Preschool Program could be judged at least a partial success if it raised the performance and motivation levels of its graduates up to the levels of their present school classmates.

Therefore, the CSE researchers decided to give the Preschool Program the benefit of the doubt and rate it a "probable" success if the test scores of its graduates were not significantly different from the scores of their elementary school classmates. The researchers would have rated the program a "definite" success if the test scores of its graduates were significantly superior, on average, to those of their present classmates.

These problems could have been avoided, the CSE researchers said, had they been able to use an "experimental" research design. This would have involved randomly assigning some children to the Preschool Program, some to the Children's Centers, and some to No-Program, and then following their progress through the first three years of elementary school. Such an evaluation study would have permitted the researchers to be completely confident that their findings were due solely to the influences of the various Preschool experiences, rather than to differences in the initial educational capacity of the children. However, that sort of study would have required more than three years to complete, and the Legislature wanted the results within one year. Moreover, the Legislature specifically called for an "after-the-fact" research design which would serve as a substitute for a three-year "experimental" research design.

The CSE evaluators began their study by selecting a representative statewide sample of agencies operating State Preschool Programs. They chose 42 such agencies, in cities ranging from Redding in the north to San Diego and Calexico in the south. Heavily represented, of course, were the Los Angeles and San Francisco areas, the state's leading population centers. The researchers then identified 148 elementary schools attended by graduates of the 42 Preschool agencies.

Data were collected for 35,286 children attending kindergarten, first grade, and second grade at the selected schools. The researchers then went through rosters of each classroom, selecting all the Preschool graduates on whom there was evaluation information and picking an equal or smaller number of children who had received no Preschool training. These final samples contained 1,180 kindergarteners who had been enrolled in the Preschool Program and 1,148 who had not; 977 first graders who were graduates of the Preschool Program and 974 who were not; and 714 second graders who had attended the Program vs. 712 who had not. In addition, three more samples were selected of children who had been enrolled in a Children's Center program; 146 kindergarteners, 94 first graders, and 66 second graders.

In seeking measures of the performance, motivation, and productivity of these children, the researchers took great care to disrupt as little as possible the everyday activities of their schools. The researchers found they could obtain meaningful and comprehensive data without having to administer a battery of special tests to the children. In fact, they administered only one such test. The other data were assembled from scores on tests already administered to all children in California public schools and from special rating sheets completed by the children's current teachers.

The CSE analysts noted that it might have been useful to examine other aspects of the impact of the Preschool Program, such as its effect on medical or nutritional supervision of children. But the law mandating the evaluation study directed the researchers to concentrate their analysis on performance, motivation, and productivity.

To measure PERFORMANCE the researchers used scores on two tests administered statewide. For children in the first grade at the time of the evaluation they used the Entry Level Test, developed by the California State Department of Education to measure immediate recall, letter recognition, auditory discrimination, visual discrimination, and language development of children. For children in the second grade the researchers used the Cooperative Primary Test - Reading, which had been administered to the students in the Spring of their first grade year. To perform on this test students must read words, sentences, and paragraphs.

The researchers used two measures of MOTIVATION: the Attitude to School Questionnaire (a test devised at CSE in 1970) and children's attendance records, as maintained by their classroom teachers. Scores on the Questionnaire, which was administered to children by their teachers, were collected for students in all three grades, as were attendance records.

The Questionnaire recorded student responses to pictures and oral descriptions of various school-related activities. The children responded by circling a drawing of a happy, neutral, or sad face.

Although absenteeism has not been widely used in large-scale evaluation studies as a reflection of student interest in school, the CSE analysts said they found support for employing it as such in their review of research on assessing young children.

The researchers decided to define student PRODUCTIVITY not in terms of output of educationally useful products, such as completed homework assignments or projects, or even poems and scientific experiments, but rather in terms of the students' devotion to accomplishing tasks. To test this quality the analysts used a Student Productivity Index, on which the children's classroom teachers were asked to assess each child on a scale of 1 through 7 in terms of such criteria as "pays attention to own activities when other things are going on" and "stays with job until he/she is finished."

On the vast majority of these tests of performance, motivation, and productivity, the CSE analysts found no significant difference between the scores of the Preschool Program's graduates and the scores of their classmates. Here are the principal exceptions:

--On the Cooperative Primary Test - Reading, administered in the Spring of the first grade year, the Preschool graduates scored significantly less well than their classmates who had attended no Preschool Program.

--On the Student Productivity Index, the Preschool graduates scored significantly less well in each of the three grades than did their classmates who had attended no Preschool Program.

--Kindergarten children who were graduates of the Preschool Program were absent a significantly greater proportion of the Fall 1973 semester than their

classmates who had attended the Children's Center program. (In the other two grades there was no significant difference between the absence rates of the Preschool graduates and those of their classmates.)

The CSE researchers performed additional analyses to supplement their basic study. One such analysis concerned the effect of enrichment of elementary school programs on the performance, motivation, and productivity of kindergarteners, first graders, and second graders. The impact on children of a successful Preschool Program might be "washed out" by an ineffective early elementary school program. To test for this possibility, the analysis grouped the children in the study by the degree of enrichment of their elementary school program. Those whose schools were receiving aid under fewer than three state or federal programs were classed in the "Low-Enrichment" group, and those whose schools received aid under three or more such programs (the maximum for any school in the study was seven) were classified "High Enrichment."

Perhaps surprisingly, the students in the High-Enrichment schools in no cases registered significantly higher performance, motivation, or productivity than those in the Low-Enrichment schools. In five cases, moreover, the students in the High-Enrichment classes registered significantly poorer scores than those in Low-Enrichment classes. This finding suggests that the enrichment programs might be detrimental to the performance, motivation, or productivity of students, but the researchers--citing sampling limitations--cautioned against drawing such conclusions, because the schools receiving more enrichment are likely more in need of it.

Another special analysis performed by the CSE researchers concerned whether any particular type of Preschool Program proved more successful than other types. In the past, concern has been expressed that massive evaluation studies of programs as large as the State Preschool Program fail to discriminate between the successful and unsuccessful versions of the Program, because they necessarily deal with averages, lumping together the results of a good Preschool agency in one area with a poor one in another.

In an effort to discriminate between the types of Preschools, the researchers asked administrators of the 42 Preschool agencies in the study sample to rank five goals and purposes for Preschool Programs in order of relative importance. The responses enabled the analysts to divide the Preschool agencies into three groups: 20 which emphasized "Preacademic Skills," 11 which emphasized "Socialization and Interaction Skills," and 11 which emphasized "Attitudes to School and Learning."

On almost all the measures of performance, motivation, and productivity used, there was no significant difference among the average scores of students from each of the three categories of Preschool Programs. The exception was in absence rates. In both kindergarten and first grade, children who had attended Preschool Programs emphasizing Social and Interaction Skills were absent significantly less often than those who had attended Preschool Programs emphasizing Preacademic Skills or Attitudes to School and Learning. At the second grade level there was no significant difference in the absence rate.

INTRODUCTION

In 1965, the California Legislature appropriated funds for a state-wide pre-school program, to be partly federally funded, by enacting AB 1331, Chapter 1248. The program was based on the Legislature's belief that "the introduction of young children to an atmosphere of learning will improve their performance and increase their motivation and productivity when they enter school" (Chapter 3, 1645). Since the intiation of the State Preschool Program, AB 451 was signed into law on October 1, 1973, and restated the legislative intent of the Program:

> The Legislature established the preschool program with a strong education component to prepare children for success in school, and declared that the program constitutes an essential component of public social services. The Legislature believes that the introduction of young children of low-income or disadvantaged families to an atmosphere of learning will improve their performance and increase their motivation and productivity when they enter a regular school (AB 451, Chapter 1005, Section 6).

AB 451 also specified the Legislature's intent to investigate whether or not, and to what extent, "the present services delivered under the preschool program are meeting purposes for which the program was established and whether the program should be fully funded with state general funds" (Ibid). One component of the investigation was to be an evaluative study of the State Preschool Program's success in achieving the objectives of improved performance, motivation, and productivity of children matriculating through the regular elementary school system (Ibid, Sec. 7). The Legislature further declared that the evaluation should include, to the extent possible, "a retrospective analysis" of improved and sustained motivation, performance, and productivity in the early elementary years (Ibid).

Evaluation Questions and Evaluation Design

The Center for the Study of Evaluation at the University of California, Los Angeles, (CSE), was selected to perform the evaluative study. To fulfill

its responsibility, CSE posed the following specific question that was intended to mirror faithfully the Legislature's intent, but that was framed in a way conducive to an evaluation design:

> *Do children who previously experienced the State Pre-school Program for at least one year show significantly improved performance, motivation, and productivity in their subsequent elementary schools when compared with children who have either experienced other pre-school programs (like the California Children's Centers), or have not experienced a traceable institutionalized pre-school program?*

This question called for comparisons among three different groups of children, as illustrated below.

Children experiencing the State Preschool Program	Children experiencing the California Children's Center Program	Children with No Traceable Institutionalized Pre-school Program
Performance Motivation Productivity	Performance Motivation Productivity	Performance Motivation Productivity

In addition, CSE investigated an important aspect of the same children's continuing elementary education by asking whether their comparative performance, motivation, and productivity was significantly affected by the number of enrichment programs, both federal and state, in their elementary schools.

The additional question called for another comparison to be made on the basis of whether the elementary schools presently educating the children received high enrichment, many sources of enrichment funding, or low enrichment, few sources of enrichment funding, or their regular educational programs. The question adds to the illustration, as below.

To answer these evaluation questions, the comparative performance, motivation, and productivity of children currently in kindergarten (1972-73 pre-school class), the first (1971-72 pre-school class), and second (1970-71 pre-school class) grades in a sample of regular elementary schools throughout California was examined,

	Children experiencing the State Preschool Program	Children experiencing the California Children's Center Program	Children with No Traceable Institutionalized Pre-School Program
Children receiving low elementary-school enrichment	Performance Motivation Productivity	Performance Motivation Productivity	Performance Motivation Productivity
Children receiving high elementary-school enrichment	Performance Motivation Productivity	Performance Motivation Productivity	Performance Motivation Productivity

using an "after-the-fact" evaluation design. The findings formed the basis for the retrospective evaluation of the extent to which the State Preschool Program was successful in achieving its purposes during those years.

CSE also anticipated that the answers to the above primary evaluation questions might not reflect a clear superiority or clear inferiority of the Preschool graduates. In this event, the Legislature would not have enough information to make an unequivocal "yes-no" decision about continued funding. By merging all of the various Preschool agencies into a single group, treating them as an undifferentiated program, and seeking a detectable "State Preschool effect," CSE thought it might be overlooking information the Legislature would find useful.

The answer to the primary evaluation questions, therefore, had to be elaborated, because "State Preschool" in reality consists of a variety of different programs and approaches. It was perfectly possible, for instance, that "no overall Preschool effect" would be found, when in fact some Preschool agencies had a strong positive effect, while others had a strong negative effect, with one cancelling the other out in an overall assessment. The secondary thrust of the evaluation, therefore, lay in providing an elaboration of the primary questions. For example, if the various agencies had different kinds of success, it might have been attributed to variations in their purposes and methods. Therefore, CSE had each agency classify itself according to its primary educational purpose. The results of the comparisons

among the types of agencies were then used to indicate which type had the greatest effect. This information was offered to the Legislature to enable it to make intermediate funding decisions, even if it decided that the evaluation information was insufficient for a "yes-no" decision. An example of the type of decision it might make could be stated as follows, "Fund the program, but mandate the adoption of the successful methods."

Limitations on the Evaluation

Limitations caused by the evaluation questions. CSE intentionally delimited its retrospective evaluation of the State Preschool Program by asking questions and seeking answers that conformed to the letter and spirit of the Legislature's requirements in AB 451. It did not address all of the important questions that might have been asked about the State Preschool Program. For example, the evaluation did not address the Program's effects on parental participation or the effects of medical or nutritional supervision. It did not measure the impact of the Program on the morale or self-concepts of the children, their parents, or teachers. Further, because this was an "after-the fact" evaluation, CSE could not directly observe children in the Preschools to analyze various secondary mental health or social benefits. Many may find these limitations to be lamentable, but, in fact, their purposeful imposition provided a much-needed focus to the evaluation of so large a statewide effort.

Limitations due to the evaluation design. In after-the-fact evaluative studies like the present one, conclusions are drawn about events that have already taken place and over which the evaluator has had no experimental control. These studies lack much of the elegance and precision of the traditional research experiment in which the investigator regulates conditions and directly observes events. If this evaluation, for example, had involved a more traditional experimental situation, children would have been randomly assigned to three pre-school experience groups and the groups would have been monitored over the three years. Random assignment

and direct observation would have permitted the evaluator to be completely confident that the findings were due solely to the influences of the pre-school experiences, rather than to systematic differences among the groups of children experiencing them.

For example, the eligibility and selection standards of the State Preschool Program (designed to meet political as well as social needs) intentionally attracted children from families with particular combinations of disadvantaged economic, educational, and ethnic backgrounds. Because of their family's or subculture's shared values and attitudes toward education, the children are likely to have responded to school in uniformly different ways from the children who had other pre-school experiences. Random assignment to the various pre-school experiences would have eliminated the prejudicial effects of such selective eligibility standards for the Preschool Program, but was clearly impossible to have implemented. Therefore, in conducting this retrospective evaluation, CSE had no choice but to accept the limitations of the after-the-fact design, and to develop procedures that could nonetheless provide accurate conclusions.

The evaluation procedures employed incorporated currently available and carefully reviewed techniques for selecting, collecting, and analyzing information in order to ensure arriving at the most accurate and objective conclusions about the State Preschool Program. The conclusions were based on the measureable performance, motivation, and productivity of children in regular elementary schools throughout the State. Nevertheless, it must be repeated that the conclusions of an after-the fact evaluative study should be interpreted with great care.

Additional limitations. California's State Preschools sometimes receive funds from one or more additional federal funding sources, like Head Start or Title 1 (Audit Report, Chapter 10, p. 73). In addition to multiple funding sources, services and children of the various programs are frequently commingled.

Thus, in arriving at conclusions about the State Preschools, it was sometimes impossible to account for the effects of other, possibly significant influences.

Another limitation on this evaluation resulted from the fact that some of the services and children of the State Preschools and of the California Children's Centers were commingled. Commingling was evidenced by shared space or facilities, or by children whose names appeared on class lists for both programs. Fortunately for the purpose of this comparative evaluation, such commingling was uncommon, involving few Preschools and Centers, and thus allowing relatively pure groups of children to be established on the basis of their pre-school experience. Children on the records of both programs were eliminated from the study.

The evaluation would have benefited greatly if "improvement" could have been more precisely assessed for each of the three types of experiences. But such precision demanded baseline data, or quantitative information on the children before the start of their pre-school experiences. Such early information on the children's performance, motivation, or productivity, or even on their socio-economic status was, however, with few exceptions, unavailable. Without it, CSE could only establish comparative relationships among the groups of children. It could not provide information on how far they had moved from their initial positions to their current accomplishments. Therefore, the evaluation was limited by an inability to detect whether or not the State Preschool children had "improved" slightly, but perhaps not sufficiently to show that their performance, motivation, and productivity was at, or above, the level of children with other experiences. This additional limitation, resulting from the lack of baseline data, was addressed in the formulation of the evaluation hypotheses.

The calendar below describes the sequence of events in which CSE moved from the evaluation questions to the evaluation study's findings.

PROJECT CALENDAR

October 19, 1973	Meeting with Richard W. Brandsma and others from the Office of the Legislative Analyst.
October 19,1973	Letter proposal for the Evaluation Study of AB 451 submitted to Richard W. Brandsma.
November 19, 1973	Meeting in Sacramento with Harold E. Geiogue of the Office of the Legislative Analyst and Jack Housden of the Department of Education.
November 20, 1973	Revised evaluation design submitted to Dr. William B. Michael of the University of Southern California for review.
November 30, 1973	Meeting with Dr. Michael at USC for discussion of possible revision of evaluation design.
December 1, 1973	Sampling procedures refined and implemented.
January 10, 1974	Meeting with Jerry Evans, Legislative Budget Committee, Office of the Legislative Analyst, at UCLA.
January 17, 1974	Visit to Sacramento to obtain Preschool Agency PEP 10 Forms.
February 4, 1974	Meeting with the Greater Los Angeles Community Action Agency, supervised by John R. Sheffer and Ella Nomland. Visit to Sacramento to get Racial/Ethnic data on Preschool Agencies from Department of Education, Division of Program Evaluation.
February 15, 1974	Letter jointly signed by A. Alan Post and Wilson Riles sent to 148 sample elementary schools.
February 18, 1974	School Districts sent copies of jointly signed letter and given the names of elementary schools to be visited by CSE staff.
February 19, 1974	First written communication with the sample Preschool agencies, including jointly signed letter, requests for rosters, and Preschool Purpose Survey cards.
February 22, 1974	Letter to 148 sample elementary schools introducing CSE, reiterating the purposes of evaluation study, and providing information to teachers whose students are to participate in study.
March 5, 1974	Meeting with the Governor's Advisory Committee on Child Development Programs.
March 18, 1974	First CSE Survey Kit sent to schools, based on rosters asked for in letters sent on February 18 and February 22.
April 1, 1974	First pick up of CSE Survey Kit by CSE field staff.
April 5, 1974	Meeting with Dr. William Michael of USC for periodic review of study design and procedures.
April 11, 1974	Requests for rosters sent to sample Children's Centers.
April 29, 1974	Last set of CSE Survey Kits sent to sample elementary schools.
May 14, 1974	Obtained psychometric information on Entry Level Test from Drs. Sheppard and Carlson, Division of Program Evaluation.
May 20, 1974	Sample agencies sent a formal note of appreciation for their cooperation, including a copy of the CSE-ECRC Preschool/Kindergarten Test Evaluations.
June 1, 1974	Obtained computer print-out with Entry Level Test scores from Westinghouse Learning Corporation.
June 3, 1974	Agency Purpose Survey completed. Field visits to elementary schools completed. Schools sent a formal note of appreciation for their cooperation, including a CSE Elementary Test Evaluation book.
July 1, 1974	Preschool rosters completed. Children's Centers rosters completed.
July 31, 1974	Data Analysis completed.
August 1-2, 1974	Drs. Hoepfner and Fink attended conference sponsored by the Early Childhood Project, Evaluation Commission of the States in Boston, Massachusetts: "Implementing Child Development Programs".
August 26, 1974	Preliminary Draft of Final Report completed.
August 28, 1974	Meeting with Jerry Evans at UCLA.
September 6, 1974	Review of Preliminary Draft of Final Report by Ms. Virginia Brown, Riverside County Schools; Ms. Billie Switzer, Head Teacher, Franklin School, Modesto, Dr. Susan Mumedal, California State University, Long Beach. Summary of Final Report by Paul Steiger, Los Angeles Times.
September 15, 1974	Review of Preliminary Draft of Final Report by Dr. William Michael.
September 30, 1974	Submission of Final Report of Evaluation Study to Office of Legislative Analyst.
October 1, 1974	Thank You Letter sent to all participants in the evaluation study.

SAMPLING PROCEDURES

Because the primary focus of this evaluative study was the effectiveness of the State Preschool Program, the sampling procedures for all three pre-school experience groups were mainly directed toward ensuring an accurate selection of former State Preschool children. In other words, CSE first concerned itself with obtaining a representative sample of children who had experienced the State Preschool Program. Next, children in the other two groups were incidentally sampled, using the State Preschool children as a reference point. Because of the emphasis on children, no attempt was made to obtain a representative sample of pre-school programs or elementary schools.

Sampling the State Preschool Children

A multi-stage sampling procedure was developed to identify those children who had experienced the State Preschool Program. This was necessitated by the fact that first Preschools had to be selected for the sample, and then the children had to be traced to their elementary schools, and those schools, in turn, had to be sampled. Throughout the discussion of the sampling of State Preschool children, then, it is important to keep in mind that three different sampling units were employed: the State Preschool agencies, recipient elementary schools, and the children themselves.

Stage I: Agency Sampling Procedure

The initial unit of sampling was the agency, defined as an administrative unit receiving AB 1331 funds that was responsible for running a State Preschool Program. (Sampling on the basis of Preschools or classes would have complicated adherence to the three criteria listed below, and would have reduced the likelihood of identifying all Preschool children at the second stage, because many Preschools feed their children into common elementary schools, particularly in urban areas. Although the State Department of Education supplied information that 192 agencies had been funded since 1970, the first year of interest to this study, a sample size of forty agencies was proposed as a feasible number for

evaluation. The following criteria formed the basis for a six-step agency sampling procedure:

a. the length of time each agency was funded
b. the agency's size, based upon the number of children enrolled
c. the agency's geographic location

Step One

Of all the agencies that were funded by the original AB 1331 Preschool legislation, only those that the State Department of Education indicated were in operation for three consecutive years, 1970-1971, 1971-1972, and 1972-1973 were initially selected for consideration in the study. The selection served the purposes of permitting comparisons of program success through the years and of minimizing the number of elementary schools that would receive the children and consequently require CSE staff visits.

One hundred thirty-five (135) agencies were identified as funded for three consecutive years.

