KENTUCKY'S KINDERGARTEN PROGRAM: FOUR YEARS LATER

RESEARCH REPORT NO. 132

LEGISLATIVE RESEARCH COMMISSION

Frankfort, Kentucky

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KENTUCKY'S KINDERGARTEN PROGRAM: FOUR YEARS LATER

Prepared by

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Research Report No. 132

Legislative Research Commission
Frankfort, Kentucky
July, 1977

This Report has been prepared by the Legislative Research Commission and paid for from state funds.

FOREWORD

Recognition of the importance of early childhood education led to the establishment of state support for a public kindergarten system by the 1972 General Assembly. The first public school programs started in 1973, and funding for additional programs is expected to be increased until all kindergarten age children not being served by private, proprietary, or locally supported programs are receiving kindergarten instruction.

This report on the status of the public kindergarten program in Kentucky is in response to House Resolution 124, passed by the 1976 General Assembly, which directed the Legislative Research Commission to study the program.

Although a number of local school districts provided information about the program in general, the report is based primarily on data provided by four selected districts. The four districts selected are Franklin County, Greenville Independent, Letcher County, and Newport Independent. The study was conducted by Janie Jones and the manuscript was prepared by Susan Eastman, Susan Harding, Sally Tillett and Jayne Wise.

VIC HELLARD, JR.
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The Capitol
Frankfort, Kentucky
July, 1977

TABLE OF CONTENTS

FOREWORD i

TABLE OF CONTENTS iii

LIST OF TABLES iv

SUMMARY AND RECOMMENDATIONS 1

CHAPTER I:
INTRODUCTION 3

CHAPTER II:
DEVELOPMENT OF THE KENTUCKY KINDERGARTEN PROGRAM 7

CHAPTER III:
PROGRAM DESCRIPTION 11
Retention Rates In Elementary Grades 12
Program Descriptions 16
District 1 16
District 2 17
District 3 18
District 4 19

CHAPTER IV:
SUGGESTED EVALUATION MODEL 21
Evaluation System Goal 21
Objectives 21
Limitations 22
Types of Analysis 23

CHAPTER V:
CONCLUSIONS AND RECOMMENDATIONS 25
Recommendation One 26
Recommendation Two 26
Recommendation Three 27
Recommendation Four 27

BIBLIOGRAPHY 29

APPENDIX A:
LEARNING OBJECTIVES OF THE KINDERGARTEN PROGRAM 35

APPENDIX B:
HOUSE JOINT RESOLUTION 124 37

LISTS OF TABLES

Table 1:
Number of Kindergarten Units, Teachers and Enrollments 9

Table 2:
Total Kindergarten Enrollment By Years 11

Table 3:
Increase in Enrollment By Type of Program 12

Table 4:
Relationship of Pilot Program Enrollment to Total Public Enrollment 12

Table 5:
Retention in First Grade 13

Table 6:
Retention in Second Grade 13

Table 7:
First Grade Retention Rates-Four Pilot School Districts and the State 15

Table 8:
Second Grade Retention Rates-Four Pilot School Districts and the State 15

SUMMARY AND RECOMMENDATIONS

In 1972, the Kentucky General Assembly authorized the use of state funds for the support of a public kindergarten program. The program began in the 1973-74 school year with 100 pilot kindergarten classroom units serving 3,010 students. As of December, 1977, there were 357 classroom units serving 11,928 students.

This is a report on the status of the state supported kindergarten program four years after its initiation in September, 1973. Four of the original pilot schools were selected from different geographical sections of the state. Personal interviews with state and local personnel, visits to kindergarten classrooms, and examination of existing school records provided the major portion of the data for the report.

In preparation for the initiation of the program, the Department of Education established a twenty-five member task force to develop a plan and to make recommendations for the program. In addition, the Bureau for School Services at the University of Kentucky was awarded a contract to evaluate the first year of the program.

Prior to the start of the first programs, the Department of Education conducted a statewide workshop plus seven one-day workshops for local school personnel.

The first year the program was in operation, the pilot schools accounted for about thirty-six percent of the total enrollment in public kindergarten. By December, 1976, that figure had increased to almost sixty-eight percent. At the same time, the number of students attending private and proprietary kindergartens remained relatively stable. This would indicate that the state program is not reducing enrollment in those programs, but is serving students who would not otherwise attend a program.

An area of great concern is the number of students repeating the early elementary grades. This concern should be directed toward not only the financial loss involved in the reeducation process, but the effect of failure on the individual as well.