THREE-YEAR PRESCHOOL AGENCIES

Alpha Kappa Alpha Sorority
Alpha Plus Corporation dba Circle Preschool
Alum Rock Union Elementary School District
Archdiocese of Los Angeles
Arvin Union School District
Benicia Community Action Council
Berkeley Hills Nursery School
Berkeley Unified School District
Berryessa Union School District
Brentwood Union School District
Brittan School District
Cajon Valley Union School District
Calexico Unified School District
California State College, Hayward
California State University, Los Angeles
Capistrano Union School District
Castro Valley Unified School District
Ceres Unified School District
Chula Vista City School District
Compton Unified School District
Corcoran Unified School District
Cupertino Elementary School District
Del Paso Heights School District
Department of Education, Diocese of San Diego
Dependency Prevention Commission (DPC) of San Bernardino
Dubnoff Center for Child Development and Educational Therapy, Inc.
Economic Opportunity Board (EOB) of Riverside
Economic Opportunity Commission of San Mateo
Education Progress Center
Escondido Union School District
Exceptional Children's Foundation
Fairfield-Suisun Unified School District
Farmersville School District
First United Methodist Church
Folsom Cordova Unified School District
Fremont Unified School District
Fresno Unified School District
Fullerton Elementary School District
Galt Joint Union School District
Gilroy Unified School District
Goleta Union School District
Greater Los Angeles Community Action Agency (GLACAA)
Hanford Elementary School District
Harbor Area Retarded Children's Foundation
Hayward Unified School District
Hemet Unified School District
Hughson Union School District
County Superintendent of Schools-Inyo County
Jefferson Elementary School District
Jurupa Unified School District
Kennedy Child Study Center
Kerman-Floyd Union Elementary School District
Kern Community College District
Kern Joint Union High School
Keyes Union Elementary School District
La Habra City School District
La Mesa-Spring Valley School District
Lemon Grove School District
Lindsay Unified School District
Lodi Unified School District
Madera Unified School District
Mafundi Institute
Marin County Superintendent of Schools
Martinez Unified School District
Marysville Joint Unified School District
Mckinley-Roosevelt Union Elementary School District
Mendota Union District
Merced County Department of Education
Modesto City Schools
Monrovia Unified School District
Mother Lode Union School District
Mt Diablo Unified School District
National School District
North Sacramento School District
Northern California Child Development, Inc
Oakland Unified School District
Oceanside Unified School District
Ontario-Montclair School District
Orange Center Schools
Oxnard School District
Pacific Grove Unified Schools
Palermo Union Elementary School District
Palo Alto Unified School District
Palo Verde Union School District
Pasadena Community Services Commission, Inc
Pasadena Unified School District
Patterson Unified School District
Peter Maurin Neighborhood House, Inc.
Pittsburg Unified School District
Pixley Union School District
Placer Community Action Council, Inc.
Ravenswood City School District
Richmond Unified School District
Rio Hondo Area Action Council
Rio School District
Robla School District
Sacramento City Unified School District
Salinas City School District
San Benito County Office of Education
San Diego Unified School District
San Francisco Community College
San Jose Unified School District
San Juan Unified School District
San Lorenzo Unified School District
San Lorenzo Valley Unified School District
San Luis Obispo County Office of Education
San Mateo City Elementary Schools
San Ysidro School District
Sanger Unified School District
Santa Barbara County Schools Office of the Superintendent
Santa Clara County Office of Education
Santa Clara Unified School District
Santa Cruz C.A.C.
Santa Maria School District
Santee School District
Shasta County Superintendent of Schools
Sonoma County Office of Education
South Bay Union School District
Stanislaus County Department of Education
Stockton Unified School District
Sunnyvale School District
Telegraph Hill Neighborhood Association
Tulare County Department of Education
Turlock Joint Union School District
Ukiah Unified School District
University of Southern California
Vallejo City Unified School District
Ventura County Head Start Preschool Program
Villa Esperanza
Washington Unified School District
Weaver Preschool
Westminster School District
Whisman School District
Willits Unified School District
Yuba City Unified School District

Step Two

The purpose of selection during this step was to ensure at the outset representation of the largest receivers of AB 1331 funds and thus, the major Preschool programs. It was decided that the inclusion of all agencies with a total enrollment of 250 or more children would satisfy this purpose. Ten agencies were selected in this fashion. Three of them, Dependency Prevention Commission (DPC) of San Bernardino, Equal Opportunity Board (EOB) of Riverside County, and Greater Los Angeles Community Action Agency (GLACAA), were later identified as meta-agencies (umbrella agencies with administrative authority over one or more agency). Sampling within each meta-agency was then necessary. However, agency names for the respective meta-agencies were not available during this sampling step.

The ten agencies selected in Step Two were:

Compton Unified School District
Dependency Prevention Commission (DPC) of San Bernardino
Economic Opportunity Board (EOB) of Riverside County
Fresno Unified School District
Greater Los Angeles Community Action Agency (GLACAA)
Oakland Unified School District
Richmond Unified School District
San Diego Unified School District
Stockton Unified School District
Tulare County Department of Education

Step Three

All agencies not selected in Step Two were plotted on a map of California. Those located in outlying areas were selected for the sample so that it would be geographically representative. Six agencies were added:

Calexico Unified School District
County Superintendent of Schools - Inyo County
Northern California Child Development, Inc.
Shasta County Superintendent of Schools
Ukiah Unified School District
Yuba City Unified School District

Of the remaining agencies on the map, several geographic clusters were visually apparent. Sampling was performed within these clusters with the following

exceptions: (a) clusters containing the metropolitan areas of San Francisco-Oakland, Los Angeles, and San Diego were excluded because Step Two sampling yielded agencies in these areas, and (b) clusters containing the three meta-agencies identified in Step Two were also excluded because sampling within them would occur when their respective agency names became available.

Ten geographic clusters containing 43 agencies remained, from which 12 agencies were selected on the basis of district size and number of Preschool classrooms.

Arvin Union School District
Santa Cruz County C.A.C.
Goleta Union School District
Hemet Unified School District
Oceanside Unified School District
Oxnard School District
Palermo Union Elementary School District
Modesto City Schools
San Luis Obispo County Office of Education
Santa Maria School District
Sonoma County Office of Education
Sacramento City Unified School District

At this point 28 agencies had been chosen.

Step Four

Twelve additional agencies were needed to complete the projected sample. They were selected randomly, using a table of random numbers, from all agencies not already chosen:

Archdiocese of Los Angeles
Exceptional Children's Foundation
Monrovia Unified School District
Rio School District
Robla School District
San Benito County Office of Education
San Lorenzo Valley Unified School District
San Ysidro School District
Cupertino Elementary Unified School District
Ventura County Community Action Agency
Villa Esperanza
Weaver Preschool

At this point forty agencies had been chosen.

Step Five

Following Step Four, agency names became available for two meta-agencies (DPC of San Bernardino and EOB of Riverside County). Two three-year agencies were selected within DPC of San Bernardino, and two three-year agencies within EOB of Riverside County in order to represent district size and geographic area. These four agencies were substituted for their two meta-agencies, thereby increasing the sample size to 42.

At this time it was also learned that one agency (the Barstow Unified School District) had been funded for fewer than three years. Victor School District was then selected as its replacement because it satisfied the criteria by which the Barstow Unified School District had been originally chosen.

Step Five agencies were:

Del Rey Foundation
Needles Unified School District
Palo Verde Unified School District
Victor School District

Step Six

Following Step Five, the agency names for GLACAA became available and one of its three-year agencies (Los Angeles County Unified School District) was chosen on the basis of geographic representativeness and number of classrooms. This agency was substituted for GLACAA. The sample size remained unchanged. At this point, however, a representative from Los Angeles County Unified School District informed CSE that the District was also an umbrella agency. Consequently, a replacement agency from the GLACAA list, the Latin American Civic Association, was selected on the same basis.

The geographical distribution of the final sample of 42 agencies is reproduced in Figure 1.

In order to establish the extent to which the sample of 42 agencies characterized the population of 226 agencies, they were compared in terms of their

Figure 1

Map of Geographic Distribution of Sample of Forty-Two State Preschool Agencies

racial and ethnic compositions because of the importance of these factors to the ideals of compensatory education and because information about race and ethnicity was accessible. To obtain the information, a letter was sent to the heads of all 226 agencies, requesting that they describe the numbers or percentages of children that were American Indian, Black, Oriental, Spanish American, or Other White (racial/ethnic categories and names adopted from statewide statistical reports). The letter, completed and returned by 221 agencies, is reprinted in Figure 2.

The results of the comparison between the sample and the population State Preschool agencies are given in Table 1.

Communications with the Preschool agencies. Initial contact with the 42 sample agencies was made by telephone in order to introduce CSE, explain the

Figure 2

Letter Sent to State Preschool Agency Population Requesting Racial/Ethnic Information

UNIVERSITY OF CALIFORNIA, LOS ANGELES

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO — SANTA BARBARA • SANTA CRUZ

CENTER FOR THE STUDY OF EVALUATION
UCLA GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

The Office of the Legislative Analyst of the State of California has contracted with the Center for the Study of Evaluation at UCLA for the purpose of evaluating the effectiveness of the State Preschool Program (AB 1331). Because your agency has received funds for the program we are requesting data on the racial composition of the preschool children in your program for the purpose of comparing our sample with the total of all the funded programs.

For your convenience, this form has been especially prepared for you to fill in the appropriate information. We anticipate that most agencies will obtain the data from the most recent Annual Statistical Report, Child Development Centers, but whatever the source or method used, it should represent the total of all state funded preschool children your agency has responsibility for. Only children who are recipients of the State Preschool Program should be included.

	American Indian	Black	Oriental	Spanish American	Other White
Number of Children					
Percent of Children					

You may fill in either the number of children in each group or the percentage of children in each group (or both if available).

A self-addressed, postage paid envelope has been included. We would greatly appreciate receipt of this information as soon as possible. Thank you for your cooperation.

Sincerely,

William A. Conniff

William A. Conniff, Jr.
Research Associate, California
Preschool Evaluation Project

Table 1

Comparison of 42 Sample State Preschool Agencies with 221 State Preschool Agencies on the Basis of Their Racial and Ethnic Composition

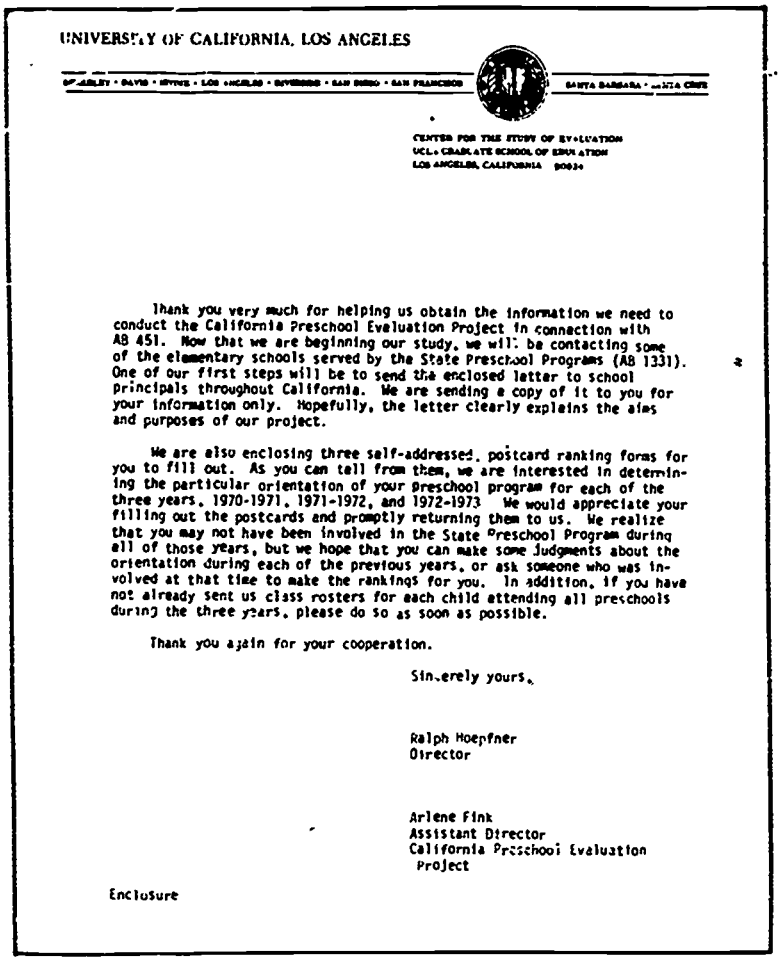
	(Sample) 42 Agencies	(Population) 221 Agencies
American Indian	4.37	2.22
Black	22.70	21.78
Oriental	1 44	3.06
Spanish American	31.75	35.87
Other White	40 20	37.20

purposes of the evaluation study, and ask for nominations of elementary schools that were likely to have received the most former Preschool students. The phone call was followed by a letter to the administrator of each agency

restating the purposes of the evaluative study, and asking for Preschool rosters for 1970-1971, 1971-1972, and 1972-1973. This letter is given in Figure 3.

Figure 3

Introductory Letter to State Preschool Agency Administrators



UNIVERSITY OF CALIFORNIA, LOS ANGELES

CENTER FOR THE STUDY OF EVALUATION
UCLA GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

Thank you very much for helping us obtain the information we need to conduct the California Preschool Evaluation Project in connection with AB 451. Now that we are beginning our study, we will be contacting some of the elementary schools served by the State Preschool Programs (AB 1331). One of our first steps will be to send the enclosed letter to school principals throughout California. We are sending a copy of it to you for your information only. Hopefully, the letter clearly explains the aims and purposes of our project.

We are also enclosing three self-addressed, postcard ranking forms for you to fill out. As you can tell from them, we are interested in determining the particular orientation of your preschool program for each of the three years, 1970-1971, 1971-1972, and 1972-1973. We would appreciate your filling out the postcards and promptly returning them to us. We realize that you may not have been involved in the State Preschool Program during all of those years, but we hope that you can make some judgments about the orientation during each of the previous years, or ask someone who was involved at that time to make the rankings for you. In addition, if you have not already sent us class rosters for each child attending all preschools during the three years, please do so as soon as possible.

Thank you again for your cooperation.

Sincerely yours,

Ralph Hoepfner
Director

Arlene Fink
Assistant Director
California Preschool Evaluation Project

Enclosure

Included with the above letter were the Agency Preschool Purpose Survey postcards, which are described in the next section on Measures of Preschool Agencies, asking the agency administrators to rank each of the five possible preschool purposes in connection with their own program's goals during 1970-71, 1971-72, and 1972-73, and a copy of a letter about the study addressed to the elementary school principals in the sample signed by Wilson Riles, the State Superintendent of Public Instruction, and A. Alan Post, the Legislative Analyst. After CSE received the rosters from all 42 agencies, a letter of gratitude

was sent out, accompanied by a complimentary copy of the CSE-ECRC Preschool/ Kindergarten Test Evaluations. A copy of this letter is reproduced in Figure 4.

Figure 4

Thank You Letter Sent by CSE to State Preschool Agencies

UNIVERSITY OF CALIFORNIA LOS ANGELES

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

CENTER FOR THE STUDY OF EVALUATION
GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

Thank you very much for helping us obtain the information we need for our California Preschool Evaluation Project. Your preschool agency has supplied us with lists of elementary schools currently attended by your former students, class registers of your former students, and postcards indicating the nature and emphasis of your program during the three years we are studying. We are very grateful for the efforts you and your staff have extended in providing us with this information, and we would like to thank you formally. We hope that the enclosed CSE Preschool/Kindergarten Test Evaluation book will serve as a token of our appreciation and that you will find the book useful.

We are well aware that our evaluation findings may have a direct bearing on your program, so as soon as we have completed our study, we will share our report to the Legislative Analyst with you. We hope that you find it an accurate reflection of California's preschools, and that it will provide you with some information about your own program.

Once again, thank you for your generous help

Sincerely,

Ralph Woepfner, Director

Arlene Fink

Arlene Fink, Assistant Director
California Preschool Evaluation Project

A formal letter of appreciation, signed by Mr. Riles and Mr. Post was also sent to each agency. This letter is reprinted in Figure 5.

Stage II: School Sampling Procedure

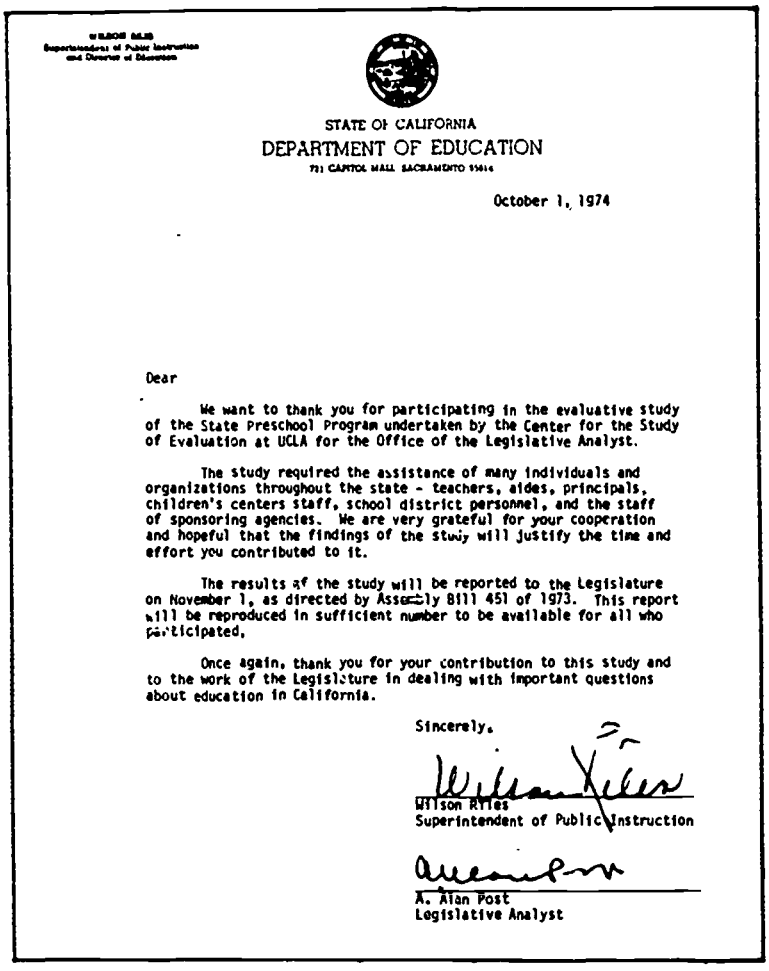
The purpose of the school sampling procedure was to select regular elementary schools, containing State Preschool children formally enrolled in the 42 agencies selected in Stage I.

School sampling consisted of three steps:

1. Identification of the elementary schools that had enrolled the largest numbers of former State Preschool children.

Figure 5

Thank You Letter Sent by Mr Riles and Mr Post to Participants in the Study



WILSON RILES
Superintendent of Public Instruction
and Director of Education

STATE OF CALIFORNIA
DEPARTMENT OF EDUCATION
721 CAPITOL MALL SACRAMENTO 95814

October 1, 1974

Dear

We want to thank you for participating in the evaluative study of the State Preschool Program undertaken by the Center for the Study of Evaluation at UCLA for the Office of the Legislative Analyst.

The study required the assistance of many individuals and organizations throughout the state - teachers, aides, principals, children's centers staff, school district personnel, and the staff of sponsoring agencies. We are very grateful for your cooperation and hopeful that the findings of the study will justify the time and effort you contributed to it.

The results of the study will be reported to the Legislature on November 1, as directed by Assembly Bill 451 of 1973. This report will be reproduced in sufficient number to be available for all who participated.

Once again, thank you for your contribution to this study and to the work of the Legislature in dealing with important questions about education in California.

Sincerely,

Wilson Riles
Superintendent of Public Instruction

A. Alan Post
Legislative Analyst

2. Selection of schools that were representative of their respective agencies in enrollment size
3. Selection of schools that were representative of their respective agencies in racial and ethnic composition.

Step One

The heads of State Preschool agencies were contacted by telephone and were requested to nominate up to eight elementary schools that were most likely to have received the largest numbers of former AB 1331 preschoolers. A telephone interview form was developed for the purpose of obtaining this and additional information required for the study. The form appears in Figure 6.

Figure 6

Telephone Interview Form to Obtain Elementary School Sample

Contact Person_____ Dates Contacted_____

Telephone No _____

AGENCY TELEPHONE CALLS

The following information should be obtained or communicated during the initial contact with the Agency Coordinator.

1. Ask for the current coordinator (head of all) of the State Preschools.

2. Identify yourself and us to the agency director:
   _____ California Preschool Evaluation Project, UCLA
   _____ Working with the State Department of Education and the Office of the
   _____ Legislative Analyst for the Legislature
   _____ Purpose: To find out how successful State Preschools are

3. Find out whether agency was funded during 1970-1971, 1971-1972, 1972-1973?

4. Ask for the number of preschool locations for each year:
   _____ 1970-1971
   _____ 1971-1972
   _____ 1972-1973

5. For each year, which elementary schools did the Preschool children go to?
   The 1970-71 Preschool children went to the following elementary schools:
   _____ _____
   _____ _____
   _____ _____
   _____ _____
   The 1971-72 Preschool children went to the following elementary schools:
   _____ _____
   _____ _____
   _____ _____
   _____ _____
   The 1972-73 Preschool children went to the following elementary schools.
   _____ _____
   _____ _____
   _____ _____
   _____ _____

(NOTE: If the Agency Coordinator cannot give you a list of the elementary schools, ask for the names of the person(s) at the head of each preschool location and the address of the location for each of the three years. (Phone numbers would be helpful.)

6. Tell Agency Coordinator that we will be sending him/her a questionnaire for more information.

7. Ask him how we can obtain class rosters for each preschool class at each preschool location for each year. If Agency Coordinator implies that he/she has ask them to send them to us.

In brief, the interview form enabled the interviewer to:

1. Check that the agency had been funded for the past three years
2. Request the names of the recipient elementary schools containing the largest numbers of former AB 1331 children for each of the three years
3. Notify the agency that CSE would be forwarding a questionnaire requesting additional information about the agency's Preschool objectives
4. Request Preschool rosters for each of the three years.

The elementary schools nominated by the agency heads were checked against data in the 1973 California Public School Directory to ensure that they enrolled in kindergarten, first and second grade students since the AB 1331 recipients in this study were in those grades at the time of sampling. In a few cases, schools originally nominated by agencies were replaced at the request of the district or agency. These changes included:

Elm Street in Bishop replaced Olancha in Inyo County because Olancha received no AB 1331 children

Sunnyslope was selected to represent San Benito since the other schools in the Hollister District had not received AB 1331 children below the third grade

Cook replaced Bruce for Santa Maria because it received more preschool children than Bruce, which is a larger school.

John J. Doyle replaced Belleview in Tulare at the district's request since Belleview received fewer, less representative children than Doyle.

Pierpont replaced Sheridan Way in Ventura because Sheridan Way is now an Intermediate School.

In Sacramento, Fruit Ridge, Jedediah Smith and Oak Ridge replaced Antelope, Bear Flag and Coloma because they have larger populations of ex-preschoolers

Redwood Valley in Ukiah was added since Calpella does not have a Kindergarten Redwood kindergarten students go to Calpella.

Step Two

Representation in terms of size of enrollment was provided by selecting two large and two small schools from the lists of recipient schools nominated by each Preschool agency. There were, however, exceptions to this policy. Some agencies had nominated four or fewer recipient schools. When this happened, all the nominated schools were selected. Other exceptions were those where enrollment sizes were so homogeneous that it was impossible to meaningfully distinguish between large and small schools. In these cases, racial/ethnic composition became the selection criterion. Thus, the sequence of Steps Two and Three in the school sampling was sometimes reordered.

Step Three

Recipient regular elementary schools were included only if their racial/ethnic compositions were similar to that of their "feeder" Preschools. The racial/ethnic composition of the recipient schools was obtained from the

1970 Directory of Public Elementary and Secondary Schools in Selected Districts: Enrollment and Staff by Racial/Ethnic Group. The racial/ethnic composition of the Preschools in each agency was obtained from the 1972-73 Statistical Report which each agency had filed with the State Department of Education.

One hundred forty-eight elementary schools were selected for the sample. They are listed by Preschool agency and located by school district. A map of their location by district is provided in Figure 7 to graphically illustrate their geographical representativeness.

Figure 7

Map of Geographic Location of 148 Sample Elementary Schools by District

In order to establish the degree of similarity between the 148 sample schools and the sample and population agencies, the schools and agencies were compared in terms of their racial and ethnic composition. The State Department of Education provided CSE with copies of the current ethnic composition of the

[illegible]

[illegible]
[illegible]
[illegible]
[illegible] Elementary
[illegible] Street Elementary

[illegible]

[illegible] School District
[illegible] Elementary

[illegible] UNIFIED SCHOOL DISTRICT

[illegible]co Unified School District
[illegible] Elementary
[illegible] Elementary
[illegible]son Elementary
[illegible]

[illegible] CRUZ COMMUNITY ACTION AGENCY

Pajaro Valley Joint Unified School District
[illegible] Elementary
Hall District Elementary

Santa Cruz City Elementary School District
[illegible] Elementary
Laurel Elementary

COMPTON UNIFIED SCHOOL DISTRICT

Compton Unified School District
Henry W. Longfellow Elementary
Ardella B. Tibby Elementary
J. F. Kennedy Elementary
Laurel Street Elementary

NEEDLES UNIFIED SCHOOL DISTRICT

Needles Unified School District
D Street Elementary
Grace Henderson Elementary
Vista Colorado Elementary

VICTOR SCHOOL DISTRICT

Victor School District
Del Rey Elementary
Desert Knolls Elementary
Irwin Elementary
Park View Elementary

PALO VERDE UNIFIED SCHOOL DISTRICT

Palo Verde Unified School District
Felix J. Appleby Elementary
Margaret White Elementary
Ruth Brown Elementary

DEL REY FOUNDATION

Desert Sands Unified School District
Martin Van Buren Elementary
Theodore Roosevelt Elementary
Palm View Elementary
Valley View Elementary

EXCEPTIONAL CHILDREN'S FOUNDATION

Los Angeles Unified School District
Alta Loma Elementary
Saturn Street Elementary
54th Street Elementary
122nd Street Elementary

FRESNO UNIFIED SCHOOL DISTRICT

Fresno Unified School District
Heaton Elementary
Lane Elementary
Lincoln Elementary
Tellman Elementary

GOLETA UNION SCHOOL DISTRICT

Goleta Union School District
Cathedral Oaks Elementary
El Camino Elementary
Goleta Elementary
La Patera Elementary

LATIN AMERICAN CIVIC ASSOCIATION

Los Angeles Unified School District
Hart Street Elementary
O'Melveny Elementary
Pacoima Elementary
San Fernando Elementary

HEMET UNIFIED SCHOOL DISTRICT

Hemet Unified School District
Hemet Elementary
Little Lake Elementary
Ramona Elementary
Whittier Elementary

COUNTY SUPERINTENDENT OF SCHOOLS-INYO COUNTY

Lone Pine School District
Lo-Inyo Elementary

Bishop Union Elementary School District
Elm Street Elementary

[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible] UNIFIED SCHOOL DISTRICT

[illegible] Unified School District
[illegible] Elementary
[illegible] Elementary
[illegible] Elementary
Plymouth Elementary

NORTHERN CALIFORNIA CHILD DEVELOPMENT, INC.

Plumas Unified School District
Greenville Elementary

Red Bluff Union Elementary School District
Jackson Heights Elementary

Susanville Elementary School District
McKinley Elementary

Westwood Unified School District
Fletcher Walker Elementary

OAKLAND UNIFIED SCHOOL DISTRICT

Oakland Unified School District
Lockwood Elementary
Melrose Elementary
Ralph J. Bunche Elementary
Stonehurst Elementary

OCEANSIDE UNIFIED SCHOOL DISTRICT

Oceanside Unified School District
Ditmar Elementary
Laurel Elementary
Libby Elementary
Mission Elementary

OXNARD SCHOOL DISTRICT

Oxnard School District
Juanita Elementary
Kamala Elementary
Marina West Elementary

PALERMO UNION ELEMENTARY SCHOOL DISTRICT

Oroville City Elementary School District
Eastside Elementary
Oakdale Heights Elementary

Palermo Union Elementary School District
Helen M. Wilcox Elementary
Palermo Elementary

RICHMOND UNIFIED SCHOOL DISTRICT

Richmond Unified School District
Bayview Elementary
Cortez Elementary
Lincoln Elementary
Peres Elementary

RIO SCHOOL DISTRICT

Rio School District
El Rio Elementary
Rio Plaza Elementary
Rio Real Elementary

ROBLA SCHOOL DISTRICT

Rio Linda Union Elementary School District
Aerohaven Elementary
Fruitvale Elementary

Robla School District
Robla Elementary
Taylor Street Elementary

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT

Sacramento City Unified School District
Fruit Ridge Elementary
Jedediah Smith Elementary
Oak Ridge Elementary
Ethel Phillips Elementary

SAN BENITO COUNTY OFFICE OF EDUCATION

Hollister Elementary School District
Sunnyslope Elementary

SAN DIEGO UNIFIED S[illegible] DISTRICT

San Diego Unified School District
Balboa Elementary
Bandini Elementary
Crockett Elementary
Stockton Elementary

SAN LORENZO VALLEY UNIFIED SCHOOL DISTRICT

San Lorenzo Valley Unified School District
Boulder Creek Elementary
Quail Hollow Elementary
San Lorenzo Elementary

[illegible] COUNTY OFFICE OF EDUCATION

[illegible] Coastal Unified School District
[illegible] Elementary
[illegible] Elementary

Lucia Mar Unified School District
Margaret Harloe Elementary
Nipomo Elementary

SAN YSIDRO SCHOOL DISTRICT

San Ysidro School District
Beyer Elementary
Smythe Elementary
Willow Elementary
La Mirada Elementary

CUPERTINO UNION ELEMENTARY SCHOOL DISTRICT

Cupertino Union Elementary School District
Doyle Elementary
Garden Gate Elementary

SANTA MARIA SCHOOL DISTRICT

Santa Maria School District
Alvin Avenue Elementary
Cook Elementary
Fairlawn Elementary
Calvin C. Oakley Elementary

SHASTA COUNTY SUPERINTENDENT OF SCHOOLS

Cascade Union Elementary School District
Verde Vale Elementary
Meadow Lane Elementary

Redding Elementary School District
Manzanita Elementary
Sycamore Elementary

SONOMA COUNTY OFFICE OF EDUCATION

Petaluma City Elementary School District
Cherry Valley Elementary
Valley Vista Elementary

Sonoma Valley Unified School District
El Verano Elementary
Sassarini Elementary

STOCKTON UNIFIED SCHOOL DISTRICT

Stockton Unified School District
Grant Elementary
King Elementary
Taft Elementary
Taylor Elementary

TULARE COUNTY DEPARTMENT OF EDUCATION

Cutler-Orosi Joint Unified School District
Cutler Elementary

Porterville Elementary School District
John Jay Doyle Elementary

Woodlake Unified School District
Woodlake Elementary

Pleasant View Elementary School District
Pleasant View Elementary

UKIAH UNIFIED SCHOOL DISTRICT

Ukiah Unified School District
Calpella Elementary
Frank Zeek Elementary
Oak Manor Elementary
Yokayo Elementary
Redwood Valley Elementary

VENTURA COUNTY COMMUNITY ACTION COMMISSION

Oxnard School District
Ramona Elementary

Ventura Unified School District
Pierpont Elementary
E. P. Foster Elementary

Simi Valley Unified School District
Park View Elementary

VILLA ESPERANZA

Pasadena Unified School District
Hamilton Primary
Jefferson Primary
Roosevelt Elementary

WEAVER PRESCHOOL

Weaver Union Elementary School District
Weaver Elementary

YUBA CITY UNIFIED SCHOOL DISTRICT

Yuba City Unified School District
Bridge Street Elementary
Park View Elementary

elementary schools in the sample. The similarity between the school and agency samples and the school sample and the agency population can be seen in Tables 2 and 3. In no case did the percentage point difference exceed 14.68 points, and this happened for the category "Other White." This particular sampling discrepancy is understandable in terms of the flow of children from the socio-economically restricted Preschools to the somewhat more integrated public schools. Further, the category "Other White" is admittedly vague, often serving as a repository for children whose racial and ethnic membership seems difficult to establish.

Table 2

Comparison of 42 State Preschool Agencies with 148 Sample Elementary Schools on the Basis of Their Racial and Ethnic Composition

	(Sample) 42 Agencies	(Sample) 148 Schools
American Indian	4.37	95
Black	22 70	18.07
Oriental	1 44	91
Spanish American	31 75	26.02
Other White	40.20	51 88

Table 3

Comparison of 148 Sample Elementary Schools with 221 State Preschool Agencies on the Basis of Their Racial and Ethnic Composition

	(Sample) 148 Schools	(Population) 221 Agencies
American Indian	.95	2.22
Black	18 07	21 78
Oriental	91	3 06
Spanish American	26 02	35 87
Other White	51 88	37 20

Communications with the Elementary Schools

From the beginning of the study, CSE accepted its responsibility to keep all participants informed of the purposes of the study and their roles in it. Each phase of the sampling and data collection was therefore accompanied by personal and written communications from CSE staff.

The principals of the 148 sample elementary schools were notified of the study, introduced to CSE, and informed of the demands to be made on them and the teachers and students in their schools in a letter jointly signed by A. Alan Post and Wilson Riles. This letter is reproduced in Figure 8.

This letter was also sent to the Superintendents of each district containing elementary schools in the sample. It was believed that the purposes of the study and the possible interruptions to the normal classroom routines resulting from visits by CSE staff, or the administration of the study's measuring instruments, would be of interest to the Superintendents or other district personnel. Superintendents were also given a list of the schools in their district that were to be involved in the study. A copy of the letter sent to the Superintendents to accompany Mr. Post's and Mr. Riles' letter can be found in Figure 9.

Figure 9

Letter Sent to Superintendents of Districts Containing 148 Sample Elementary Schools

UNIVERSITY OF CALIFORNIA, LOS ANGELES

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO — SANTA BARBARA • SANTA CRUZ

CENTER FOR THE STUDY OF EVALUATION
UCLA GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

The Center for the Study of Evaluation has been asked by the Office of the Legislative Analyst, with the cooperation of the State Department of Education, to conduct a study of California's State Preschool Program. The study, mandated by Assembly Bill 451, requires that we examine the effects the Program has had in improving student performance, productivity, and motivation in the elementary school. We are therefore contacting the following principals of elementary schools in your District to help provide us with information:

1.
2.
3.
4.

In order to fully explain the nature and purposes of our study, each principal will receive the attached letter signed by A. Alan Post and Wilson Riles, which we are enclosing for your information. During the next few months, we shall keep you informed of our activities in your District and of our communications with principals and teachers. If you have questions about our study, please feel free to call Dr. Arlene Fink or Dr. Ralph Hoepfner at (213) 825-4711.

Sincerely yours,

Ralph Hoepfner, Director

Arlene Fink, Assistant Director
California Preschool Evaluation Project

Enclosure

Figure 8

Letter Sent by Mr. Riles and Mr. Post to Principal of 148 Sample Elementary Schools

WILSON RILES
Superintendent of Public Instruction
and Director of Education

STATE OF CALIFORNIA
DEPARTMENT OF EDUCATION
721 CAPITOL MALL SACRAMENTO 95814

Next year the California State Legislature will have to make difficult decisions about the funding of our educational programs. One important question being asked by the Legislature as it considers whether to continue state funding of the Early preschool program is, "How effective has the program been for the children of California?" The Office of the Legislative Analyst has contracted with the Center for the Study of Evaluation to find an answer to this question. In this attempt, the Center will study the children who are presently in the kindergarten, first, and second grades of California's schools. We ask your cooperation in assisting the Center's staff in the collection of educational information about these children. Because we in Sacramento and the staff at the Center for the Study of Evaluation are very much aware of the pressures and time constraints placed upon the administrators and teachers in your school, every attempt is being made to achieve your necessary cooperation while making as few demands upon your staff as possible.

The Center for the Study of Evaluation has developed a mail and personal visit plan for collecting three categories of information:

1. Class Rosters. Current classroom rosters (the name of the teacher and each child in a class) for every kindergarten, first, and second grade classroom in your school. (For schools with ungraded or combined classes, the Center will need rosters for all classrooms containing children of those grades.) We request that you mail the completed rosters by March 1, 1974 to:

Dr. Arlene Fink, Assistant Director
Preschool Evaluation Project
Center for the Study of Evaluation
UCLA Graduate School of Education
Los Angeles, California 90024

2. Survey of Attitudes. To obtain information on the children's attitudes toward school and learning, the Center will provide each kindergarten, first, and second grade classroom teacher with a complete self-administering package of short questionnaires designed especially for young children. The questionnaires will take no more than twenty minutes to distribute, supervise, complete, and collect. In addition, the Center will send each of the teachers involved a brief form for rating the children's attitudes. This rating form will require no more than fifteen minutes of the teacher's time. The children's questionnaires and the teachers' rating forms will be mailed to you for distribution by classroom between March 15 and 30, 1974. Complete information for each classroom should be obtained by April 15, 1974, and placed in the school's main office to be collected by a visitor from the Center for the Study of Evaluation.

3. School Information. In late March 1974, Dr. Fink will call you to make an appointment for a member of the Center's staff to visit your school. The visitor will have four responsibilities:

a. to collect the completed children's attitude questionnaires stored in the school's main office;

b. to collect the completed teachers' rating forms stored in the school's main office;

c. to transcribe attendance records for each child for the Fall semester of 1973-74 from the office secretary;

d. to transcribe scores from the standardized achievement tests for all students who have such scores.

Dr. Fink will contact you shortly to answer any questions you may have about the preparation of class rosters, the administration of the children's questionnaires and the teachers' rating forms, and the collection of the attendance and standardized test information.

Sincerely,

Wilson Riles

WILSON RILES
Superintendent of Public Instruction

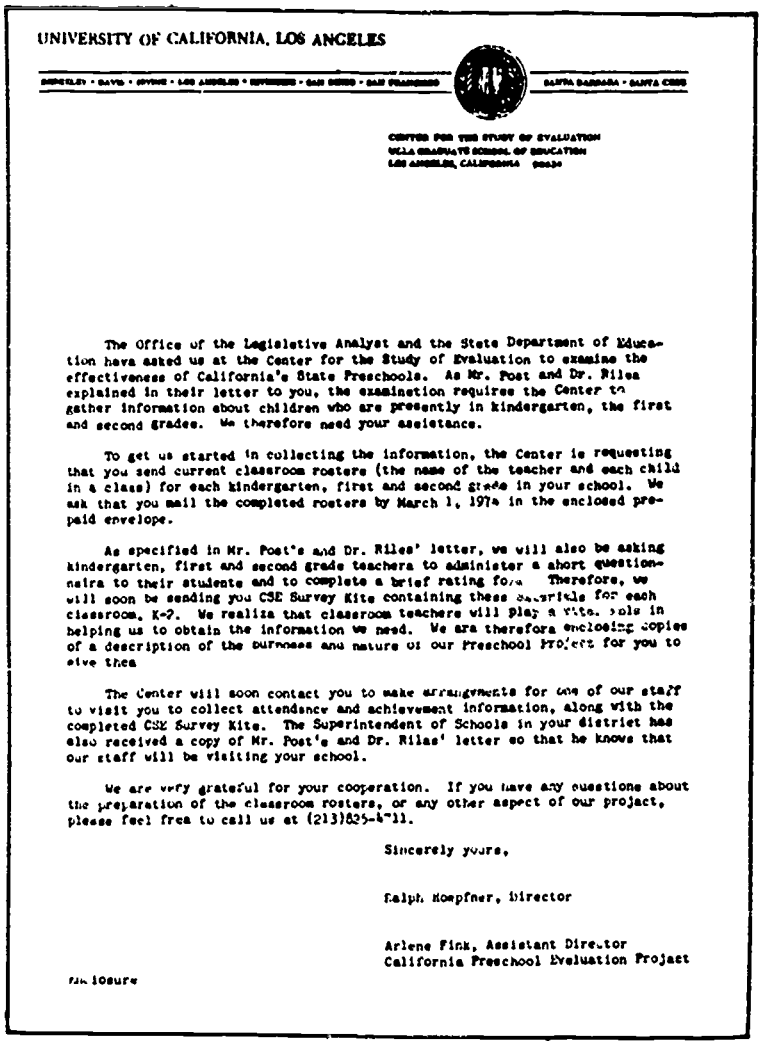
A. Alan Post

A. ALAN POST
Legislative Analyst

The letter sent to the elementary school principals by Mr. Post and Mr. Riles was accompanied by a letter from CSE to introduce the Center, reiterate the purpose of the study, and to emphasize the need for current class rosters for each kindergarten, first and second-grade class in the school. The letter from CSE is reprinted in Figure 10.

Figure 10

Introductory Letter to 148 Sample Elementary Schools



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CENTER FOR THE STUDY OF EVALUATION
UCLA GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

The Office of the Legislative Analyst and the State Department of Education have asked us at the Center for the Study of Evaluation to examine the effectiveness of California's State Preschools. As Mr. Post and Dr. Riles explained in their letter to you, the examination requires the Center to gather information about children who are presently in kindergarten, the first and second grades. We therefore need your assistance.

To get us started in collecting the information, the Center is requesting that you send current classroom rosters (the name of the teacher and each child in a class) for each kindergarten, first and second grade in your school. We ask that you mail the completed rosters by March 1, 1974 in the enclosed pre-paid envelope.

As specified in Mr. Post's and Dr. Riles' letter, we will also be asking kindergarten, first and second grade teachers to administer a short questionnaire to their students and to complete a brief rating form. Therefore, we will soon be sending you CSE Survey Kits containing these materials for each classroom, K-2. We realize that classroom teachers will play a vital role in helping us to obtain the information we need. We are therefore enclosing copies of a description of the purposes and nature of our Preschool Project for you to give them.

The Center will soon contact you to make arrangements for one of our staff to visit you to collect attendance and achievement information, along with the completed CSE Survey Kits. The Superintendent of Schools in your district has also received a copy of Mr. Post's and Dr. Riles' letter so that he knows that our staff will be visiting your school.

We are very grateful for your cooperation. If you have any questions about the preparation of the classroom rosters, or any other aspect of our project, please feel free to call us at (213)825-4711.

Sincerely yours,

Ralph Hoepfner, Director

Arlene Fink, Assistant Director
California Preschool Evaluation Project

Enclosure

As can be seen from the contents of CSE's first contact with the sample elementary schools, principals were provided with a written explanation of the purposes of the study and the teachers' roles in it. These explanations were

specially printed for distribution to the teachers by the principals if it was felt that further information about the study was needed. The written explanation is reprinted in Figure 11.

Figure 11

Information for Participating Teachers

UNIVERSITY OF CALIFORNIA, LOS ANGELES

CENTER FOR THE STUDY OF EVALUATION
UCLA GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

February 1974

To Participating Teachers:

WHO ARE WE

The Center for the Study of Evaluation at UCLA is a research and development center devoted to the theory and practice of educational evaluation. This year, the Center has been asked by the Office of the Legislative Analyst to conduct a study of the effectiveness of California's State Preschool Program.

WHY WE NEED YOUR HELP

Since 1965, California has offered a statewide preschool program to children of low income families in order to help prepare them for success in elementary school. As teachers of elementary school children, you are in the best position to know the extent to which the program has been successful in achieving its major purpose.

HOW YOU CAN HELP US

In order to obtain the information we need, the Center for the Study of Evaluation has prepared the CSE Survey Kit containing a brief questionnaire for you to give to your students and a short rating form for you to complete. We anticipate that the questionnaire will require about twenty minutes of your class time and the rating form about ten minutes. We will be sending the Kit to you, along with complete instructions, in March, 1974. Since we know how difficult it sometimes is to adjust classroom schedules, we will make every attempt to be as flexible as possible in arranging for the collection of information at your school.

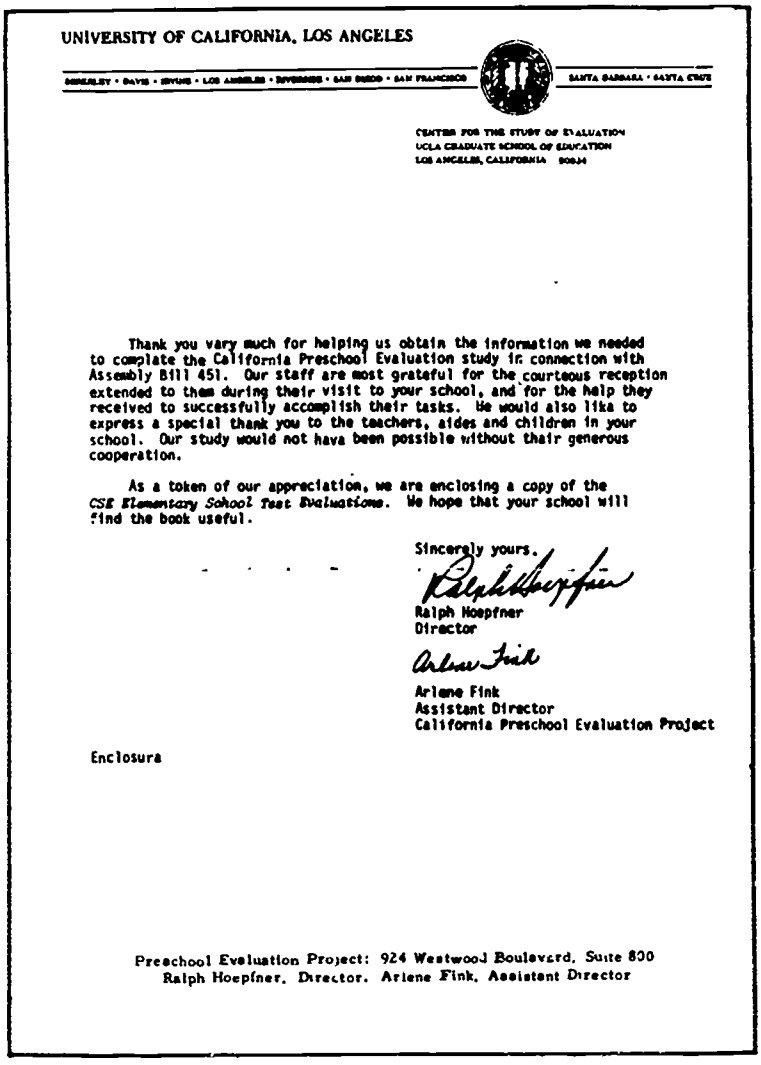
Thank you for your cooperation. We look forward to working with you and your principal.