In the five-year period from 1970-71 through 1974-75, retention rates in both the first and second grade have made consistent, though minor, declines. However, the first grade rate is still 12.13 percent which is over 7,000 students annually. The second grade rate is considerably less at 4.29 percent. During that five year period, a total of 38,851 students have repeated the first grade at a cost to the state of approximately $14,695,360. For that same period, 13,477 students went through the second grade for the second time at an approximate cost of $5,088,630.

Although no statistical comparison could be made in this report, there is a great deal of evidence that the number of students repeating a grade is much lower for the group that has had kindergarten then it is for those who have not.

The retention rates of individual school districts vary by district. The 1974-75 first grade rate for the pilot schools examined for this report ranged from a low of 2.22 percent to a high of 15.29 percent. The state rate for that year was 12.13 percent. The second grade rates for the same year ranged from a low of no failures to a high of 6.36 percent, with a state rate of 4.29 percent.

This report includes condensed descriptions of the program in the four districts which were selected for study.

The following recommendations were made:

Recommendation One

In those districts where the teacher is working without a set of written objectives, the Department of Education should work with the local elementary supervisors and teachers to develop a set of specific performance objectives for all kindergarten programs.

Recommendation Two

Communications between supervisors and teachers and between the teachers themselves should be improved.

Recommendation Three

As one means of reducing the number of students repeating one or more elementary grades by providing a more sound basis for later educational development, those school districts which have high retention rates and/or low student achievement should be identified to receive top priority in obtaining kindergarten units and assistance in developing a sound program.

Recommendation Four

The Department of Education should establish a procedure through which reliable information can be obtained on the long term results of kindegarten instruction.

CHAPTER ONE

INTRODUCTION

Action by the Kentucky General Assembly in 1972 established statutory authority for a state supported public kindergarten program. The Department of Education immediately began development of a pilot program financed by foundation program funds with 100 kindergarten classes in 96 school districts for the 1973-74 school year. This was expanded to 150 units in 1974-75, 200 units in 1975-76, and 350 units in 1976-77. During the 1976-77 school year, additional units were transferred from other departments bringing the total to 378.7 by the end of the year.

Prior to 1973 there were numerous kindergarten programs throughout the state. However, these were primarily fee-charging private programs, federally funded programs for disadvantaged children, and a few locally funded public programs. This limited participation to those children whose parents were financially able and interested enough to enroll them in a program and to a limited number of the total "disadvantaged" preschool age children in the state.

Four years after enactment of the enabling legislation, House Resolution 124, passed by the 1976 General Assembly, directed the Legislative Research Commission to conduct a study of the state supported kindergarten program in its fourth year of operation.

As with many areas of education, there are conflicting opinions as to the purpose of a kindergarten program, the most appropriate methods for accomplishing that purpose, and who can benefit most from the program.

Although it is difficult to identify a single overall purpose, opinions regarding the purpose of kindergarten instruction can be grouped into three major categories. The first category describes the basic purpose as primarily academic readiness for the first grade. The second group views kindergarten as a socializing institution for preparing the child to get along with other individuals. The last point of view is a combination of the first two; however, there is no real agreement as to what the exact balance should be. E. Paul Torrance describes what he calls "a creative-aesthetic approach" which develops the "beginning of intellectual skills, abilities, and attitudes which are tansferable to later learning situations." (Torrance, 1969.)

In a 1972 survey conducted by the Bureau of School Services of kindergarten programs in other states, eleven of thirty-four responses indicated that providing social experiences for the child was the highest ranked major purpose of the program. Nine other states ranked "providing a good year of life" as the number one purpose. (Bureau of School Services, 1972.)

A review of the literature pertaining to kindergarten programs throughout the United States shows a variety of instructional methods in use. These range from a highly structured academic approach to a more or less unstructured enrichment oriented approach, with a wide range of combinations between the extremes of structured academic and the unstructured enrichment approach. The method of instruction reflects the teacher's accepted purpose of each program, whether academic readiness or social adjustment.

In Kentucky, a child must be five years of age on or before December 31 following the opening of school in order to enter the state supported kindergarten program. The survey referred to earlier conducted by the Bureau of School Services shows that in 1972 only two of thirty states have an entrance age under five. All other responding states reported an entrance age of five years with reference to some cutoff date.

Although five years is the generally accepted kindergarten entrance age, there is some research evidence that imagination and creative activity in children increase to a peak between four and five years of age and then start to decline. (Torrance, 1969.) A project conducted at Florida University involving four different groups of children was designed to test a concept called "Learning to Learn." The project resulted in the conclusion that "age four is superior to age five for implementing programs dealing with remediation and development of language." (Van deRiet, 1970.)

A majority of the literature dealing with kindergarten has been concerned with the effect on the disadvantaged child as opposed to the "non-disadvantaged" child. In almost all cases, the greater gains are made by the disadvantaged child. The larger increase in IQ score experienced by the disadvantaged child would indicate that the disadvantaged child is not necessarily less intelligent than other children, but has had less exposure to the type of environment in which optimum mental development can take place.

Research results such as these tend to support the theory that the lack of mental stimulation at an early age, which is more likely to occur in the disadvantaged home, is one of the major causes of later educational difficulties. An evaluation report by the Wichita, Kansas, Board of Education states:

> It is obvious that if a child receives inadequate verbal stimulation, he may not only be deficient in language skills, but will indeed have difficulty organizing his perceputual skills. This is to say there is a definite relationship between communication and cognition. (Wichita Unified School District, 1969.)

Numerous studies have provided evidence that the child who attends some type of program prior to starting the first grade will have a definite advantage over the child who does not attend a program. Most of these studies conclude that this advantage is lost by the time the child reaches the third grade. However, most studies did not follow the child past the third grade. An analysis of a number of longitudinal studies on the Headstart program reported in *Science News* indicates the presence of what is referred to as the "sleeper effects" of early education.

The report discusses several significant factors which appear to be related to participation in a program. Perhaps most important was the superior mathematical ability demonstrated by program participants when tested in the eighth grade, although there were no significant differences when compared with a control group in the third grade. Evidence was reported which would indicate teaching methods and program structure made little difference with one exception. Those programs which had a high parent involvement, including home visits by the teacher, appear to provide the greatest lasting benefits. This type of program tended to produce a larger early IQ gain and less need for later special education. Referring to a "home-based"

program in Gainesville, Florida, the report states that " . . . only one percent of children whose parents had participated in a home-based education program needed special education by the fifth grade. Nearly thirty percent of the students in a control group needed special help by then." (Science news, 1977.)

CHAPTER TWO

DEVELOPMENT OF THE KENTUCKY KINDERGARTEN PROGRAM

With the passage of enabling legislation, the Department of Education established the Kentucky Kindergarten Task Force as an advisory body to the Department. The purposes of the twenty-five member task force were to develop criteria for selecting the one hundred pilot districts, to establish goals for the program, and to develop recommendations concerning program content, scheduling, facilities, and evaluation procedures.

The output of the task force was a paper entitled "Proposed Content of Guide Manual for Kindergarten Pilot Project." The paper contains a rather comprehensive list of goal expectations for the kindergarten child and characteristics of the five year old. In addition, it contains suggested daily activites, room arrangements, materials and equipment, and a discussion of the competencies of the "good" kindergarten teacher. However, no plans or techniques for evaluation were included.

During the 1973-74 school year, the Bureau of School Services (later reorganized as the Center for Professional Development) at the University of Kentucky was awarded a contract by the Department of Education to conduct an evaluation of the pilot programs. The study was designed to obtain from the teacher an estimate of the degree to which the 1973-74 kindergarten student needed improvement in thirty-seven objective areas developed from the broad list prepared by the task force. (A list of the "learning needs" used for the study is given in Appendix A.) The assumption was made that:

> . . . effective instruction would show evidence of having reduced the degree of learning needs of pupils; that is, if Johnny came into the kindergarten program with certain identifiable needs and the program provided learning experiences which tended to reduce those needs, the conclusion would be drawn that instruction was effective. (Center for Professional Development, 1975.)

The thirty-seven objectives were grouped into five clusters: emotional maturity, social maturity, intellectual skills, aesthetic development, and health, safety, and physical education. The teacher estimates of "need" were obtained at the beginning of the 1973-74 school year and again at the end of the year.

According to the draft report by the Center for Professional Development, the first year of the program was highly successful as measured by the movement of the majority of the students from the categories indicating a learning need toward those categories of less need. [However, the report was never prepared in final form. The report submitted at the end of the project carries a note identifying it as "an abbreviated first draft report.]

Prior to the opening of the 1973-74 school year, the Kentucky Department of Education conducted a two day in-service workshop for persons concerned with the kindergarten program. The two hundred participants included sixty-five of the pilot program teachers.

In addition to the statewide in-service training, a series of seven one-day workshops were conducted at various locations around the state. Of the two hundred twenty-four persons attending the one-day workshops, eighty-five were kindergarten teachers.