Ralph Hoepfner, Director
Arlene Fink, Associate Director
California Preschool Evaluation Project

Communications with the elementary schools next took place after the CSE Survey Kits, containing two of the study's measures, the Attitude to School Questionnaire and the Student Productivity Index, had been sent to the schools. These communications involved arranging appointments for CSE staff to visit the schools and collect the Kits, and obtain attendance and other information. After the visits were completed, CSE expressed its gratitude to the 148 sample schools by sending each one a complimentary copy of the CSE Elementary Test Evaluations. The letter can be found in Figure 12.

Figure 12

Thank You Letter Sent by CSE to 148 Sample Elementary Schools



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CENTER FOR THE STUDY OF EVALUATION
UCLA GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

Thank you very much for helping us obtain the information we needed to complete the California Preschool Evaluation study in connection with Assembly Bill 451. Our staff are most grateful for the courteous reception extended to them during their visit to your school, and for the help they received to successfully accomplish their tasks. We would also like to express a special thank you to the teachers, aides and children in your school. Our study would not have been possible without their generous cooperation.

As a token of our appreciation, we are enclosing a copy of the *CSE Elementary School Test Evaluations*. We hope that your school will find the book useful.

Sincerely yours,

Ralph Hoepfner
Director

Arlene Fink
Assistant Director
California Preschool Evaluation Project

Enclosure

Preschool Evaluation Project: 924 Westwood Boulevard, Suite 800
Ralph Hoepfner, Director. Arlene Fink, Assistant Director

The elementary schools that participated in the study also received a letter of appreciation from Mr. Post and Mr. Riles. (See Figure 5.)

Sampling the California Children's Center Children

California Children's Centers provide day care services with an educational component for children of AFDC (Aid to Families with Dependent Children) parents in work or training. In this study, children from the pre-school division of the Children's Centers were used as a separate group for comparison against the State Preschool Program children because the Centers offer the largest single alternative institutionalized pre-school experience for California children.

Procedures for Selecting Children's Centers

The selection of Children's Centers was essentially done in reversed order. No attempt was made to obtain a sample that was representative of the statewide Children's Center Program. Centers were identified that were likely to have sent children to the elementary schools already in the sample. It was assumed that these Centers would be geographically close to their respective elementary schools.

Children's Center selection consisted of three steps:

1. Identification, by precise location, of each of the 148 sample elementary schools
2. Determination of Children's Centers located in the same city as the schools in the sample and which would, therefore, be likely to have sent students to the schools. The Children's Center Directory (Preview Edition), published by the State Department of Education in 1973, was employed at this step
3. For large cities, like Sacramento or Stockton, with many Children's Centers, a current map of the city was checked to determine which Children's Centers are geographically close to the school in the sample.

One hundred thirty-three Children's Centers were finally identified. No Centers were identified for 59 of the sample schools. The Children's Centers for each Preschool agency and elementary school in the sample are listed below. Rosters from the 47 Children's Centers marked with an asterisk were not received because in certain cases, Center personnel indicated that there was too much work involved in producing the number of rosters CSE requested or because they had lost the rosters. A map of the grographical location of Children's Centers clustered by their associated Preschool agencies is given in Figure 13.

Communications with the Children's Centers

Once the Children's Centers were identified, a letter was sent to the director asking for rosters of their Preschool children for 1970-1971, 1971-1972, and 1972-1973. The letter is reproduced in Figure 14. At the conclusion of this evaluation study, the heads of the cooperating Children's Centers received the

ARCHDIOCESE OF LOS ANGELES

Brooklyn Avenue Elementary
Riggin Elementary
Wadsworth Elementary
112th Street Elementary
* [illegible] Street
* [illegible] Street
* Eastman Avenue
* [illegible] Street
* [illegible] Street
Utah Street
Hutchinson Street
South Central Community
Child Care Center
* [illegible]
* [illegible] Care Center
at Baptist Center
Wadsworth
* [illegible]
* [illegible]
* [illegible] Street
[illegible] Street
* 98th Street
Beethoven
* Shenandoah Street
Sixth Avenue
* 52nd Street
* Normandie Avenue
Norwood Street
Belvedere
Hyde Park Blvd
* Queen Anne Place
* 76th STreet
* Hawthorne
* Golden Day
* Golden Day
Compton Avenue
* Holmes Avenue
* Niles Avenue
102nd Street
* 112th Street
* San Pedro Street
State Street
* Trinity
* Vernon City

ARVIN UNION SCHOOL DISTRICT

Sierra Vista Elementary

No Children's Centers Identified

CALEXICO UNIFIED SCHOOL DISTRICT

Dool Elementary
Hoffman Elementary
Jefferson Elementary
Mains Elementary

No Children's Centers Identified

SANTA CRUZ COMMUNITY ACTION COUNCIL

Freedom Elementary
Hall District Elementary
Gault Elementary
Laurel Elementary

La Fonda
* *Watsonville Head Start*

COMPTON UNIFIED SCHOOL DISTRICT

J. F Kennedy Elementary
Laurel Street Elementary
Longfellow Elementary
Ardella B Tibby Elementary

Anderson
Caldwell
Enterprise, IVA
Kelly
Lincoln
Roosevelt
Rosecrans
Tibby
Willowbrook
* *Willowbrook, IVA*

NEEDLES UNIFIED SCHOOL DISTRICT

O Street Elementary
Grace Henderson Elementary
Vista Colorado Elementary

No Children's Centers Iden [illegible]

VICTOR SCHOOL DISTRICT

Del Rey Elementary
Desert Knolls Elementary
Irwin Elementary
Park View Elementary

No Children's Centers Identified

PALO VERDE UNIFIED SCHOOL DISTRICT

Felix J Appleby Elementary
Margaret White Elementary
Ruth Brown Elementary

No Children's Centers Identified

DEL REY FOUNDATION

Martin Van Buren Elementary
Theodore Roosevelt Elementary
Palm View Elementary
Valley View Elementary

California a Children's Center

EXCEPTIONAL CHILDREN'S FOUNDATION

Alta Loma Elementary
Saturn Street Elementary
54th Street Elementary
122nd Street Elementary

Same as Archdiocese of Los Angeles

FRESNO UNIFIED SCHOOL DISTRICT

Heaton Elementary
Lane Elementary
Lincoln Elementary
Teilman Elementary

Emerson
Fairview Heights
Heaton
Webster

GOLETA UNION SCHOOL DISTRICT

Cathedral Oaks Elementary
El Camino Elementary
Goleta Elementary
La Patera Elementary

No Children's Centers Identified

LATIN AMERICAN CIVIC ASSOCIATION

Hart Street Elementary
O'Melveny Elementary
Pacoima Elementary
San Fernando Elementary

* *Lemay Street*
* *Noble Avenue*
Hubbard Street
Pacoima
* *San Fernando*
* *Vaughn Street*
Canoga Park
* *Calvary Day Care Center*

HEMET UNIFIED SCHOOL DISTRICT

Hemet Elementary
Little Lake Elementary
Ramona Elementary
Whittier Elementary

No Children's Center Identified

COUNTY SUPERINTENDENT OF SCHOOLS-INYO COUNTY

Lo'Inyo Elementary
Elm Street Elementary

No Children's Centers Identified

MODESTO CITY SCHOOLS

Fairview Elementary
Robertson Road Elementary
Shackelford Elementary
Orville Wright Elementary

Modesto Children's Center

MONROVIA UNIFIED SCHOOL DISTRICT

Bradoaks Elementary
Mayflower Elementary
Monroe Elementary
Plymouth Elementary

No Children's Centers Identified

NORTHERN CALIFORNIA CHILD DEVELOPMENT, INC

Greenville Elementary
Jackson Heights Elementary
McKinley Elementary
Fletcher Welker Elementary

No Children's Centers Identified

OAKLAND UNIFIED SCHOOL DISTRICT

Lockwood Elementary
Melrose Elementary
Ralph J. Bunche Elementary
Stonehurst Elementary

North Peralta Community College
* *Beebe and AME*
Brethren Day Care Center
* *East Oakland Preschool Association for the Mentally Retarded*
* *Coretta King*
Presbyterian Church
* *St. Andrew's*
St. Vincent's Day Home
Taylor Memorial
Merritt College
Arroyo Viejo
Clawson
Emerson
Golden Gate
Martin Luther King, Jr
Laurel
Lockwood
Longfellow
Piedmont Avenue
Prescott
Sherhouse
Washington

OCEANSIDE UNIFIED SCHOOL DISTRICT

Delmar Elementary
Laurel Elementary
Libby Elementary
Mission Elementary

No Children's Centers Identified

OXNARD SCHOOLS

Juanita Elementary
Kamala Elementary
Marina West Elementary

Ocean View
* *Avenue Day Care Center*
* *Colonia Day Care Center*

PALERMO UNION ELEMENTARY SCHOOL DISTRICT

Eastside Elementary
Helen M Wilcox Elementary
Oakdale Heights Elementary
Palermo Elementary

Palermo School

RICHMOND UNIFIED SCHOOL DISTRICT

Bayview Elementary
Cortez Elementary
Lincoln Elementary
Peres Elementary

Crescent Park
Lake Children's Center
Maritime Extended Center
Maritime Children's Center
Peres
Pullman
Apostolic Temple of Truth
* *Contra Costa Jr. College*
Opportunity Children's Center

RIO SCHOOL DISTRICT

El Rio Elementary
Rio Plaza Elementary
Rio Real Elementary

Same as Oxnard Schools

ROBLA SCHOOL DISTRICT

Aerohaven Elementary
Fruitvale Elementary
Robla Elementary
Taylor Street Elementary

* *Orangevale*
* *Wright*
Associated Student Center
College Town Campus
Campus Children's Center

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT

Fruit Ridge Elementary
Jedediah Smith Elementary
Oak Ridge Elementary
Ethel Phillips Elementary

El Dorado
C F Huntington
Elder Creek
Sierra

SAN BENITO COUNTY OFFICE OF EDUCATION

Sunnyslope Elementary

No Children's Centers Identified

SAN DIEGO UNIFIED SCHOOL DISTRICT

Balboa Elementary
Bandini Elementary
Crockett Elementary
Stockton Elementary

San Diego Community College Child Development Center
Logan
Kennedy
Rowan

SAN LORENZO VALLEY UNIFIED SCHOOL DISTRICT

Boulder Creek Elementary
Quail Hollow Elementary
San Lorenzo Elementary

No Children's Centers Identified

SAN LUIS OBISPO COUNTY OFFICE OF EDUCATIO.

Emerson Elementary
Margaret Harloe Elementary
Los Ranchos Elementary
Nipomo Elementary

No Children's Centers Identified

SAN YSIDRO SCHOOL DISTRICT

Beyer Elementary
Smythe Elementary
Willow Elementary
La Mirada Elementary

No Children's Centers Identified

CUPERTINO UNION ELEMENTARY SCHOOL DISTRICT

Doyle Elementary
Garden Gate Elementary

No Children's Centers Identified

SANTA MARIA SCHOOL DISTRICT

Alvin Avenue Elementary
Cook Elementary
Fairlawn Elementary
Calvin C Oakley Elementary

No Children's Centers Identified

SHASTA COUNTY SUPERINTENDENT OF SCHOOLS

Manzanita Elementary
Verde Vale Elementary
Meadow Lane Elementary
Sycamore Elementary

Anderson Heights
Redding Center

SONOMA COUNTY OFFICE OF EDUCATION

Cherry Valley Elementary
Valley Vista Elementary
El Verano Elementary
Sassarini Elementary

Petaluma
Sonoma

STOCKTON UNIFIED SCHOOL DISTRICT

Grant Elementary
King Elementary
Taft Elementary
Taylor Elementary

Conway
Coretta King
Martin Luther King, Jr.
* *Taylor School Age Center*
Van Buren School Age Center
Sierra Vista

TULARE COUNTY DEPARTMENT OF EDUCATION

Cutler Elementary
John J. Doyle Elementary
Woodlake Elementary
Pleasant View Elementary

No Children's Centers Identified

UKIAH UNIFIED SCHOOL DISTRICT

Calpella Elementary
Frank Zeek Elementary
Oak Manor Elementary
Yokayo Elementary
Redwood Valley Elementary

Ukiah Valley Child Development Center

VENTURA COUNTY COMMUNITY ACTION COMMISSION

Ramona Elementary
Pierpont Elementary
E.P Foster Elementary
Park View Elementary

Same as Oxnard Schools

VILLA ESPERANZA

Hamilton Primary
Jefferson Primary
Roosevelt Elementary

Garfield
Hodges Center
* *Jefferson*
* *Longfellow*
* *Madison*
Washington
Willard

WEAVER PRESCHOOL

Weaver Elementary
* *Sneathy School*

YUBA CITY UNIFIED SCHOOL DISTRICT

Bridge Street Elementary
Park Avenue Elementary

Yuba City

Figure 13

Map of Geographical Location of 133 Sample Children's Centers Clustered by Their Associated Preschool Agency

same letter of appreciation from Mr. Post and Mr. Riles as was sent to the Preschool agencies and elementary schools in the sample. (See Figure 5.)

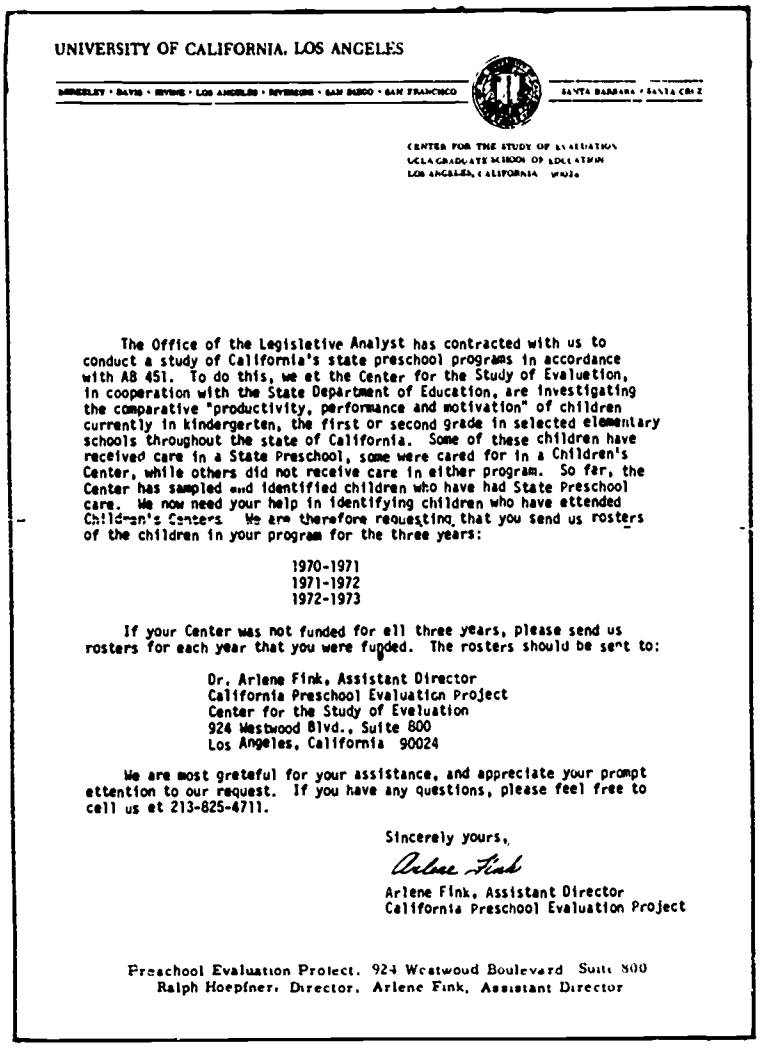
Sampling the Children with No Traceable Institutionalized Pre-School Program Experience

In California, children are required by law to start school at the age of six. Before that time, if they are eligible, they may attend State Preschools, Children's Centers, Head Start Centers, Migrant Preschools, the Educationally Disadvantaged Youth Program preschools, and Title I preschools. Other alternatives for children under the age of six include attending a privately run pre-school or remaining at home.

Records of children's pre-school experiences are not kept in a systematic way by elementary schools. Some schools have traced these experiences for

Figure 14

Letter to Children's Center Director Requesting Rosters



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CENTER FOR THE STUDY OF EVALUATION
UCLA GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

The Office of the Legislative Analyst has contracted with us to conduct a study of California's state preschool programs in accordance with AB 451. To do this, we at the Center for the Study of Evaluation, in cooperation with the State Department of Education, are investigating the comparative "productivity, performance and motivation" of children currently in kindergarten, the first or second grade in selected elementary schools throughout the state of California. Some of these children have received care in a State Preschool, some were cared for in a Children's Center, while others did not receive care in either program. So far, the Center has sampled and identified children who have had State Preschool care. We now need your help in identifying children who have attended Children's Centers. We are therefore requesting that you send us rosters of the children in your program for the three years:

1970-1971
1971-1972
1972-1973

If your Center was not funded for all three years, please send us rosters for each year that you were funded. The rosters should be sent to:

Dr. Arlene Fink, Assistant Director
California Preschool Evaluation Project
Center for the Study of Evaluation
924 Westwood Blvd., Suite 800
Los Angeles, California 90024

We are most grateful for your assistance, and appreciate your prompt attention to our request. If you have any questions, please feel free to call us at 213-825-4711.

Sincerely yours,

Arlene Fink

Arlene Fink, Assistant Director
California Preschool Evaluation Project

Preschool Evaluation Project, 924 Westwood Boulevard Suite 800
Ralph Hoepfner, Director, Arlene Fink, Assistant Director

several children; others have not. To locate children who had attended State Preschools and Children's Centers, CSE had to rely upon rosters provided by the agencies administering those programs. No similar rosters were available for the rest of the children in the sample elementary schools. Unless CSE had used the expensive and time-consuming process of interviewing the children's parents, it would not have been possible to identify the precise nature of their pre-school experiences. Further, no other single program, except the Children's Centers, is monitored to constitute a major alternative to the State Preschool Program. Therefore, in the absence of concrete information about the many available pre-school experiences, the third group of children in this

evaluative study was considered to have experienced "No Traceable Institutionalized Pre-school Program," or "No-Program." They were selected at random from the elementary school children who had not been enrolled in the State Preschool Program or the Children's Centers. It is possible that some of those children had actually experienced one of the pre-school programs.

Preschool rosters requested from the Victor School District and San Ysidro School District were incomplete, which may have resulted in the incorrect assignment of some children to the "No-Program" group. However, the number of children incorrectly assigned was considered too small to have significantly affected the study's findings.

The Final Samples of Children

Evaluative information was obtained from the schools for a total of 35,286 children, 11,532 at the kindergarten level, 12,193 at grade one, and 11,561 at grade two. These students were then classified into the three groups that constituted the primary evaluation design: State Preschool children, Children's Center children, and No-Program children. Classification of children into the first two groups was achieved by matching names of children on State Preschool and on Children's Center classroom rosters with the names listed on the classroom rosters of the schools expected to have received them. Children in the third group were randomly selected from among the remaining elementary school children within the same classroom.

The number of State Preschool children with evaluative information in each classroom determined the maximum number to be drawn for each of the three evaluation groups from each classroom. If no State Preschool children were in the classroom, then none of the students from that classroom were selected. If, for example, there were four State Preschool children in the classroom, then no more than four children with each of the other pre-school experiences were also

selected from the classroom. If four of one of the other groups could not be found in the classroom, then the needed number was not obtained from any other classroom or school. This restrictive sampling approach was adopted to avoid perpetuating potential inequalities among the three groups of children being compared that have been known to result from ability tracking and incomplete school integration. The specific sampling procedure is described as follows:

Classroom Sampling Procedures

Every child with one or more pieces of evaluative information is eligible for being sampled from the classroom. The Preschool graduates are the sample of major concern, and therefore they set the sampling procedure.

First, the Preschool children are identified. Let P equal the number of Preschool children with at least one piece of evaluative information identified within each classroom.

Second, identify the Children's Center children who have at least one piece of evaluative information. Let the number of such children be C. Select these children so that C is equal to or less than P within each classroom.

Last, randomly select a number N of No-Program children who have at least one piece of evaluative information. N should be equal to or less than P (it may be equal to, less than, or greater than C).

Regardless of the inequality of the sample sizes within a classroom, there should be no extra-classroom sampling in an effort to equalize the numbers. It will always be the case that all the Preschool children will be selected, and there will be no other sample with more children than the Preschool sample, either within a classroom or in the total study.

Because 51 of the sample schools had no geographically close Children's Centers, the number of children having experienced the Children's Center program was expected to be smaller than the other two samples. This difference caused minor complications in the analyses to be reported, and is reflected in Table 4 below, which describes the final number of children who participated in this evaluative study.

Table 4

Number of Children in Each Evaluation Group in the Final Sample

Grade	State Preschool Children	Children's Center Children	Children with No Traceable Institutionalized Preschool Program (No-Program)
Kindergarten	1,160	146	1,148
Grade 1	977	94	974
Grade 2	714	66	712

THE MEASURES EMPLOYED

The evaluative study required by AB 451 was to include "to the extent possible, a retrospective analysis of improved and sustained performance, motivation, and productivity achieved in the early elementary years." It was necessary, therefore, to select measuring instruments and procedures that would focus on those characteristics and that would be appropriate for children currently in kindergarten, the first, and second grades. In addition, measures were needed for Preschool purpose and elementary school enrichment.

Measures of Student Characteristics

Measures of the student characteristics were selected to meet three critical criteria:

Validity - The wording of the legislation was rephrased into what educators call "objectives," and measures were then selected that were closely targeted to the objectives.

Reliability - Measures were selected that had previously been employed with similar children and had proved to provide stable and well-graded scores.

Appropriateness - Measures were selected that were appropriate for young children; that would not bore or tire them, or unduly challenge them. Whenever possible, CSE chose scores that were already on students' records in order to minimize the amount of testing each student would have to endure.

Measures of Performance

The AB 451 term "performance" was rephrased to mean "academic performance" to conform to the educational objective implicit in the original Preschool legislation (AB 1331, 1965). There is general agreement among educators that academic performance is at present most effectively assessed with achievement tests.

Therefore, student scores on two achievement tests used in the 1973 Statewide Testing Program were employed: the Entry Level Test for first-grade students and the Cooperative Primary Test - Reading for second-grade students. By relying on information already on the students' records, the amount of time required for testing and interrupting normal classroom routine was minimized.