Data from the workshop evaluation indicated that:

> . . . the teachers who attended two or three in-service sessions are more positive, more child-centered, and more involved in decision making than those who did not attend any of the in-service sessions. These involved teachers indicated they are part of a team effort and that they have the support and assistance of the Kentucky Department of Education. The teachers who did not attend any in-service sessions, however, feel the Department of Education is providing neither support or assistance, nor do they consider themselves part of a statewide team. (Cunningham, 1974.)

The report does, however, caution against assuming that involvement in the workshops caused the reported differences. As pointed out in the report, perhaps the teacher who is most concerned with developing child-centered individualized programs is more likely to attend professional meetings.

The pilot kindergarten programs began in September, 1973, with one hundred classes employing eighty-seven full time teachers, twenty-six part time teachers, thirty-two full time teaching assistants, and eight part time teaching assistants. Twenty-six of the programs had one group of students for a full day with the remainder having half day classes. Of the sixty-four schools having half day programs, fifty-nine had one group of students in the morning and another group in the afternoon. The other fifteen schools had one group for half a day only. The total enrollment during the 1973-74 school year was 3,010 students of which 510 attended an all day class.

By the beginning of the 1974-75 school year, fifty additional foundation program units were authorized, bringing the total to one hundred fifty units. During that year, the number of teachers increased to one hundred forty-six full time and eight part time with a total enrollment of 4,691. The enrollment was made up of 789 students attending class for a full day and 3,902 attending half day sessions.

In 1975-76, there were two hundred kindergarten units funded through the foundation program. This involved one hundred eighty-nine full time teachers and twenty-two part-time teachers. Total enrollment that year was 6,658 of which 1,235 attended all day and 5,423 attended half day programs.

Foundation program funds for the current year, 1976-77, were originally authorized for 350 untis. Later in the year, approval for additional units brought the total to 378.7 units. At an approximate value of $13,350 per unit, about $5,055,645 in state funds will be spent on the program this year. Enrollments have increased to 1,602 full day students and 10,326 half day students for a total of 11,928 as of December, 1976. There were 349 full time teachers and sixteen part time teachers.

Information on the number of units, the number of full and part time teachers, and the number of students enrolled by year is given in Table 1. The 357 units for 1976-77 reflect the addition of seven units prior to December. The additional units for that year were added after December.

TABLE 1

Number of Kindergarten Units, Teachers, and Enrollments

YEAR	NUMBER OF UNITS	NUMBER OF TEACHERS FULL TIME	NUMBER OF TEACHERS PART TIME	ENROLLMENT FULL DAY	ENROLLMENT HALF DAY
1973-74	100	87	26	510	2,500
1974-75	150	146	8	789	3,902
1975-76	200	189	22	1,235	5,423
1976-77	357	349	16	1,602	10,326

Source: Kentucky Department of Education

CHAPTER THREE

PROGRAM DESCRIPTION

This section consists primarily of data tables and descriptions of four programs which were part of the original pilot program and are still a part of the state supported program.

Table 2 shows the total statewide enrollment in all types of kindergarten programs, but does not include headstart and nursery school students. Figures reported are for the fall of each school year. The "Public" column includes the pilot programs financed through the minimum foundation program and other public school kindergartens financed with local funds. The "Private" column is the total for parochial school kindergartens and those on military bases in the university model schools. The "Proprietary" column shows the individually owned, profit-making programs.

TABLE 2

Total Kindergarten Enrollment By Years

	PUBLIC		PRIVATE		PROPRIETARY		
YEAR	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	TOTAL
1973-74	8,304	37.52	2,377	10.74	11,446	51.72	22,127
1974-75	10,769	43.75	2,614	10.62	11,230	45.62	24,613
1975-76	12,152	44.95	2,885	10.67	11,995	44.37	27,032
1976-77*	17,566	—	2,929	—	—	—	—

Source: Kentucky Department of Education

*Current information is not available on proprietary school enrollments for 1976-77; therefore, percentages were not computed for that year.

The increase in enrollment by type of kindergarten program is given in Table 3. There was a significant increase in public kindergarten programs each year due to the addition of foundation program units. The rate of enrollment increase in public programs declined sharply in 1975-76; however, the amount of increase for the current year (1976-77) jumped to 44.55% of the prior year's enrollment.