The Entry Level Test. In the Fall of 1973, every first-grade student in the State was to have been administered the Entry Level Test. This test was developed by the California State Department of Education to obtain baseline information on students and on schools. It is optically scored by computer and has subtests for Immediate Recall, Letter Recognition, Auditory Discrimination, Visual Discrimination, and Language Development. Scores on the subtests are summed to provide a total raw score. The five achievement areas thus assessed are commonly included in tests of reading readiness. Because scores are not reported by student name, characteristics of each child in the three samples were matched with those on computer print-outs provided by Westinghouse Learning Corporation.

In correspondence with Dr. Lorrie Sheppard, who was responsible for the test's development, CSE obtained the following psychometric information on the Entry Level Test.

Validity - items were reviewed and edited by several persons; intercorrelations with other standardized tests (Metropolitan Readiness Test, Metropolitan Achievement Test, and Clymer-Barret Reading Test) were moderate.

Reliability - test-retest reliability of individual scores was computed to be .62.

Appropriateness - items were designed to be relatively easy and proved to be so. Using school mean scores, high-moderate correlations were found with percentage of English-speaking children in the school and with percentage of white children.

The Cooperative Primary Test - Reading. Every first-grade student in the Spring of 1973 (second graders at the time of this evaluation) was to have been administered the Cooperative Primary Test - Reading, Form 12B, published by Educational Testing Service, 1965. The test was developed by an advisory panel and by educators. Students must read the words, sentences, and paragraphs to perform on this test. The vocabulary level was carefully controlled to be at a standard primary level, but was not tied to any particular test or reading program.

School and district records for the Cooperative Primary Test - Reading were maintained in various formats: raw scores, percentiles, stanines, and grade equivalents. For purposes of data analysis, all scores were kept as raw scores or were converted back to raw scores via the published norm tables. Where scores were based upon local norms, the local conversion tables were used to un-convert the scores.

The manual for this test classifies the items into categories of Comprehension (identifying an illustrative instance and identifying an associated object or instance); Extraction; Interpretation, Evaluation, and Inference.

Validity - items professionally developed and edited; no other-test intercorrelations reported.

Reliability - alternate-form and internal-consistency reliability coefficients range from the high .80s into the .90s.

Appropriateness - items exhibit a wide range of difficulty levels.

Measures of Motivation

AB 451 was not specific with regard to aspects of motivation that were to be considered in the evaluation. Once again, CSE elected to interpret the word in terms of academic achievement in accordance with the objectives planned for the Preschool Program (AB 1331, 1965). Psychologists of personality (e.g., Cattell, 1957; Guilford, 1959) contend that attitudes are clear and observable manifestations

of internal and unobservable motivations. An individual's attitude toward a thing or activity is a measure of the direction and intensity of the motivation for it. Ball (1971) found evidence of a crystallized attitude toward school by age 5 or 6, and Hartvill (1971) found that children are willing and able to attend to tasks involved in picture-based attitude scales.

The Attitude to School Questionnaire. CSE selected its own Attitude to School Questionnaire (Strickland, 1970) as the primary measure of motivation as reflected through attitude. The Questionnaire is a group-administered measure of academic sentiment containing fifteen scored picture items presented one per page in two forms: a girl's form featuring pictures with a girl as the main character and a boy's form featuring pictures of a boy. The students were given oral descriptions of various school-related activities, about which they recorded their attitudes by circling a drawing of a happy, neutral, or sad face. The Questionnaire avoids dependence on children's reading skills; no reading is required. The vocabulary used in the oral story narrations were checked against the Rinsland (1945) and Thorndike (1921) lists and was found to be suitable. The pages of the Questionnaire are colored rather than numbered so the child needs only to know the colors white, pink, blue, yellow, and green.

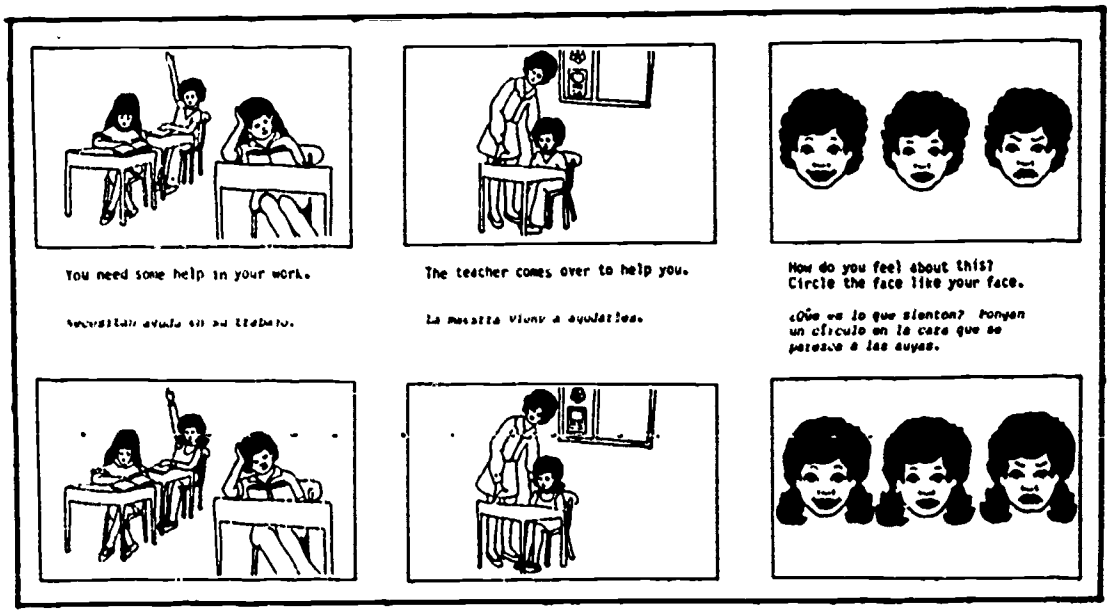
Figure 15 illustrates an item taken from a sample page of both the girl's and boy's forms, with the oral text in both English and Spanish. (The written text is heard by the examinee; it is not read.)

In creating the illustrations for the Questionnaire, great artistic care was taken to make the people in the figures free of racial characteristics so that children of the various racial groups would be equally likely to identify with the appropriate one of the three faces.

The Attitude to School Questionnaire was administered to all kindergarten, first and second-grade children in the evaluative study by their classroom

Figure 15

Item from Boy's and Girl's Forms of the Attitude to School Questionnaire



teachers. Reported administration difficulties were routine and in no way exceptional. The scoring of the Questionnaire was done by hand. Each happy face marked was scored two points, a neutral face earned one point, and an unhappy face received no points. Items to which there was no response were scored one point. Scoring was discontinued for any student's booklet that contained three or more consecutive omissions. Raw scores were employed in all analyses.

Validity - Items of the Questionnaire were developed to survey attitudes to school, show-and-tell activities, school-work, math, reading, non-threatening authorities, authority in general, and peers and play. Factor analyses confirmed the existence of several of the factors.

Reliability - Internal consistency reliability coefficients had been estimated in the low nineties, but the test-retest reliability, estimated over nine months, was only .13. The

fifteen-item internal-consistency reliability (alpha) computed from children participating in the present evaluation is reported in Table 5.

Table 5

Internal-Consistency Reliability Estimates (Alpha) of Attitude to School Questionnaire

Grade Level	Number of Children Tested	Reliability Estimate
Kindergarten	9,936	.81
First Grade	11,130	.78
Second Grade	10,229	.76

Attendance Records. In order to avoid additional testing that might overtax both school personnel and the students and to provide additional knowledge about motivation, attendance records were used as an unobtrusive measure of student interest in school.. Although absenteeism has not been widely used in large-scale evaluation studies as a reflection of student interest in school, support for this measure was found in reports that reviewed much of the research on assessing young children (Ball, 1971). In a report dealing with behavioral objectives in the area of attitude toward school, the Instructional Objectives Exchange (1970) suggests attendance records as a measure in the intermediate and secondary grades. An unpublished evaluation report of the Los Angeles Unified School District shows consistently lower absenteeism figures for children who had pre-kindergarten experiences. These differences are maintained longitudinally through the third grade.

All records of numbers of days absent at each school were converted into percentages, based upon the number of days of school during the Fall, 1973, semester at that school. In this way, attendance records from different schools with different schedules were converted to a common base for analysis purposes.

Measures of Productivity

The concept of productivity in education suggests the creation of numerous educationally valuable products like completed homework assignments, essays,

projects, and even poems or scientific experiments. In analyzing improved and sustained productivity in young children, however, it did not seem suitable to count the number of such products created, or to appraise their relative values (or their values to their relatives). Further, an extensive review of the educational and psychological research revealed that "productivity" has seldom been studied, but that when it has been investigated, it has usually been defined in terms of task orientation.

The Student Productivity Index. Since the ability to attend to a task and follow it through to completion may be considered to be a logical and necessary first step in the production of educationally valuable products, this evaluative study employed a measure of task orientation as a major dimension of productivity. Thus, the Student Productivity Index (see Figure 16) was adapted from the Classroom Behavior Inventory (Schaefer, 1971) for this study. The adapted version is nearly identical to the original, with the exception that minor changes in the wording were made mainly to eliminate possible sex bias, e.g., "he/she" replaced "he" in two items.

The Student Productivity Index was used by a teacher to rate his/her students on a seven-point scale from "always" to "never" for five items dealing with different aspects of task-orientation behavior in the classroom. The instrument usually required less than two minutes to complete for each child, and assumed that teachers could make fairly reliable judgments about specific classroom task-oriented behaviors.

Each teacher rated each child in his or her class on five task orientation items, using the seven-point scale. For the teacher's convenience, CSE had placed the students' names on the Index in advance, relying on the classroom rosters previously sent by the elementary schools. Scoring was done by hand and involved computing a total score for each student by adding the teacher's ratings. If

Figure 16

The Student Productivity Index

STUDENT PRODUCTIVITY INDEX

For each student, check the word in each item that best describes his or her behavior in the classroom. Your first impression will be adequate, but be sure to rate each student on the five items.

Student Name	ITEM 1: Pays Attention To Own Activities When Other Things Are Going On	ITEM 2: Stays With A Job Until He/She Is Finished	ITEM 3: Becomes Very Absorbed In What He/She Is Doing	ITEM 4: Works Earnestly At Classwork. Doesn't Take It Lightly	ITEM 5: Watches Carefully When A Teacher Or Classmate Is Showing How To Do Something
	Always 1 / Almost Always 2 / Frequently 3 / Half the Time 4 / Occasionally 5 / Almost Never 6 / Never 7	Always 1 / Almost Always 2 / Frequently 3 / Half the Time 4 / Occasionally 5 / Almost Never 6 / Never 7	Always 1 / Almost Always 2 / Frequently 3 / Half the Time 4 / Occasionally 5 / Almost Never 6 / Never 7	Always 1 / Almost Always 2 / Frequently 3 / Half the Time 4 / Occasionally 5 / Almost Never 6 / Never 7	Always 1 / Almost Always 2 / Frequently 3 / Half the Time 4 / Occasionally 5 / Almost Never 6 / Never 7

Adapted from the CLASSROOM BEHAVIOR INVENTORY, K 5, 1969, by E. Schaefer, M. Aaronson, and V. Small

the teacher's ratings for a student on one or two items were missing, a median score of four was assigned for that item. If more than two ratings were missing for any one student, the student's score was not recorded.

Because research has consistently shown that different teachers use different

standards in making their ratings of students, the ratings for each classroom teacher were standardized into percentiles to obtain a common base for analysis purposes. In this manner, both "easy" teacher/raters and "hard" ones could be generally equated and only differences among the students would remain for evaluation purposes.

Validity - The Classroom Behavior Inventory was developed from factor-analytic techniques (Schaefer, 1971). It was employed in the Head Start Planned Variation evaluation for 1971, and was found to correlate .40 with the total score of the Tests of Basic Language Competency in English and Spanish, Level 1 (Preschool) (Cervenka, 1968).

Reliability - Test-retest reliability coefficients, based upon the Head Start sample, were in the .70s. Inter-rater reliability coefficients were in the low .60s. The Task Orientation scale's internal-consistency reliability coefficient was .72.

Summary of Measures of Students

Table 6 shows the measures of performance, motivation, and productivity that were obtained for kindergarten, first, and second grades.

Table 6

Summary Table of Student Measures by Grade Levels

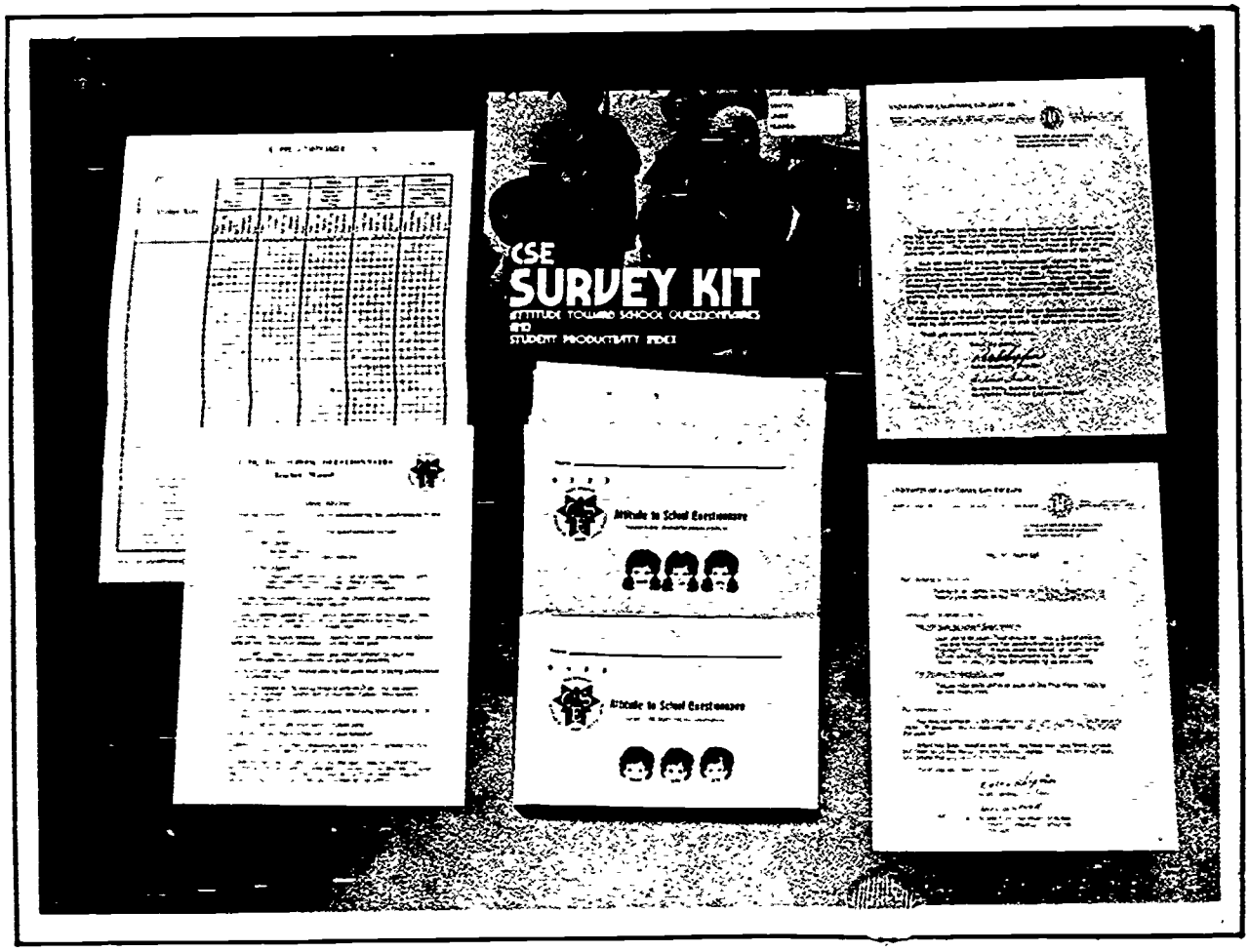
Grade	Performance	Motivation	Productivity
K		Attitude to School Questionnaire Attendance Rate	Student Productivity Index
1	Entry Level Test	Attitude to School Questionnaire Attendance Rate	Student Productivity Index
2	Cooperative Primary Test - Reading	Attitude to School Questionnaire Attendance Rate	Student Productivity Index

The CSE Survey Kit. To facilitate the administration and use of the Attitude to School Questionnaire and the Student Productivity Index, both

instruments and the manual for the Questionnaire were placed in an illustrated box called the CSE Survey Kit, which is reproduced below in Figure 17.

Figure 17

CSE Survey Kit

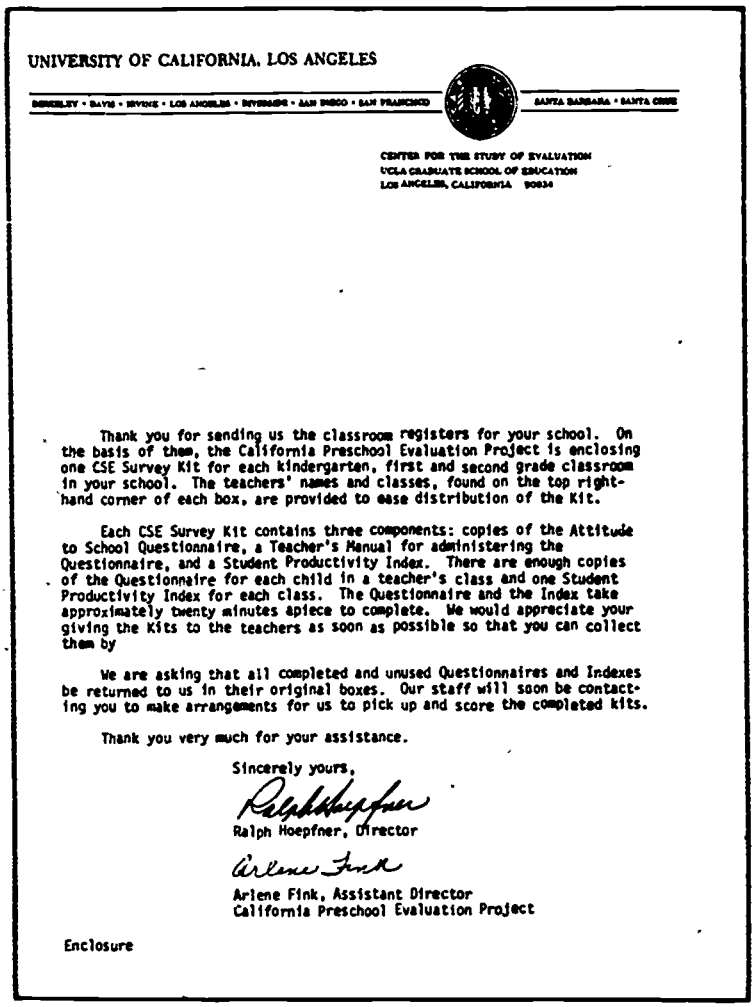


The Kit contained a sufficient supply of materials and had the teacher's name and the class on the box cover. It was accompanied by a letter to the principal and instructions for the teacher. The letter to the principal is reprinted in Figure 18.

Each principal was allowed at least two weeks to distribute the Kits and see to its completion by the classroom teachers. The teachers' instructions are given in Figure 19.

Figure 18

Letter to Principal Concerning CSE Survey Kit



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CENTER FOR THE STUDY OF EVALUATION
UCLA GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

Thank you for sending us the classroom registers for your school. On the basis of them, the California Preschool Evaluation Project is enclosing one CSE Survey Kit for each kindergarten, first and second grade classroom in your school. The teachers' names and classes, found on the top right-hand corner of each box, are provided to ease distribution of the Kit.

Each CSE Survey Kit contains three components: copies of the Attitude to School Questionnaire, a Teacher's Manual for administering the Questionnaire, and a Student Productivity Index. There are enough copies of the Questionnaire for each child in a teacher's class and one Student Productivity Index for each class. The Questionnaire and the Index take approximately twenty minutes apiece to complete. We would appreciate your giving the Kits to the teachers as soon as possible so that you can collect them by

We are asking that all completed and unused Questionnaires and Indexes be returned to us in their original boxes. Our staff will soon be contacting you to make arrangements for us to pick up and score the completed kits.

Thank you very much for your assistance.

Sincerely yours,

Ralph Hoepfner, Director

Arlene Fink, Assistant Director
California Preschool Evaluation Project

Enclosure

Measures of Preschool Agencies

Preschool Agency Purpose

This evaluation study did not focus on the specific purposes of each California State Preschool, but concentrated instead on the question of the effectiveness of the State Preschool Program as a whole. Nevertheless, data were collected to provide descriptions of the general purposes of each Program during the three years of interest. The Preschool purposes, as reported by the Preschool agency administrators, were then compared to the enabling legislation to provide a check on how well the legislative mandates were being met. More

Figure 19

Teachers' Instructions for Using CSE Survey Kit

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LOS ANGELES, CALIFORNIA 90024

THE CSE SURVEY KIT

The Contents of this Kit

Twenty blue copies of the Attitude to School Questionnaire
Twenty pink copies of the Attitude to School Questionnaire

Directions for Using this Kit

The Attitude to School Questionnaire

Each child in your class should fill out a Questionnaire. Complete instructions for administration are given in the Teacher's Manual. Please read the Manual at least once before administering the Questionnaire to your class. There is no need for you to attempt to do any scoring.

The Student Productivity Index

Please rate each child on each of the five items directly on the Index form.

The Completed Kit

You should arrange to administer the Attitude to School Questionnaire (about 20 minutes) and to complete the Student Productivity Index during the week of

After the Questionnaire and the Index have been completed, please put them, with the Manual and any unused copies, in their original box, and return the entire Kit to the Principal.

Thank you very much for your help

Ralph Hoepfner

Ralph Hoepfner, Director

Arlene Fink

Arlene Fink, Assistant Director
California Preschool Evaluation Project

important, however, data on the purpose of each agency provided information for comparing types of agencies in terms of their differential effects on students.

The Preschool Agency Purpose Survey. The administrator in charge of each of the Preschool agenices involved in this evaluative study participated in the Survey. There were three parallel forms of the Survey, one for each of the three years, 1970-71, 1971-72, and 1972-73. Agency administrators were asked to rank-order five possible preschool purposes. The Survey form for the

year 1971-72 is reproduced in Figure 20. Each Survey was printed on a CSE self-addressed postpaid postcard for convenience.

Figure 20

Preschool Agency Purpose Survey

The list below contains five purposes of preschool education. Please rank these purposes according to how much emphasis each received in your State Preschool Program during the 1972-1973 school year. The purpose that is emphasized most should be ranked "1", the second most emphasized should be ranked "2," etc. Be sure to write in a rank for each purpose.

PRESCHOOL PURPOSE	RANK
To help children improve their visual and hearing sensitivity; to facilitate muscle development and coordination.	
To help children develop skills in communication verbally and orally; to promote ability to deal with concepts such as number, time, color and size.	
To help children become considerate of others, cooperative and friendly; to help them want to share, and to respect public and private property.	
To help children acquire a favorable attitude toward attending school, their teachers and learning; to help promote an appreciation of persistence and achievement.	
To help children develop a healthy self-concept, self-esteem, and self-confidence; to develop a sense of personal worth, self-understanding and security.	

Thank you very much for your cooperation.

The five purposes each Preschool administrator ranked were selected to cover the wide range of objectives and purposes that are the current targets of pre-school education. Although five-category descriptions can hardly be expected to encompass the scope of any educational program, the Preschool administrators did not appear to have difficulties in describing their individual programs in terms of the five rankings.

The means of the ranks provided by the Preschool administrators for all 42 agencies and over all three years are presented in Table 7.

Table 7

Obtained Mean Ranks of the Five Preschool Purposes

Preschool Purpose	Mean Rank
Psycho-motor Development	3.7
Preacademic Skills	2.6
Socialization and Interaction Skills	3.8
Attitude to School and Learning	3.3
Self-concept Development	1.4

The purpose most frequently ranked as being most emphasized is that of development of students' self-concepts, while the second ranked purpose is that of Preacademic Skills. The enabling legislation, on the other hand, has not

specified improved self-concept as a Preschool objective (partly because the societal value of its achievement is only speculation, and partly because there is currently no exportable intervention program that directly addresses it in a convincing manner), but has placed emphasis upon the preacademic educative function. It would appear that the majority of the Preschool agencies have kept the legislated mandate clearly in mind, while replacing it with another, less accountable, and more nebulous one.

The original intention of collecting the data on Preschool purposes was, however, to enable comparisons among types of agencies in terms of their effectiveness. This was planned to meet the contingency that the primary evaluation findings might be ambiguous. The 42 agencies therefore had to be grouped into clusters, based upon similarities of their purposes. Because 98 percent of the agencies had ranked the self-concept purpose first or second in importance, no discriminations among the agencies could be made on the rankings of that purpose. Agencies were grouped together that ranked other purposes highly. This technique was successful in grouping all 42 agencies into three types. Twenty agencies belonged to the type that emphasized Preacademic Skills. Eleven agencies belonged to the type that emphasized Socialization and Interaction Skills, and 11 belonged to the type that emphasized Attitudes to School and Learning.

For the comparative analysis, each agency was therefore coded as belonging to one of the above three pre-school types. No attention was paid to elementary school purposes, and how they might interact with pre-school purposes.

Measures of Continuing Educational Enrichment

Many individuals who are concerned with the education of young children (Jensen, 1967; Deutsch, 1969; Silberman, 1970) have theorized that the ultimate success of pre-school experiences is dependent upon the richness and quality of subsequent elementary education. Bettye Caldwell (1968), for example, has stated

that "it seems imperative to link preschool programs with elementary education programs."

Based on this position, CSE collected data on the enrichment provided by each elementary school in the evaluative study, so that pre-school effects could be considered with respect to variations in the quality of elementary education.

The Enrichment Checklist. A child's experiences in elementary school can be improved in quality and enriched in many ways: through competent and understanding teachers and administrators, the use of appropriate curriculum materials, and educationally sound activities, to name but a few. Although money alone does not guarantee an enriched educational experience, CSE employed funded programs as the measure of the degree of enrichment in continuing education. For the purposes of this study, enrichment was thus gauged by the number of non-locally funded (state or federal) educational programs operating in the school. Because exact dollar amounts, and enrichment effects, were difficult to determine and evaluate, CSE used only the number of such programs installed as its measure of enrichment.

A checklist was, therefore, completed for each school in order to tabulate the number of non-locally funded programs. In an attempt to simplify the checklist, and to make it nearly comprehensive, the following program types were listed:

State Early Childhood Education Program
Follow-Through Program
Miller-Unruh Program
Right-to-Read Program
State Bilingual Program
State Mentally Gifted Minors Program
Title I (Disadvantaged) Program
Title III (Innovative) Program
Title VII (Bilingual) Program
Other Programs

At each school, the operating programs were checked and the number of checks was later tabulated as the enrichment index. The 148 elementary school enrichment indexes ranged from 0 to 7, (that is, no school was enriched by more than seven programs), and were distributed as described in Table 8. In order to create two

discrete categories of approximately equal numbers of schools, the index was dichotomized at 2.5, near its median value, and all schools with 0 to 2 enrichment programs were classified as "Low Enrichment," while those with 3 or more enrichment programs were classified as "High Enrichment." Eighty schools were classified as "Low Enrichment" in this manner, and 68 were classified as "High Enrichment." If the state's Early Childhood Education Program is not considered as providing enrichment that could affect the evaluation data (due to its recent innauguration), the index value for separating high from low achievement schools would remain the same, but the categories would contain very unequal numbers of schools with 18 moving from the high group to the low group. The state's Early Childhood Education Program was therefore included in the index as an "adjustment" to obtain a more equal dichotomization.

Table 8

Number of Schools Receiving Each Enrichment Index

Enrichment Index	Number of Schools	Enrichment Classification
0	22	"Low Enrichment" (80)
1	18	
2	40	
3	38	"High Enrichment" (68)
4	18	
5	9	
6	2	
7	2	
8	0	
9	0	
10	0	
Total	148	

The Collection of Information about Performance, Motivation, and Productivity

As a result of the sampling procedures, 148 elementary schools throughout California were selected for the study. Information about the comparative performance, motivation, and productivity of the children in these schools was obtained by relying on their records of achievement and attendance and by using the two specially prepared instruments, the Attitude to School Questionnaire

and the Student Productivity Index. On the basis of rosters for each kindergarten, first- and second-grade class sent by all elementary school principals, CSE Survey Kits containing these instruments were sent out for completion.

To maximize efficiency, CSE arranged to send its own field evaluation personnel to each school to collect the Kits and to transcribe the school record information. In this way, CSE believed, the need for school staff's time and involvement would be minimized and information would be gathered in a uniform and reliable manner, thus making it ultimately easier for CSE to organize the information for analysis and interpretation. Field evaluators were therefore recruited and trained. The schools they visited were arranged into itineraries of three, four, or five schools each according to geographic location and proximity. For example, there were three schools in Santa Maria, four in Pasadena, and five in Stockton/Modesto. There were approximately seven itineraries in any one week, and eight weeks were allotted for school visitations by the CSE field evaluators.

Recruiting and Training Field Evaluators

Preference for the job of field evaluator was given to individuals:

With current and valid California driver's license
With at least a BA or BS degree
With credits in education, psychology, sociology, or public welfare
With experience in the public school system
With sound and practical judgment
With interpersonal skills
Who could and would follow directions
Who would dress and comport themselves in a way consistent with the expectations of regular school personnel
Who would work typical school hours (work beginning at or before 8:00 a.m.).

Once the field evaluators were selected, they were formally trained by regular CSE staff in group and individual workshop sessions to perform their responsibilities. To facilitate training, each field evaluator was provided with a copy of a "Procedures for Visiting Schools" booklet, which explained the purposes

and procedures of the evaluative study, gave a detailed description of the evaluator's responsibilities, and provided him/her with samples and extra copies of all information recording forms.

Explaining purposes. This section of the "Procedures for Visiting Schools" booklet was intended to give the field evaluators a capsule summary of the Preschool Evaluation Project and the Preschool Program and also to provide a sense of the sequence of events so that they would be able to establish a sense of the context in which their responsibilities were to be fulfilled. The "Introduction" to the study, written for the field evaluators, took the form given in Figure 21.

Figure 21

Introduction to the California Preschool Evaluation Project (CPEP)

1. Introduction to the

CALIFORNIA PRESCHOOL EVALUATION PROJECT (CPEP)

The Center for the Study of Evaluation at UCLA has been asked by the Office of the Legislative Analyst to conduct an evaluation study of California's State Preschools. The Preschool Program was created by Assembly Bill 1331. The Center's Evaluation Study was mandated by Assembly Bill 451. This Bill says:

> This study shall include. . .an evaluation of the results achieved by the preschool program through a controlled evaluation of participating children. This evaluation should include, to the extent possible, a retrospective analysis of improved and sustained motivation, performance, and productivity achieved in kindergarten through grade [2]. (Section 6)

To fulfill the requirements of the Bill, CSE has developed extensive sampling procedures to make sure that information is collected from appropriate elementary schools on as many former preschool children as possible, and that the information is accurate in terms of the program's geographic, racial and economic requirements. The elementary schools (or districts) that you are visiting were selected as a result of the sampling procedures.

The principal of the elementary school and the superintendent of the school district in which the schools are located have been informed in a letter signed by Dr. Wilson Riles and Mr. A. Alan Post of the purposes of the evaluation study, and the information CSE needs. As you can see, CSE is working with the State Department of Education as well as the Legislative Analyst. Shortly before your visit, each school (or district) was personally called to set up an appointment, to obtain the name of a person for you to contact, and to further clarify the school's (or district's) and your mutual responsibilities. To gain formal entry into the schools (or districts), you have been provided with a letter of introduction signed by Wilson Riles.

Your major responsibilities for the California Preschool Project are to visit schools to collect and return to UCLA the completed CSE Survey Kits and to record information on the School Record Rosters. You will also be expected to complete the School Experience Form, and to keep records of your time and expenses.

Detailing responsibilities. Field evaluators had three basic responsibilities to the study: to visit the sample elementary schools; to collect the completed CSE Survey Kits; and to transcribe information from school records onto CSE forms. Evaluators were also required to keep accurate records of

their time and expenses.

Visiting the Sample Elementary Schools

A "School Folders Packet" was prepared for each itinerary. In this packet, the field evaluator was provided with a map of the area to be visited; self-addressed CSE mailing labels; two copies of the Student Productivity Index; filament tape; stamped, self-addressed manilla envelopes; and individual school folders for each elementary school in the itinerary. Each individual school folder contained a School Identification Sheet that provided field evaluators with the name and address of the elementary school; an appointment date and time; a person to ask for when arriving at the school; and the physical location of the information needed from the school records (each school was contacted by telephone at least a week in advance of a visit and cooperative arrangements made for the visit). The School Identification Sheet is reprinted in Figure 22.

Figure 22

School Identification Sheet

Area:
Travel:
District Information:
(If relevant)

SCHOOL IDENTIFICATION SHEET

Name of School _____

Address: _____

_____

Phone Number _____

Date of Visit _____ Time _____

Field Evaluator's Name _____

Contact Person at School _____

Number of CSE Survey Kits mailed to school _____

Location of:

Fall 1973 Attendance Records _____
Grade One Birthdates _____
Grade One Ethnic Membership, Grade One Sex Information _____
Grade Two Spring 1973 Cooperative Primary Tests _____

Special Instructions _____

_____

_____

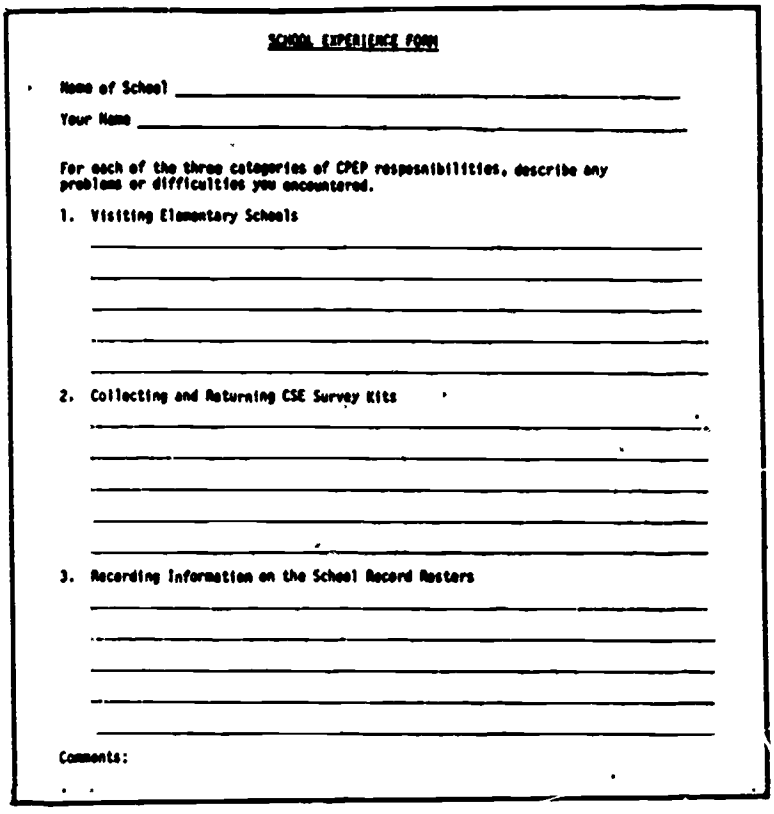
In case of extreme difficulty, call:

Arlene Fink, Ralph Hoepfner — Maureen Malanaphy, Jan Wiedman — at (213) 825-4711

The individual school folder also contained one School Record Roster for each teacher's kindergarten, first, or second grade class that was prepared from the school's rosters. The uses of the School Record Roster are described in greater detail below. Finally, each individual school folder contained a School Experience Form that the field evaluator filled out to help CSE keep a check on possible problems experienced by the evaluators or schools. The School Experience Form is reproduced in Figure 23.

Figure 23

School Experience Form



SCHOOL EXPERIENCE FORM

Name of School _____

Your Name _____

For each of the three categories of CPEP responsibilities, describe any problems or difficulties you encountered.

1. Visiting Elementary Schools

2. Collecting and Returning CSE Survey Kits

3. Recording Information on the School Record Rosters

Comments:

Field evaluators were instructed to always carry the business card provided by CSE as a formal introduction into the schools. Further, they were advised to call the contact person named on the School Identification Sheet to introduce themselves before a visit and to re-check the school's address and location.

Collecting and returning CSE Survey Kits. The directions to field evaluators concerning the collection and return of the Survey Kits were as follows:

1. Check to see that you have collected the appropriate number of CSE Survey Kits, and that the Questionnaires and Indexes are completed.
2. Pack all completed CSE Survey Kits into the carton that was used to mail them to the school. (If the carton is no longer available, you must obtain a new one).
3. Paste the label with CSE's address over the old label. The CSE return label can be found in the School Folders Packet. Extra labels are attached to this folder.
4. Tie the carton with filament tape, found in the School Folders Packet.
5. Mail the carton to CSF: Special Fourth Class Rate, and record the cost of the postage.

Possible problems in collecting and returning the Kits, and their solutions were also provided:

Problem:. You cannot collect the appropriate number of CSE Survey Kits and/or Attitude to School Questionnaires, because some teachers have not completed them.

Solution: Try to convince the school of the importance of obtaining the information. For example, you might mention the need to include as many children as possible in the CPEP evaluative study, and point out that the California Legislature will be making funding decisions on the basis of what we find. If the school is willing, have the staff mail you the Kits. If necessary, provide them with a CSE label for the boxes.

Problem: You cannot collect the appropriate number of Indexes.

Solution: Try persuasion. If successful, provide one of the stamped addressed manilla envelopes included in the School Folders Packet (extra copies are also included in the folder). Be sure to write the name of the school, the teacher's name, and the grade level at the top of the index.

Recording information on the School Record Rosters. The School Record Rosters for each school contained the name of each student in a kindergarten, first-, or second-grade class and the name of the teacher. The School Record Roster is given in Figure 24.

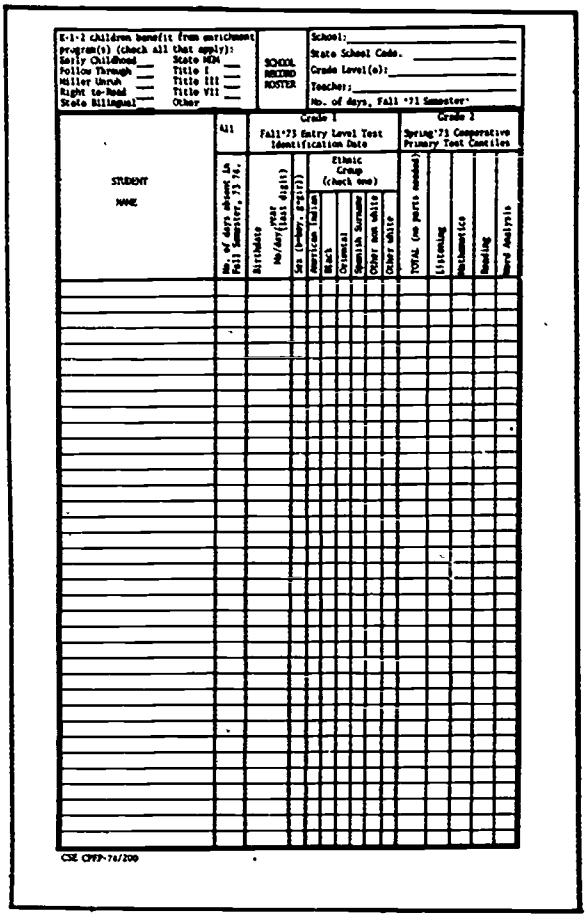
Field evaluators were told to record the needed information and were advised that:

1. The location or whereabouts of the information, e.g., attendance records for computing the number of days each child was absent during the Fall, 1973 semester, is provided for you on the School Identification Sheet.
2. As soon as you arrive at the school, find out from the school contact:
   a. The type of enrichment program, if any, at the school
   b. The number of days in the Fall semester
   c. The state school code

As can be readily seen from the example of the School Record Roster illustrated in Figure 24, while the attendance information and the Cooperative

Figure 24

School Record Roster



Primary scores were available from the schools, the scores for the Entry Level Test were not. These scores had to be obtained from the company that maintains the statewide computer bank of scores. The computer bank stores individual scores, but the scores are coded only by birthdate, ethnicity, sex, and socio-economic index of each student. It is for this reason that information collected on the School Record Roster for all first-grade students is entirely descriptive. The computer bank was searched to match descriptions within schools so that Entry Level Test scores could be assigned to students. CSE gratefully acknowledges the cooperation of Westinghouse Learning Corporation, the agency charged with the computer bank, for its indispensable help in data retrieval for the first-grade test data.

DATA ANALYSIS

This chapter of the evaluation report presents the more technical aspects of the evaluation study including the formulation of the hypotheses and the procedures for analyzing the data.

The Evaluation Questions as Evaluation Hypotheses

The Need for Hypotheses

Experts in the field of evaluation of social and educational programs have not addressed in a comprehensive manner the issue of whether clear experimental hypotheses must be stated in the development of evaluation designs or in the accompanying analysis procedures. CSE conceptualized the present evaluation study as an applied experiment and consequently translated the primary evaluation questions into formalized statements of hypotheses. This procedure was employed for two compelling reasons.

First, the results of the evaluation study were to be supplied to the State Legislature and the Legislature would necessarily have to generalize the findings to pre-school education and into the future of the State Preschool Program. Interpreting the findings of the evaluation study in terms of formalized hypotheses provides the Legislature with built-in indexes of confidence from which they may make generalizations in the most enlightened manner.

Second, the results of the evaluation study could have considerable socio-political implications in terms of continued, altered, or terminated funding of a somewhat controversial program. Because how one interprets evaluation findings is subtly influenced by the nature of the original questions (hypotheses), it was important for CSE to maintain its integrity by formally and precisely stating hypotheses before any of the evaluation findings became known. CSE believed that if these hypotheses were based upon a scrupulously careful consideration of all possible influences on the evaluation findings, then the

objectivity of the interpretation of the findings would be greatly enhanced.

The Influence of the Pre-Existing Samples

Hypotheses that form parts of experimental designs are all based upon the supposition that the populations giving rise to the samples to be compared after the educational treatment were essentially equal before the treatment. This is usually assured through some variety of random sampling or random assignment. However, the case of applied experiments or evaluation studies like this examination of the Preschool Program (and for the Children's Center Program), initial selection of participants into the programs was not random and there is reason to believe that the children in the three groups of this evaluation study represent populations of young children characterized by different degrees of what is called "educational disadvantage." This initial inequality of the groups affected the nature of the formally stated hypotheses and thus how the findings were interpreted.

Reasons why the groups are initially equal. The sampling of all students in each of the three groups was made within schools and within classrooms. That is, for each child in the Preschool Program, a child for each of the other two groups was (attempted to be) selected who was from the same classroom. No attempt was made to match children across classrooms or schools. Even if the classrooms were rigidly tracked by ability level (or any other characteristic), and even if the schools were rigidly segregated according to any socio-economic or racial and ethnic basis, the sampling procedure employed in this evaluation study maximized the equality of the students in each of the groups. On the basis of this evaluation study's sampling approach, the three groups should exhibit initial equality and normal experimental hypotheses should be appropriate. But the evidence for the initial inequality among the three groups is much greater and CSE made every effort to give that evidence due consideration in the formulation of hypotheses.

Reasons why the groups are initially unequal. Not only can the children be looked at on the basis of the sampling procedures for the evaluation study, but they can also be looked at on the basis of how they were selected (or not selected) one, two, or three years previously into their respective pre-school experiences. If such selection was not essentially random, then there is evidenice that the three groups were not initially equal. To determine if the nature of the criteria would result in random selection, the eligibility requirements for each of the two programs, Preschool and Children's Centers, had to be considered in comparison to the No-Program children.

Table 9

Sampling Effects of Pre-School Program Eligibility Requirements

Basis for Potential Inequality	Preschool Children	Children's Center Children	No Program Children (who attend elementary schools with Preschool and Children's Center children)
Socio-Ecocomic Status	Must be AFDC recipient, from low-income family, welfare recipient, or economically disadvantaged.	Must be current, former, or potential AFDC recipient, parent either employed, in training, or in school. Any child may be enrolled, if there is space, but priority goes to children meeting criteria above.	Not known; probably covers most of the socio-economic range, with likely underrepresentation of upper-middle and upper classes.
Cultural Differences	Preference given to non-English-speaking families, and to the socially and environmentally disadvantaged.	Not known; no cultural requirements.	Not known; probably very heterogeneous.
Racial/Ethnic Origin*	2% American Indian; 22% Black; 3% Oriental; 36% Spanish American; 37% Other White (as obtained from Table 1).	58% White; 27% Black; 10% Chicano; 1% Chinese; 1 % Native American; 3% Other.	1% American Indian; 18% Black; 1% Oriental; 26% Spanish American; 52% Other White (as obtained from Table 2).
Family Involvement in Education	Parents must enroll the child and be involved in the educational program.	Parents must enroll the child and must participate; but participation is often marginal because most parents work or go to school.	Not known; could range from malign neglect to intense involvement in private preschool program.