TABLE 3

Increase in Enrollment by Type of Program

YEAR	PUBLIC NUMBER	PUBLIC PERCENT*	PRIVATE NUMBER	PRIVATE PERCENT*	PROPRIETARY NUMBER	PROPRIETARY PERCENT*	TOTAL NUMBER	TOTAL PERCENT*
1974-75	2,465	29.68	237	9.97	-216	-1.88	2,486	11.23
1975-76	1,383	12.84	271	10.36	765	6.81	2,419	9.82
1976-77	5,414	44.55	44	1.52	—	—	—	—

Source: Kentucky Department of Education

*Computed as a percentage of prior year enrollment.

In Table 4, the total public school kindergarten enrollment includes those enrolled in the pilot programs financed through the minimum foundation program as well as those programs financed at the local level. The table shows the increase by year in all public kindergarten programs as well as increases in the pilot schools. In addition, the last column gives the percentage of all public kindergarten students who are being served by the state supported pilot programs.

TABLE 4

Relationship of Pilot Program Enrollment to Total Public Enrollment

YEAR	TOTAL PUBLIC ENROLLMENT	INCREASE NUMBER	INCREASE PERCENT	PILOT SCHOOL ENROLLMENT	INCREASE NUMBER	INCREASE PERCENT	PILOT AS % OF PUBLIC
1973-74	8,304	—	—	3,010	—	—	36.24
1974-75	10,769	2,465	29.68	4,691	1,681	55.84	43.56
1975-76	12,152	1,383	12.84	6,658	1,967	41.93	54.78
1976-77	17,566	5,414	44.55	11,928	5,270	79.15	67.90

Source: Kentucky Department of Education

Retention Rates In Elementary Grades

One of the most generally accepted assumptions concerning the benefits of a kindergarten program is that a reduction in the retention rate of the early elementary grades will result from expansion of the program to serve more students. To more fully support or disprove that theory, a controlled longitudinal study of Kentucky students repeating one or more grades would be needed. Other influencing factors would have to be eliminated and the students followed over a period of time. As stated earlier, most studies have focused on the effects of kindergarten on the first two or three grades and may have, therefore, ignored later

results, not only on the number of students repeating a grade, but also on academic achievement and the number completing high school.

Table 5 and 6 contain data on the number of students repeating the first and second grades and the minimum foundation program funds required to support those students repeating a grade. The value per unit is an average which will vary according to the rank and experience of the teacher, and the number of units is based on an average daily attendance of twenty-seven students. The total cost is computed by multiplying the number of units required by the value of a unit in the following year. For example, in the 1973-74 school year, 7,197 students were retained in the first grade. The 267 units necessary to support those students the following year had an approximate per unit value of $10,940 or a total cost of $2,920,980.

TABLE 5

Retention in First Grade

YEAR	TOTAL PUBLIC FIRST GRADE*	RETAINED IN FIRST GRADE NUMBER	RETAINED IN FIRST GRADE PERCENT	TOTAL COST** ($)
1970-71	69,354	9,078	13.08	3,034,080
1971-72	56,273	8,133	12.62	2,889,600
1972-73	52,967	7,429	12.30	2,777,500
1973-74	58,884	7,196	12.22	2,920,980
1974-75	57,778	7,014	12.13	3,073,200

*Based on end of year figures

**Based on the per unit value of the foundation program unit in the following year

TABLE 6

Retention in Second Grade

YEAR	TOTAL PUBLIC SECOND GRADE*	RETAINED IN SECOND GRADE NUMBER	RETAINED IN SECOND GRADE PERCENT	TOTAL COST** ($)
1970-71	61,973	3,050	4.92	1,020,390
1971-72	61,266	2,854	4.65	1,017,600
1972-73	58,167	2,816	4.84	1,050,400
1973-74	55,140	2,464	4.46	995,540
1974-75	53,354	2,293	4.29	1,004,700

*Based on end of year figure

**Based on the per unit value of the foundation program unit in the following year

Throughout the state there are a number of exceptional children in the educational system who cannot function in the regular classroom situation. These children of varying ages and abilities may be receiving instruction in a self-contained classroom, a state institution, or even in the home or hospital. Prior to the 1975-76 school year, this type of exceptional child was recorded separately for purposes of reporting the number of students repeating each grade level. However, for the 1975-76 school year, the "exceptional child" catagory was eliminated from the school principal's annual report, and all children receiving educational instruction were classified at their functional level, which was primarily first or second grade.

This commingling of data invalidates any comparison of the 1975-76 retention rates with prior years. Although in the current year the exceptional child is again in a separate classification, the information on promotion/retention will not be available for some time.

The statewide retention rates in the first and second grades have remained relatively stable since 1970 with minor declines each year. In the five-year period, 1970-71 through 1974-75, a total of 38,851 students have repeated the first grade at a cost to the state of approximately $14,695,360. During the same five-year period, 13,477 students went through the second grade for the second time at an approximate cost of $5,088,630.

The records of sixty-five students who were in one of the original kindergarten programs in 1973-74 show that only one of the sixty-five repeated the first grade and one repeated the second grade. Four others have received some type of special help such as speech therapy.

Although the number repeating a grade is likely to be much lower for those who have had educational experiences prior to entering the first grade, the figures given above cannot be taken as representing the total picture. The examination of student records was limited to those whose parents had given written permission to the school to release the records in accordance with the provisions of the Privacy Act. The parent most likely to release the record for study is also more likely to have a greater interest in the child's education, thereby creating an atmosphere conducive to learning. Parent interest in education and participation in the program has been shown by numerous studies to be one of the best predictors, along with parent's occupation and educational level, of a child's success in school.

When considering retention rates in the public schools, one aspect which tends to be overlooked, except in some areas of psychological research, is the effect on the individual student. The financial consideration is much easier to measure, but the individual effect may have a more critical long term impact.

Another significant factor concerning retention rates is that the state rate is an average and does not show anything about the individual districts. While some districts are able to achieve a low rate of repeaters, others have an extremely high rate.

In Tables 7 and 8, first and second grade retention rates for four of the pilot districts are shown in relation to the rate for the four districts combined and the entire state. Several significant factors should be noted concerning Table 7. In 1970-71, more than one-fifth of the first grade students repeated that grade in District 1 at a time when approximately only thirteen percent were repeating the first grade statewide. That same year, Districts 2 and 3 also had rates higher than the state while District 4 had a rate about one-half the state rate.

With the 1971-72 school year, both Districts 1 and 2 started a downward trend, District 3 dropped then remained rather stable, and District 4 began an upward trend.

By the 1974-75 year, District 1 had dropped to a low of 2.22 percent or about one-fifth of the state rate. The other three districts reported an increase that year.

Although the number of students repeating the second grade is much lower than for the first grade, information from the four selected districts shows much the same pattern of increases and decreases as the first grade. (Table 8.)

TABLE 7

First Grade Retention Rates
Four Pilot School Districts and the State

YEAR	DISTRICT 1	DISTRICT 2	DISTRICT 3	DISTRICT 4	COMBINED DISTRICTS	STATE
1970-71	20.67	15.76	18.27	6.74	17.79	13.08
1971-72	17.73	14.78	13.54	7.93	15.09	12.62
1972-73	16.10	11.79	13.61	8.45	13.58	12.30
1973-74	6.55	10.68	14.56	8.00	10.60	12.22
1974-75	2.22	13.52	15.29	11.26	11.04	12.13

TABLE 8

Second Grade Retention Rates
Four Pilot School Districts and the State

YEAR	DISTRICT 1	DISTRICT 2	DISTRICT 3	DISTRICT 4	COMBINED DISTRICTS	STATE
1970-71	11.16	5.27	10.00	2.43	8.39	4.92
1971-72	7.00	6.81	7.01	2.46	6.71	4.65
1972-73	5.13	2.90	3.94	0.00	3.77	4.84
1973-74	5.12	2.10	9.10	3.12	5.49	4.46
1974-75	0.00	1.73	6.36	0.00	2.73	4.29

District 1 dropped steadily from an extremely high rate in 1970-71 (11.16% - more than twice the state rate) to no second grade repeaters in 1974-75.

Of the four districts, District 2 is the only one showing an increase of any importance in 1971-72. However, the district shows a downward trend with a rate much below the state rate since 1972-73.

District 3 has shown the most erratic pattern of the four districts for both first and second grades. The second grade has increased and decreased while remaining relatively high with only one year lower than the state rate.

District 4 has had a slightly increasing rate for three of the five years. For 1972-73 and 1974-75, all second grade students were promoted to the third grade.

The state rate for the five year period has remained almost constant.

A simple cause and effect relationship cannot be assigned to retention rates. The rate is influenced by variables which may have little to do with learning. As pointed out earlier, a change in student accounting can greatly affect the rate. Another factor is the philosophy of the individual teacher and current school administrators.