*State consensus figures for children, aged 3 to 5, in 1970 were: 8% Negro; 75% White; 1% Japanese; 13% Spanish surname; 1% American Indian; 1% Chinese; and 1% Filipino. Racial/Ethnic labels are consistent with their various direct and indirect sources.

Table 9, presenting general eligibility criteria for the three groups that could cause sampling inequalities, indicates that the three groups of children cannot be considered to be random (and therefore equal) samples of the population of California pre-school-aged children. Based upon the number and biasing

effects of the eligibility criteria, it was inferred that initially the Preschool children were most economically disadvantaged, leading to the conclusion that they were the most educationally disadvantaged; the Children's Center children were second in terms of educational disadvantage; the No-Program children were least educationally disadvantaged.

The Evaluation Hypotheses

Because of the importance of the hypotheses in addressing the limitation resulting from the lack of baseline data, it was necessary to formulate them in a unique way. For this reason, the rationale for the hypotheses is presented in detail.

If, on the generalized dependent variable of educational advantage, μ_P stands for the mean of the population P of participants in the Preschool Program, μ_C, for the mean of the population C of children who had experiences in the Children's Center Program, and μ_N for the mean of the population N of children who had taken part in no institutionalized program, a basis is furnished for formulating each of several possible hypotheses.

Hypotheses for two-group comparisons. Initially, consideration will be given to comparisons between populations P and N, as population C constitutes, in a sense, an additional benefit or dividend of importance but not of vital significance. It can be argued, on the basis of the previous discussion, that despite the care taken in sampling, there may be a slight built-in advantage for children in the N population, as the lack of prior participation in an institutionalized pre-school program could indicate for population N the somewhat enhanced probability of a slightly higher socio-economic level in the home and of a somewhat more advantageous home environment for learning than that found for children in population P. (The alternative, that many of the children from population N are from families so disadvantaged that their parents didn't even know about or care about the possibility of a pre-school experience, was not considered highly likely.)

Hence, it is not unlikely that if the members of population P had not received

any pre-school program, their average level of academic performance, motivation, and productivity would have been lower than that of population N. The equation below describes this probablistic situation:

$$\mu_N > \mu_p.$$

Thus it would appear that if the mean academic performance, motivations, and productivity level of individuals in population P after the Preschool experience were at least equal to that of population N, there would be reason to conclude that the Preschool Program was successful. This finding would indicate that the Preschool Program brought the disadvantaged children up to (but not above) the level of the No-Program children and would be interpreted as evidence that the Preschool Program probably was successful in meeting its goals. The equation that illustrates the condition under which the Preschool Program would be adjudged a probable success is:

$$\mu_N \neq \mu_p \neq \mu_N.$$

The Preschool Program would be adjudged a definite success if:

$$\mu_p > \mu_N.$$

Although it is customary in a directional hypothesis involving a one-tailed significance test (relative to which the substantive research-oriented prediction from a theoretical frame work would be that the mean of the Preschool population would be greater than the mean of the No-Program population) to state the null hypothesis (H_0) and the alternative hypothesis (H_A) as

$$H_0: \mu_p \leq \mu_N$$

$$H_A: \mu_p > \mu_N,$$

it is conceivable (precisely as happened in this evaluation study) that there could be a situation in which the expectation for the evaluation hypothesis would be that the average level of the experimental (Preschool) population would be equal to or greater than that of the control (No-Program) population, and that the

null hypothesis would indicate that the mean of the experimental (Preschool Program) population would be less than (but not equal to) that of the control (No-Program) population, as evidenced by the following statements:

$$H_0: \mu_p < \mu_N$$

$$H_A: \mu_p \geq \mu_N$$

For the investigation involving populations P and N, it would seem reasonable from the argument previously presented that the null hypothesis and alternative (evaluation) hypothesis be stated as above.

To formulate the null hypothesis H_0 as a non-directional one of no difference, in which either a positive or negative sampling difference between means would be entertained as a highly likely occurrence, would seem to be an evasive tactic, as there appears to be a reasonable expectation on the part of the legislators and members of the teaching and home communities that children given the Preschool experience should do in subsequent primary grades <u>at least</u> as well as similar children not afforded such an opportunity. To argue that disadvantaged children in the Preschool Program would exhibit, on the average, a level of performance superior to that of somewhat less-disadvantaged children, would be to expect more from the Preschool Program than would be expected from any other educative program, and this would be unrealistic, and probably unfairly discriminatory. By the same token, to argue that the Preschool Program could not erase the deficit of the disadvantaged child, but merely make it smaller, would be to inject an element of fatalistic pessimism for the intervention approach. Thus, the formulation afforded by the adopted hypotheses seemed on both research-evaluation and political-humanistic grounds the most reasonable and pragmatic one.

The hypotheses for the comparisons between the Preschool children and the No-Program children were evaluated as follows: Significantly greater improvement of the Preschool children was interpreted as indicating a <u>definite success</u> of

the Program; any non-significant difference between the programs was interpreted as indicating a probable success of the Preschool Program; and any significantly greater improvement of the No-Program children was interpreted as indicating a definite failure of the Preschool Program. In the usual evaluation study these criteria would be considered exceedingly one-sided in allowing the Preschool Program to merit positive evaluation; however, CSE believed that the possibility of initial sampling bias warranted this more liberal approach.

Hypotheses for three-group comparisons. If the third population, C, is injected into the discussion, many interesting possibilities could arise from the standpoint of the research hypotheses. The two most likely expectations would be:

$$H_{A1}: \mu_p > \mu_C > \mu_N$$

or

$$H_{A2}: \mu_p = \mu_C = \mu_N.$$

The second alternative hypothesis, A_2, allows for the minimal expectation of equality to be achieved; and the first alternative hypothesis, A_1, for the fulfillment of the somewhat hopeful "underdog" expectation that the disadvantaged children in the enriching Preschool Program would excel those in the Children's Center Program who, in turn, would excel children not receiving any institutionalized pre-school experience. Both alternatives were combined to provide the operating evaluation hypothesis:

$$H_A: \mu_p \geq \mu_C \geq \mu_N,$$

with interpretations similar to those for the two-population case.

It is conceivable that the non-effectiveness of the pre-school experiences or the realities of the differences caused by disadvantaged conditions might yield the following nul hypothesis:

$$H_0: \mu_p < \mu_C < \mu_N.$$

with accompanying negative evaluation interpretations for the pre-school experience programs.

The hypotheses for the comparisons among the Preschool, Children's Center, and No-Program children partly repeat those for the two-group comparisons discussed above. For that reason, the three-group hypotheses were evaluated primarily for the Preschool vs. Children's Center comparisons, with No-Program comparisons playing a secondary role. The hypotheses were evaluated as follows: Significantly greater improvement of the Preschool children over the Children's Center children was interpreted as indicating that the Preschool Program was definitely more successful than the Children's Center Program; any non-significant difference between the Preschool Children and the Children's Center children was interpreted as indicating that the Preschool Program was probably more successful than the Children's Center Program; any significantly greater improvement of the Children's Center children over the Preschool children was interpreted as indicating that the Children's Center Program was definitely more successful than the Preschool Program. Each of these interpretations was further tempered, of course, with the observed differences from the No-Program children. As with the two-group criteria, these would be considered exceedingly one-sided in allowing the Preschool Program to merit positive evaluation in comparison to the Children's Centers by traditional evaluation standards. CSE still believed that the possibility of initial sampling bias warranted this more liberal approach.

Hypothesis for Preschool purposes comparisons. The fact that the sample of Preschool agencies employed in this evaluation study could be categorized into three different groups on the basis of their self-reported priorities or purposes allowed for a comparison among the three groups in terms of the dependent variables reflecting levels of performance, motivation, and productivity. Because the categorization of the Preschool agencies was not based on any preconceived plan, but was made empirically according to the findings of the Preschool Purpose Survey, no directional hypotheses were made regarding the possible differences among the groups. The non-directional evaluation hypothesis for the

Preacademic Skills population (A), the Socialization and Interaction Skills population (S), and the Attitudes to School and Learning population (L), is stated as

$$H_A: \mu_A \neq \mu_S \neq \mu_L,$$

while the null hypothesis is stated as

$$H_0: \mu_A = \mu_S = \mu_L.$$

With a non-directional hypothesis, any observed significant difference among the groups of Preschool agencies can be reported as information that might be useful for decision making by the Legislature, and therefore was reported in that fashion.

Hypothesis for school-enrichment comparisons. Based upon the literature cited previously on page 51 of this evaluation report, the following directional hypothesis was made regarding the differences between the means of the Low-Enrichment schools (Low) and the High-Enrichment schools (High):

$$H_A: \mu_{Low} < \mu_{High}.$$

The concommitant null hypothesis would read:

$$H_0: \mu_{Low} \geq \mu_{High}.$$

It was considered that rejection or non-rejection of the null hypothesis would have no direct decision-making implications for the Legislature, but would only be useful for a more careful consideration of implications from other statistical tests described above. It was also thought that the findings for the "enrichment" comparisons, secondary concerns in the two-group and three-group comparison analyses, should not be interpreted as an evaluation of the general "enrichment" policy, because High and Low schools might have been different on other characteristics (such as concentration of disadvantaged children). It could be argued, for example, that since enrichment programs are (in general) provided where they are most needed, equal achievement would be an indication of probably success. Thus the findings were meant to be interpreted only in a "maintenance" perspective.

Analysis Methods to Test the Hypotheses

The analysis method selected to test all the hypotheses of this evaluation study was the univariate analysis of variance. While analysis of covariance would be an appropriate method, especially where the comparison groups are unequal in many relevant respects, no measures that could qualify as covariates were available for most of the children in all three groups. For example, although Bettye Caldwell's Preschool Inventory was administered to a state-wide sample of Head Start children during the years of concern to this evaluation study, and Head Start programs were frequently commingled with Preschool and Children's Center Programs, none of the No-Program children could be expected to have taken the test during their pre-school years, and there would therefore be no way to adjust for their differences.

Analyses to compare Preschool to No-Program children. At each of the three grade levels and for each of the measures taken at the respective grade, a two-way analysis of variance was performed. One dimension was the Preschool-No-Program comparison and the second dimension was the Low - High school-enrichment comparison. The comparisons are graphically presented in Figure 25.

Figure 25

Preschool vs. No-Program Comparisons

	Preschool Program	No-Program
Low Enrichment		
High Enrichment		

F tests for the first main effe (comparing the two right columns) indicated whether or not the Preschool children exceeded or were equal to (or lower than) the No-Program children, without consideration of their elementary school programs. F tests for the second main effect (comparing the two bottom rows)

indicated whether the children in High-Enriched elementary schools exceeded (or were equal to or lower than) children in Low-Enrichment elementary schools, ignoring their pre-school experiences. F tests for the interaction (comparing both columns and rows simultaneously) indicated whether school enrichment worked to enhance, maintain, diminish, or reverse any effects of the two pre-school experiences.

Analyses to compare Preschool to Children's Center to No-Program children. At each of three grade levels and for each of the measures taken at the respective grade, a two-way analysis of variance was performed. The samples of students for this analysis were composed of all the cases from classrooms in which all three types of children (in terms of their pre-school experiences) were found. One dimension of the analysis was the Preschool - Children's Center - No-Program comparison and the second dimension was the Low - High school-enrichment comparison. The comparisons are graphically presented in Figure 26.

Figure 26

Preschool vs. Children's Center vs. No-Program Comparisons

	Preschool Program	Children's Center	No-Program
Low Enrichment			
High Enrichment			

F tests for the first main effect (comparing the three right columns) indicated whether or not the Preschool children exceeded or were equal to (or lower than) the Children's Center children who, in turn, exceeded or were equal to (or lower than) the No-Program children without consideration of their elementary school programs. F tests for the second main effect (comparing the two bottom rows) indicated whether the children in High-Enrichment elementary schools exceeded (or were equal to or lower than) children in Low-Enrichment elementary schools,

ignoring their pre-school experiences. F tests for the interaction (comparing both columns and rows simultaneously) indicated whether school enrichment worked to enhance, maintain, diminish, or reverse any effects of the three pre-school experiences. The comparisons made for the first main effect, when significant, were followed by post hoc comparisons to find just which groups were different from one another.

Analyses to compare the effects of different Preschool purposes. At each of the three grade levels and for each of the measures taken at the respective grade, a one-way analysis of variance was performed over the three types of Preschool purposes. The samples of students for this analysis were composed only of those students who had completed Preschool experiences. The one dimension of the analysis was the Preacademic Skills - Socialization and Interaction Skills - Attitudes to School and Learning comparisons among the Preschool's self-described priority purpose. The comparisons are graphically presented in Figure 27.

Figure 27

Preschool Purposes Comparisons

Preacademic Skills	Socialization and Interaction Skills	Attitudes to School and Learning

An F test for the main effect (comparing the three columns) indicated whether or not there were differences among children from the three differently focused Preschool agencies. If the tests were significant, they were followed by post hoc comparisons to determine which type of Preschool had the most positive effect on which type of student outcome.

Because of the extreme care taken in the sampling of children to represent

each of the groups being compared in any of the analyses described above and because in many instances statistical equality was to be liberally interpreted as somewhat confirmatory of hypotheses, the .05 level of significance was adopted for the evaluation of all the inferential statistical tests.

Comparison of Preschool Children to No-Program Children

To test for differences between Preschool and No-Program children, at each grade level and for each measure, a two-way analysis of variance was conducted. The basic design for this analysis, presented in Figure 25, is outlined in the previous chapter.

Differences in Performance

Two measures of performance were considered: the Entry Level Test for first-grade students and the Cooperative Primary Test - Reading for second-grade students. The results of the analysis for each measure are presented in Tables 10 and 11, respectively. (Throughout this chapter, the abbreviations appearing in the tables are: N = sample size; M = mean value; df = degrees of freedom; F = F value; p = probability value; and ns = not significant.)

Table 10

Analysis of Entry Level Test: Grade 1

	Preschool Experience	No-Program Experience
Low Enrichment	N = 298 M = 26.90	N = 284 M = 27.34
High Enrichment	N = 428 M = 26.36	N = 439 M = 26.80

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	67.99	1.82	ns
Low vs. High Enrichment	1	103.34	2.77	ns
Interaction	1	.08	.00	ns
Error	1445	37.30		

Entry Level Test. No statistically significant differences in performance were found between Preschool and No-Program children or between Low-Enrichment and High-Enrichment children. In addition, tests for interactive effects of the Preschool experience and Enrichment were also nonsignificant.

In terms of the evaluation hypothesis, these results indicate that with

respect to performance, as measured by the Entry Level Test:

1. The Preschool Program was probably successful in meeting this goal.
2. Enrichment had no effect on maintaining student performance.

Table 11

Analysis of Cooperative Primary Test-Reading: Grade 2

	Preschool Experience	No-Program Experience
Low Enrichment	N = 237 M = 22.04	N = 213 M = 24.90
High Enrichment	N = 350 M = 21.78	N = 314 M = 23.14

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	1187.59	16.62	p<.01
Low vs. High Enrichment	1	273.98	3.83	p<.05
Interaction	1	149.53	2.09	ns
Error	1110	71.46		

Cooperative Primary Test - Reading. Comparison of performance between Preschool and No-Program children reveals statistically significant differences, with the Preschool children (M = 21.88) earning lower scores than the No-Program children (M = 23.85). In addition, differences were found between High Enrichment and Low Enrichment with the Low-Enrichment children (M = 23.39) surpassing the High-Enrichment children (M = 22.42). Tests for an interaction between the Preschool experience and Enrichment were nonsignificant.

In terms of the evaluation hypothesis, these results indicate that for performance, as measured by the Cooperative Primary Test - Reading:

1. The Preschool Program was definitely not successful in meeting this goal.
2. Enrichment appeared to be detrimental in maintaining performance.

Summary. For both measures of performance, the Preschool children had lower mean scores than the No-Program children. However, the means were only significantly different for one of the measures. Therefore, it is concluded that the Preschool Program was probably successful in improving first-grade performance, but definitely not successful in improving second-grade performance.

In addition, enriched elementary-school programs did not maintain or enhance first-grade improvement, and actually appeared to be detrimental to second-grade performance.

Differences in Motivation

Two measures of motivation available at each grade level were considered in this set of analyses: the Attitude to School Questionnaire (ASQ) and attendance. The results of the analyses are presented in Table 12 through 14 for the Attitude to School Questionnaire and in Tables 15 through 17 for attendance. In interpreting the results of these analyses, it should be kept in mind that attendance was measured on a reversed scale as percentage of a semester absent. Consequently, a lower value represents a "better" score on this measure.

Table 12

Analysis of Attitude to School Questionnaire: Grade K

	Preschool Experience	No-Program Experience
Low Enrichment	N = 456 M = 20.37	N = 439 M = 20.60
High Enrichment	N = 587 M = 19.76	N = 563 M = 20.17

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	49.99	1.22	ns
Low vs. High Enrichment	1	137.32	3.36	ns
Interaction	1	3.44	.08	ns
Error	2041	40.93		

Table 13

Analysis of Attitude to School Questionnaire: Grade 1

	Preschool Experience	No-Program Experience
Low Enrichment	N = 361 M = 20.78	N = 366 M = 21.18
High Enrichment	N = 527 M = 19.92	N = 524 M = 19.74

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	5.35	.18	ns
Low vs. High Enrichment	1	572.09	18.82	p<.01
Interaction	1	34.83	1.15	ns
Error	1774	30.39		

Table 14

Analysis of Attitude to School Questionnaire: Grade 2

	Preschool Experience	No-Program Experience
Low Enrichment	N = 266 M = 20.63	N = 271 M = 20.70
High Enrichment	N = 385 M = 21.05	N = 382 M = 21.05

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	.54	.02	ns
Low vs. High Enrichment	1	47.19	1.96	ns
Interaction	1	.15	.01	ns
Error	1309	24.09		

Attitude to School Questionnaire. Comparison of Preschool children to No-Program children produced nonsignificant differences at each of the three grade levels. No significant differences were found between the High-Enrichment and Low-Enrichment children except for grade one. In the first grade, Low-Enrichment children (M = 20.98) showed higher motivation than the High-Enrichment children (M = 19.83). No significant interactions between Preschool experience and Enrichment were found at any grade level.

According to the evaluation hypothesis, these results indicate that in terms of motivation, as measured by the Attitude to School Questionnaire:

1. The Preschool Program was probably successful in meeting this goal.
2. Enrichment appeared to have no effect on maintaining student motivation in kindergarten and the second grade, but appeared to be detrimental in maintaining student motivation in the first grade.

Table 15

Analysis of Percentage of Semester Absent: Grade K

	Preschool Experience	No-Program Experience
Low Enrichment	N = 479 M = 11.47	N = 462 M = 10.50
High Enrichment	N = 647 M = 10.55	N = 603 M = 10.48

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	144.33	1.47	ns
Low vs. High Enrichment	1	116.44	1.18	ns
Interaction	1	106.35	1.08	ns
Error	2187	98.52		

Table 16

Analysis of Percentage of Semester Absent: Grade 1

	Preschool Experience	No-Program Experience
Low Enrichment	N = 379 M = 8.55	N = 374 M = 8.27
High Enrichment	N = 545 M = 8.57	N = 555 M = 8.32

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	31.21	.42	ns
Low vs. High Enrichment	1	0.76	.01	ns
Interaction	1	0.22	.00	ns
Error	1849	74.44		

Table 17

Analysis of Percentage of Semester Absent: Grade 2

	Preschool Experience	No-Program Experience
Low Enrichment	N = 275 M = 6.16	N = 282 M = 6.68
High Enrichment	N = 405 M = 6.82	N = 397 M = 6.53

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	4.23	.09	ns
Low vs. High Enrichment	1	21.20	.45	ns
Interaction	1	54.68	1.16	ns
Error	1355	46.92		

Attendance. At each grade level, no statistically significant differences were produced between the Preschool and No-Program children, or between the Low-Enrichment and High-Enrichment children. Further, no interactions were found between Preschool experience and Enrichment.

According to the evaluation hypothesis, these results indicate that in terms of motivation, as measured by attendance:

1. The Preschool Program was probably successful in meeting this goal.
2. Enrichment had no effect on maintaining student motivation.

Summary. Even though the mean scores on both measures of motivation at most of the grade levels were slightly favorable to the No-Program children, the differences were not significant. In terms of motivation, it is concluded that the Preschool Program probably effected improvement, but that the improvement

was neither maintained nor enhanced by enriched elementary-school programs, and that in one instance, these programs actually appeared detrimental to motivation.

Differences in Productivity

For this analysis, the Student Productivity Index was used as the measure of productivity at each grade level. It should be kept in mind that the Student Productivity Index uses a reversed scale, with higher scores indicating less productivity. The results of this analysis are presented in Tables 18 through 20.

Student Productivity Index. Statistically significant differences in productivity were found between Preschool and No-Program children, with No-Program children surpassing the Preschool children at each grade level. (In kindergarten Preschool, M =52.37, No-Program, M = 47.60; in grade one Preschool, M = 52.22, No-Program, M = 48.23; and in grade two Preschool, M = 0.97, No-Program, M = 47.43.) Comparisons between High and Low-Enrichment children at each grade level produced no significant results. Similarly, no significant interactions were found between Preschool experiences and Enrichment.

In terms of the evaluation hypothesis, these results indicate that for student productivity, as measured by the Student Productivity Index:

1. The Preschool Program was definitely unsuccessful in meeting this goal.
2. Enrichment had no effect on maintaining student productivity.

Summary. The Preschool children exhibited significantly less productivity than the No-Program children. In terms of productivity, it is concluded that the Preschool Program was definitely not successful in effecting improvement and that enrichment at the elementary level had no effect either.

Comparison of Preschool, Children's Center and No-Program Children

To test for differences among the Preschool, Children's Center, and No-Program children, a 2X3 analysis of variance was performed. The basic design for this analysis, presented in Figure 26, is outlined in the previous chapter.