Therefore, in order to develop valid conclusions concerning the effect of the kindergarten program on reducing the number of students repeating the elementary grades, the kindergarten influence must be isolated from other factors which also affect the rate. In addition, the rates must be examined over a period of time. When a new program of any kind is started, there must be an initial period during which adjustments are made and problem areas identified and resolved. These adjustments are necessary, not only in terms of the kindergarten program, but for teachers throughout the elementary grades especially the first grade teacher. More and more students are entering the first grade with some type of pre-first grade educational experiences. At the same time, there will be some who do not have this prior experience. The first grade teacher must be able to develop a learning situation in which each child is encouraged to progress rather than wait for the remainder of the class to catch up.

If the first grade teacher must, through necessity or lack of experience, assume that all first graders are on the same learning level, this could explain in part the reported "fading out" or loss of the advantage gained through kindergarten experiences.

Program Descriptions

Four programs, which started as pilot programs in 1973, are described in this section. The programs were selected from different sections of the state to allow for geographical differences. The descriptions are in terms of enrollments, type of program, objectives, and student selection process. At each school, student records were examined, although the available information varied by district. Teachers at various grade levels were interviewed whenever possible.

District 1

As one of the pilot districts, this program started with one foundation program unit at one of the larger schools. Currently the district has two units which operate a half day program at each of four schools. For the current year, the pilot school has 105 kindergarten students of which eighty-five are supported with federal Title I Compensatory Education funds and twenty with foundation program funds. The school is currently able to provide instruction for all who

apply; however, if the federal funds were not available, this school would need approximately two additional units to provide a half day program for all children. Since the school can presently enroll all who apply, there is no established selection process.

The objectives of the program are basically academic, and utilize a beginning readiness language arts approach which is patterned after the first grade system. The child is exposed to the same instructional method when he enters the first grade. This eliminates the dramatic adjustment necessary for the average first grade child.

First grade groupings are made on the basis of scores on the Visual Motor Inventory and the ABC Inventory. Those who have attended the kindergarten program tend to score at least two months ahead of those who have not. More than half those entering first grade have attended some type of previous program. For example, this school currently has 154 first grade students and 105 kindergarten students. Assuming no dramatic increase in enrollment next year, this means at least sixty-eight percent of the first grade will have had kindergarten experiences.

Patent participation in this program is reported as being excellent with a majority participating in special activities such as field trips, parent day, etc. None assist with the regular day-to-day class activities.

District 2

As with the other programs, this one started with one foundation program unit in 1973-74. There are currently three units for the total county system, with two being in this school. The program employs two teachers for thirty-nine students attending class for a full day.

The outstanding feature of this school is the instructional method used. It is an open concept, competency based, team teaching approach. This approach begins in the kindergarten and is being implemented throughout the elementary school.

The system is referred to as an ungraded system, and it is designed around a set of predetermined skills needed by the child progressing through the educational system. The pre-post test theory of skills deficiency identification is used to determine the logical sequence of instruction needed by the individual student. Instruction is divided into units, and a record is kept of each student's mastery of that unit. The individual child studies that particular unit as long as necessary before going on to another. Although the system is an individualized one, it does not eliminate group instruction. All students needing assistance in a particular unit can be instructed at one time.

If a child has not successfully completed one or more units at the end of the year, he does not repeat the entire sequence but only those units not completed. In addition, he does not stay behind while his friends go on to another "grade." The record on the individual child, showing those exact skills he has or has not mastered, is passed on to his current teacher who is responsible for helping him obtain those skills.

Since this is only the second year the program has been operational, its impact cannot yet be fully evaluated. The system should be re-examined at a later date to determine if it has a significant potential for education. It should be pointed out that any individualized instruc-

tional method requires extensive pre-service or in-service training for all those involved in it. Regardless of how sound the concept may be, it requires some re-organization of the traditional educational setting.

District 3

This school operated a full day program for the first three years. At the beginning of the fourth year (1976-77), the program was changed to a half day in order to serve one group of students in the morning and another group in the afternoon. This change allowed the number enrolled to be increased from twenty to forty students.

In January, 1977, three additional foundation program units were established for the district, one of which is at the original pilot school. The remaining units are in two other schools in the county system. The pilot school currently has two teachers serving thirty-five students in the morning and thirty students in the afternoon.

All eligible students may register for the program. However, selection for participation is done by lottery. Names are drawn at random until the program quota is filled. During the 1976-77 school term, there are 142 first grade students. Assuming an average of twenty students for a half day session or forty students for each foundation program unit, the school would require at least three and one-half total units, or one and one-half additional units, to provide a kindergarten program for all first graders at that school.

The classroom is organized so that one or both teachers may work with the entire group or each teacher may work with individual students.