Table 18

Analysis of Student Productivity Index: Grade K

	Preschool Experience	No-Program Experience
Low Enrichment	N = 493 M = 51.87	N = 477 M = 48.41
High Enrichment	N = 646 M = 52.75	N = 627 M = 46.98

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	11710.61	13.37	p<.01
Low vs. High Enrichment	1	40.85	.05	ns
Interaction	1	733.12	.84	ns
Error	2239	875.65		

Table 19

Analysis of Student Productivity Index: Grade 1

	Preschool Experience	No-Program Experience
Low Enrichment	N = 386 M = 53.24	N = 386 M = 48.17
High Enrichment	N = 556 M = 51.51	N = 561 M = 48.28

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	7876.30	8.98	p<.01
Low vs. High Enrichment	1	299.57	.34	ns
Interaction	1	385.17	.44	ns
Error	1885	877.56		

Table 20

Analysis of Student Productivity Index: Grade 2

	Preschool Experience	No-Program Experience
Low Enrichment	N = 282 M = 50.61	N = 286 M = 45.95
High Enrichment	N = 415 M = 51.21	N = 407 M = 48.46

SOURCE	df	Mean Square	F	p
Preschool vs. No-Program	1	4603.83	5.29	p<.05
Low vs. High Enrichment	1	814.76	.94	ns
Interaction	1	308.32	.35	ns
Error	1386	870.84		

Differences in Performance

Two measures of performance were considered: the Entry Level Test for first-grade students and the Cooperative Primary Test - Reading for second-grade students. The results of this analysis for each measure are presented in Tables 21 and 22.

Table 21

Analysis of Entry Level Test: Grade 1

	Preschool	Children Center	No-Program
Low Enrichment	N = 65 M = 28.46	N = 19 M = 29.16	N = 54 M = 27.51
High Enrichment	N = 113 M = 27.51	N = 39 M = 26.92	N = 112 M = 27.01

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	16.14	0.56	ns
Low vs. High Enrichment	1	108.21	3.75	ns
Interaction	2	17.58	.61	ns
Error	396	28.87		

Entry Level Test. No statistically significant differences were found between Preschool, Children's Center, and No-Program students, or between the High-Enrichment and Low-Enrichment students. In addition, the test for interactive effects between Preschool experience and Enrichment was nonsignificant.

According to the evaluation hypothesis, these results indicate that with respect to performance, as measured by the Entry Level Test:

1. The Preschool Program was probably more successful than the Children's Center Program in meeting this goal.
2. Enrichment had no effect on maintaining student performance.

Cooperative Primary Test - Reading. No significant differences were found between the Preschool, Children's Center, and No-Program children. All the mean scores in Table 22 are very close to the mean of the published national norms for Grade 1 - Spring. Significant differences were produced, however, between High and Low Enrichment, with Low-Enrichment children (M = 24.39) surpassing

Table 22

Analysis of Cooperative Primary Test-Reading: Grade 2

	Preschool	Children Center	No-Program
Low Enrichment	N = 57 M = 22.33	N = 21 M = 27.90	N = 53 M = 25.21
High Enrichment	N = 85 M = 21.78	N = 36 M = 21.25	N = 70 M = 22.76

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	151.30	2.36	ns
Low vs. High Enrichment	1	677.13	10.57	p<.01
Interaction	2	212.04	3.31	p<.05
Error	316	64.08		

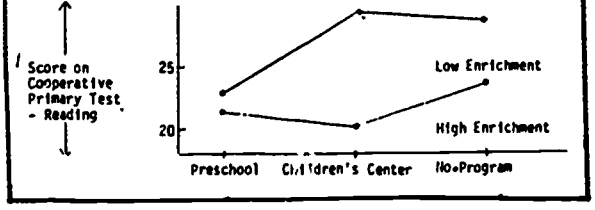
Newman-Keuls Multiple Comparison Test

Low Enrichment, Children Center > High Enrichment, No Program p<.01
Low Enrichment, Children Center > Low Enrichment, Preschool p<.01
Low Enrichment, Children Center > High Enrichment, Preschool p<.01
Low Enrichment, Children Center > High Enrichment, Children Center p<.01

the High-Enrichment children (M = 22.04). The test for interaction between Preschool experience and Enrichment was also significant. This interaction is presented graphically in Figure 28. Inspection of the Low-Enrichment and High-Enrichment profiles in Figure 28 reveals that the greatest differences occur between Low-Enrichment-Children's Center and High-Enrichment-Children's Center students. This result was confirmed by a Newman-Keuls multiple-comparison test: Significant cell comparisons occur between the Low-Enrichment-Children's Center students and the Low-Enrichment-Preschool students, the High-Enrichment-Preschool students, the High-Enrichment-Children's Center students, and the High-Enrichment-No-Program students.

Figure 28

Interaction between Preschool Experience and Enrichment: Cooperative Primary Test - Reading



In terms of the evaluation hypothesis, these results indicate that for performance, as measured by the Cooperative Primary Test - Reading:

1. The Preschool Program was probably more successful than the Children's Center Program in meeting this goal.
2. Enrichment appeared to be detrimental in maintaining performance.
3. Enrichment appeared to be particularly detrimental for Children's Center and No-Program students in maintaining performance.

Summary. The Preschool children earned mean scores that were not significantly different from those of the Chidlren's Center children. Children in Low-Enrichment schools exhibited higher performance than those in High-Enrichment schools. In terms of performance, it is concluded that the Preschool Program probably effected improvement more than the Children's Center Program, but that none of the improvement was maintained or enhanced by enriched elementary-school programs.

Differences in Motivation

At each grade level, two measures of motivation were considered for this analysis: the Attitude to School Questionnaire and attendance. The results of these analyses are presented in Tables 23 through 25 for the Attitude to School Questionnaire and in Tables 26 through 28 for attendance. In interpreting the results of the latter analysis, it should be kept in mind that attendance was measured on a reversed scale as percentage of a semester absent. Consequently, a lower value represents a "better" score on this measure.

Attitude to School Questionnaire. As in the previous analyses comparing Preschool and No-Program children, the comparison of Preschool, Children's Center, and No-Program children produced no statistically significant differences at each of the three grade levels. Once again, significant differences were found between High-Enrichment and Low-Enrichment children for kindergarten and first-grade students. In both cases, Low-Enrichment children

Table 23

Analysis of Attitude to School Questionnaire: Grade K

	Preschool	Children Center	No-Program
Low Enrichment	N = 129 M = 21.00	N = 74 M = 21.68	N = 122 M = 21.79
High Enrichment	N = 151 M = 19.68	N = 56 M = 18.07	N = 162 M = 20.48

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	81.00	1.91	ns
Low vs. High Enrichment	1	645.06	15.19	p<.01
Interaction	2	87.54	2.06	ns
Error	688	42.46		

Table 24

Analysis of Attitude to School Questionnaire: Grade 1

	Preschool	Children Center	No-Program
Low Enrichment	N = 80 M = 20.47	N = 36 M = 21.03	N = 81 M = 20.58
High Enrichment	N = 133 M = 18.80	N = 47 M = 19.57	N = 133 M = 18.43

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	24.51	.71	ns
Low vs. High Enrichment	1	312.94	9.12	p<.01
Interaction	2	4.30	0.10	ns
Error	504	34.30		

Table 25

Analysis of Attitude to School Questionnaire: Grade 2

	Preschool	Children Center	No-Program
Low Enrichment	N = 57 M = 20.75	N = 22 M = 20.23	N = 57 M = 19.72
High Enrichment	N = 83 M = 20.30	N = 38 M = 21.11	N = 87 M = 19.45

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	31.90	1.30	ns
Low vs. High Enrichment	1	0.18	.01	ns
Interaction	2	12.01	.49	ns
Error	338	24.63		

showed higher motivation than High-Enrichment children. (In kindergarten, Low Enrichment, M = 21.45, High Enrichment, M = 19.79; in first grade, Low Enrichment, M = 20.62, High Enrichment, M = 18.76.) No significant interactions between Preschool experience and Enrichment were produced at any grade level.

According to the evaluation hypothesis, these results indicate that in terms of motivation, as measured by the Attitude to School Questionnaire:

1. The Preschool Program was probably more successful than the Children's Center Program in meeting this goal.
2. Enrichment appeared to be detrimental in maintaining student motivation for the Kindergarten and first-grade students, and had no effect in maintaining student motivation in the second grade.

Table 26

Analysis of Percentage of Semester Absent: Grade K

	Preschool	Children Center	No-Program
Low Enrichment	N = 135 M = 11.90	N = 80 M = 7.61	N = 130 M = 9.78
High Enrichment	N = 169 M = 11.13	N = 60 M = 9.88	N = 159 M = 11.10

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	412.95	4.04	p<.05
Low vs. High Enrichment	1	141.65	1.39	ns
Interaction	2	128.29	1.26	ns
Error	727	102.13		

Newman-Keuls Multiple Comparison Test

Children Center < Preschool
Children Center < No-Program

Table 27

Analysis of Percentage of Semester Absent: Grade 1

	Preschool	Children Center	No-Program
Low Enrichment	N = 85 M = 9.87	N = 34 M = 7.59	N = 83 M = 8.63
High Enrichment	N = 136 M = 8.27	N = 50 M = 11.14	N = 138 M = 8.95

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	11.33	.13	ns
Low vs. High Enrichment	1	58.96	.65	ns
Interaction	2	231.41	2.57	ns
Error	520	90.19		

Table 28

Analysis of Percentage of Semester Absent: Grade 2

	Preschool	Children Center	No-Program
Low Enrichment	N = 61 M = 6.87	N = 22 M = 4.50	N = 62 M = 6.84
High Enrichment	N = 88 M = 5.93	N = 37 M = 7.57	N = 89 M = 7.38

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	28.18	.58	ns
Low vs. High Enrichment	1	50.02	1.15	ns
Interaction	2	96.40	1.98	ns
Error	353	47.78		

Attendance. Tests for differences in attendance among Preschool, Children's Center, and No-Program children were significant only for kindergarten. (Preschool, M = 11.47; Children's Center, M = 8.59; No-Program, M = 10.51.) Multiple-comparison Newman-Keuls tests performed for the kindergarten analysis revealed that the Children's Center students had significantly better attendance records than the Preschool Program and No-Program children. No statistically significant differences were found between Low-Enrichment and High-Enrichment children. At each grade level, tests for interaction between Preschool experience and Enrichment were also nonsignificant.

In terms of the evaluation hypothesis, these results indicate that for motivation, as measured by attendance:

1. In kindergarten, the Children's Center Program was definitely more successful than the Preschool Program, while at grades one and two the Preschool Program was probably more successful than the Children's Center Program in meeting this goal.
2. Enrichment had no effect on maintaining student motivation.

Summary. Slightly differing conclusions must be drawn regarding the comparison of the Preschool Program to the Children's Center Program in terms of improvement in motivation. With the exception of the attendance measure at

the kindergarten level, the Preschool Program was probably more successful in improving motivation. Enrichment at the elementary level either has no maintenance effect on the motivation or else depresses it.

Differences in Productivity

For this analysis, productivity was measured by the Student Productivity Index (a reversed scale) at each grade level. In tables 29 through 31 the results of this analysis are presented.

Table 29

Analysis of Student Productivity Index: Grade K

	Preschool	Children Center	No-Program
Low Enrichment	N = 137 M = 50.23	N = 79 M = 47.14	N = 129 M = 46.42
High Enrichment	N = 167 M = 53.16	N = 57 M = 49.96	N = 172 M = 47.58

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	1201.55	1.34	ns
Low vs. High Enrichment	1	839.65	0.93	ns
Interaction	2	50.94	0.06	ns
Error	735	899.29		

Table 30

Analysis of Student Productivity Index: Grade 1

	Preschool	Children Center	No-Program
Low Enrichment	N = 89 M = 53.43	N = 36 M = 51.36	N = 87 M = 50.55
High Enrichment	N = 135 M = 48.09	N = 51 M = 47.59	N = 139 M = 48.84

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	67.64	.07	ns
Low vs. High Enrichment	1	1384.11	1.51	ns
Interaction	2	115.92	.13	ns
Error	531	916.90		

Table 31

Analysis of Student Productivity Index: Grade 2

	Preschool	Children Center	No-Program
Low Enrichment	N = 63 M = 48.32	N = 23 M = 46.48	N = 64 M = 44.56
High Enrichment	N = 91 M = 55.87	N = 41 M = 47.22	N = 89 M = 49.08

SOURCE	df	Mean Square	F	p
Preschool vs. Children Center vs. No-Program	2	909.71	1.02	ns
Low vs. High Enrichment	1	1349.68	1.52	ns
Interaction	2	286.92	.32	ns
Error	365	888.85		

Student Productivity Index. No statistically significant differences in productivity between Preschool, Children's Center, and No-Program children were produced. Comparisons between High-and Low-Enrichment Programs at each grade level also produced no significant results. Finally, tests for Preschool experience by Enrichment interactions were nonsignificant.

In terms of the evaluation hypothesis, these results indicate that for student productivity, as measured by the Student Productivity Index:

1. The Preschool Program was probably more successful than the Children's Center Program in meeting this goal.
2. Enrichment had no effect on maintaining student productivity.

Summary. The Preschool children earned average productivity scores that were higher, indicating less productivity, than the Children's Center children earned, but the differences were not significant. In terms of productivity, it is therefore concluded that the Preschool Program was probably successful in effecting improvement and that enrichment at the elementary level had no effect on it.

Comparison Among Preschool Purposes

To compare performance, motivation, and productivity among students in Preschools with differing purposes, a one-way analysis of variance was performed.

The basic design for this analysis, presented in Figure 27, is outlined in the previous chapter.

Differences in Performance

Two measures of performance were considered: the Entry Level Test for first-grade students and the Cooperative Primary Test - Reading for second-grade students. The results of this analysis for each measure are presented in Tables 32 and 33.

Table 32

Analysis of Entry Level Test: Grade 1

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 483 M = 26.56	N = 111 M = 26.41	N = 130 M = 26.81

SOURCE	df	Mean Square	F	p
Purpose	2	5.06	.14	ns
Error	721	36.41		

Entry Level Test. No statistically significant differences were found between Preschools emphasizing Preacademic Skills, Socialization and Interaction Skills, or Attitudes to School and Learning.

According to the evaluation hypothesis, this result suggests that Preschool Purpose did not influence student's performance as measured by the Entry Level Test.

Table 33

Analysis of Cooperative Primary Test-Reading: Grade 2

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 384 M = 21.77	N = 77 M = 23.69	N = 126 M = 21.12

SOURCE	df	Mean Square	F	p
Purpose	2	164.53	2.49	ns
Error	584	66.06		

Cooperative Primary Test - Reading. No significant differences were found among Preschools with differing purposes. In terms of the evaluation hypothesis, this result suggests that Preschool Purpose does not influence students' performance as measured by the Cooperative Primary Test - Reading.

Summary. Variations in the purposes of Preschools had no effect upon later performance of their students.

Differences in Motivation

At each grade level, two measures of motivation were considered: The Attitude to School Questionnaire and attendance. The results of the analyses are presented in Tables 34 through 36 for the Attitude to School Questionnaire and in Tables 37 through 39 for attendance. In interpreting the results of this latter analysis, it should be kept in mind that attendance was measured on a reversed scale as percentage of a semester absent. Consequently, a lower value represents a "better" score on this measure.

Table 34

Analysis of Attitude to School Questionnaire: Grade K

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 694 M = 20.05	N = 145 M = 19.53	N = 202 M = 20.37

SOURCE	df	Mean Square	F	p
Purpose	2	29.84	.70	ns
Error	1038	42.87		

Table 35

Analysis of Attitude to School Questionnaire: Grade 1

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 579 M = 20.40	N = 140 M = 20.71	N = 167 M = 19.58

SOURCE	df	Mean Square	F	p
Purpose	2	58.19	1.98	ns
Error	883	29.34		

Table 36

Analysis of Attitude to School Questionnaire: Grade 2

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 413 M = 20.77	N = 98 M = 20.63	N = 140 M = 21.36

SOURCE	df	Mean Square	F	p
Purpose	2	22.75	.94	ns
Error	648	24.23		

Attitude to School Questionnaire. Comparison of student motivation among Preschools with differing purposes revealed no significant differences at each grade level. In terms of the evaluation hypothesis, this result suggests that Preschool Purpose did not influence students' motivation, as measured by the Attitude to School Questionnaire.

Table 37

Analysis of Percentage of Semester Absent: Grade K

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 746 M = 11.7a	N = 158 M = 8.59	N = 220 M = 9.86

SOURCE	df	Mean Square	F	p
Purpose	2	802.84	8.46	p < .01
Error	1121	94.95		

Newman-Keuls Multiple Comparison Test

Social and interactional skills < preacademic p < .01
Attitudes to school learning < preacademic p < .05

Table 38

Analysis of Percentage of Semester Absent: Grade 1

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 607 M = 8.88	N = 147 M = 6.54	N = 168 M = 9.21

SOURCE	df	Mean Square	F	p
Purpose	2	364.66	4.95	p < .01
Error	919	73.68		

Newman-Keuls Multiple Comparison Test

Social and interactional skills < attitude p < .01
Attitudes to school learning < preacademic p < .05

Table 39

Analysis of Percentage of Semester Absent: Grade 2

Preacademic	Social and Interactional Skills		Attitudes to School and Learning	
N = 432 M = 6.91	N = 98 M = 5.38		N = 150 M = 6.31	
SOURCE	df	Mean Square	F	p
Purpose	2	99.50	2.10	ns
Error	677	47.29		

Attendance. Tests for differences in attendance among Preschools with differing purposes were significant at the kindergarten and first-grade levels: In kindergarten, Preacademic Skills, M = 11.74, Social and Interaction Skills, M = 8.59, and Attitudes to School and Learning, M = 9.86. Multiple-comparison Newman-Keuls tests revealed that students in Preschools emphasizing Attitudes to School and Learning had significantly better attendance records than Preschools emphasizing Preacademic Skills: In the first grade, Preacademic Skills, M = 8.88, Social and Interaction Skills, M - 6.54; Attitudes to School and Learning, M = 9.21. Multiple-comparison Newman-Keuls tests revealed that students in Preschools emphasizing Social and Interaction Skills had significantly better attendance records than students in Preschools emphasizing Preacademic Skills or Attitudes to School and Learning. In terms of the evaluation hypothesis, this result suggests that Preschools concentrating on Attitudes to School and Learning or Social and Interaction Skills maintain better attendance levels than Preschools emphasizing Preacademic Skills.

Summary. Preschools emphasizing Social and Interaction Skills graduated students who generally had fewer absences in elementary school, while Preschools emphasizing Preacademic Skills graduated students who had more absences.

Differences in Productivity

For this analysis, the Student Productivity Index (a reversed scale, with a lower score "better" than a higher score) was used as the measure of productivity

at each grade level. The results of this analysis are presented in Tables 40 through 42.

Student Productivity Index. No significant differences were found among Preschools with differing purposes. In terms of the evaluation hypotheses, this result suggests that Preschool Purpose does not influence students' productivity as measured by the Student Productivity Index.

Summary. Student productivity at the elementary level was not influenced by the purpose of the student's Preschool.

Table 40

Analysis of Student Productivity Index: Grade K

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 754 M = 52.71	N = 158 M = 53.90	N = 225 M = 50.00

SOURCE	df	Mean Square	F	p
Purpose	2	859.50	1.02	ns
Error	1134	845.07		

Table 41

Analysis of Student Productivity Index: Grade 1

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 615 M = 51.50	N = 150 M = 51.94	N = 175 M = 54.81

SOURCE	df	Mean Square	F	p
Purpose	2	751.00	.88	ns
Error	937	856.40		

Table 42

Analysis of Student Productivity Index: Grade 2

Preacademic	Social and Interactional Skills	Attitudes to School and Learning
N = 438 M = 50.05	N = 109 M = 50.53	N = 150 M = 53.95

SOURCE	df	Mean Square	F	p
Purpose	2	862.50	.98	ns
Error	694	882.35		

SUMMARY OF FINDINGS

Throughout this report of the evaluation study of California's State Preschool Program, a great deal of effort has been made to describe the reasoning involved in the formulation of hypotheses, the selection of measures, and in the procedures used to find answers to the evaluation questions. CSE firmly believes its reasoning resulted in methods that were effective in allowing any discernable effects of the Preschool Program to be demonstrated, if such effects existed, and thought it worthwhile to detail the logic behind those methods. It can be shown that whenever decisions about matters of method or procedure had to be made that might sway the evaluation findings in favor of the State Preschool Program or against it, a decision to favor the Program was made. (CSE's decisions were based primarily upon the assumed disadvantage of the Preschool children relative to children in the comparison groups. To the extent that the reader disagrees with that assumption, his/her interpretation of the evaluation findings will be less favorable toward the Preschool Program). Therefore, CSE's inclination toward the Program must be kept in mind as, by way of summary, each of the three evaluation questions from the first section of the report of this study are repeated, and a summarized finding is provided as an answer to each question.

Question One

Do children who previously experienced the State Preschool Program for at least one year show significantly improved performance, motivation, and productivity in their subsequent elementary schools when compared with children who have either experienced other pre-school programs (like the Children's Centers), or have not experienced a traceable institutionalized pre-school program?

Based upon the evaluation comparisons summarized in the first two rows of Table 43, CSE offers this evaluation answer:

Children who attended the State Preschool Program probably show improved performance and motivation, but they probably do not show improved productivity.

Table 43

Summary of Evaluation Findings by Preschool Objectives

EVALUATION COMPARISONS	OBJECTIVES OF THE STATE PRESCHOOL LEGISLATION		
	Performance	Motivation	Productivity
Are the State Preschools successful in meeting each objective when compared with the No-Program group?	Sometimes Probably Successful; Sometimes Definitely Not Successful	Probably Successful	Definitely Not Successful
Are the State Preschools successful in meeting each objective when compared to the Children's Centers and the No-Program group?	Probably More Successful	Sometimes Probably More Successful	Probably More Successful
Is any one of the State Preschool Purposes more successful in meeting each objective?	No One More Successful	Attitude to School and Learning and Social and Interactional Skills Are Sometimes More Successful	No One More Successful

Question Two

Were the children's performance, motivation, and productivity significantly affected by the number of enrichment programs, both federal and state, in their elementary schools?

Based upon the findings recorded in the last section of this report, CSE offers this evaluation answer:

Due to sampling based primarily on concerns of the Preschool evaluation, it was not likely that this study obtained a representative sample of elementary schools with varying enrichments (and CSE did not attempt to obtain such a sample). The inadequate sampling may have caused the frequent finding that enrichment programs had detrimental effects.

Question Three

Do children who experienced Preschools with differing purposes show significantly improved performance, motivation, and productivity in their subsequent elementary schools when compared with children who experienced any differing type of Preschool?

Based upon the evaluation comparisons summarized in the last row of Table 43, CSE offers this evaluation answer:

According to the categories of Preschool purposes found by CSE, no one type of Preschool produced elementary-level children who exhibited consistently improved performance, motivation, or productivity.

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