The major objectives of this program are:

(a) to help the child develop confidence in himself. (The teacher stresses the importance of a child being unafraid to try new things even though they may not always be easy or turn out right.)

(b) to develop the ability to interact with other children, both individually and in a group.

The program does not stress academic preparation in the sense of teaching the child to read or write. However, the program utilizes the Open Court method of teaching phonics. This is the same system used in the first grade at this school and provides the necessary background for reading in the first grade. Although no organized reading program exist in the kindergarten class, a child is encouraged to read if he indicates a desire to do so.

First grade students are placed in ability groupings based on the results of the Metropolitan Readiness Test which is administered during the first two weeks of the first grade. If during the first eight to twelve weeks of school a student shows a higher or lower ability than indicated by the test, he will be placed in another group. The groupings usually result in the higher groups being those who have attended some type of program prior to the first grade. The greatest percentage of the lower ability groupings have not attended a pre-first grade program. This would indicate that previous experience is the most important factor in determining group placement. The first grade teachers at this school estimate that approximately fifty percent of

the first grade enrollment has not attended any type of kindergarten. However, the teachers report that this percentage is decreasing each year.

Patents participate in the program to a certain extent. Those who are not employed are involved more frequently than those who work. Even those who work become involved at special times such as Christmas. This school has a "parent aide" program which encourages parents to come to the school as volunteers whenever possible.

District 4

This school limits the kindergarten enrollment to thirty students—fifteen in the morning and fifteen in the afternoon. The first two years acceptance for the program was on a first come, first served basis. However, the third year a selection process was established whereby all potential students registered and thirty names were drawn. Currently fifty-three students have registered for next year. The program has one teacher.

Assignment to first grade rooms is not done on the basis of any standardized testing procedure. Within a classroom, groups are organized according to reading ability as determined by the teacher. Because no pretesting is done prior to or upon entering the first grade, there is no recorded evidence of the kindergarten student being in the "high" group. However, the teachers report that there is a very definite difference in the child who has attended kindergarten and one who has not. The majority of all entering first grade students have attended some type of program.

CHAPTER FOUR

SUGGESTED EVALUATION MODEL

The most effective educational evaluation takes place over a time span which takes into account the long range as well as the immediate results of the total learning experiences of the student. Although a concentrated short term approach does serve a purpose and provides a specific type data, a longitudinal design can provide current information needed for immediate program changes and at the same time develop a more sound basis for future program decisions.

The majority of all educational evaluation is conducted on a formal project basis requiring a staff and extensive testing of students. This type situation is usually not feasible over a number of years. In order to collect reliable information over an extended period of time without the use of additional personnel, the design must be as simple as possible and be built into the existing state level data system where practical. At the same time, the system should include prompt feedback to the local school district in order that program improvement may be initiated by the individual districts as soon as possible.

In view of these requirements, the following goal has been established for the system. The goal is followed by specific objectives in outline form with a short explanation for initiating and carrying out the evaluation.

Evaluation system goal: To develop a data base for the state supported Kentucky kindergarten program for the purpose of assessing the immediate results and the long range effects on educational achievement, both statewide and at the local school district level.

Objectives:

1. *Identify schools to participate in the system.* The primary criterion for selection will be participation in the state test scoring service. This is a computerized system in which the results of the Comprehensive Tests of Basic Skills (CTBS) are available for analysis. Although this is a voluntary program, most school districts do participate.

2. *Develop procedures for obtaining identifying information on the kindergarten students to be included in the program.* The answer sheet for the CTBS contains a twelve digit frame for special codes which is not presently used by the existing system. This frame can be used for the already established three digit district code number and a nine digit social security number. In order to keep the original group as intact as possible throughout the study, the kindergarten teacher will be asked to have each student in the selected class obtain a social security number. The district code and social security number will be entered in the special code frame during each testing period.

3. *Establish data items and procedures for analysis.* The CTBS provides academic aptitude scores in ten subtest areas. Scores of the kindergarten group can be compared with the state and/or district averages on any or all of the subtests. Analysis can be done annually; at

two, three, or four year intervals; or at selected grade levels such as third, sixth, ninth, and twelfth.

4. *Establish policy and procedures for information dissemination.* The time frame for availability of results will be determined by objective three. However, once results become available, dissemination procedures must insure that they reach the potential users and that assistance is provided in using the results as a basis for program decisions. Many times the teacher, instructional supervisor, and others most directly involved in the educational process are overlooked when program results are disseminated.

5. *Identify specific types of information for specific target audiences.* Local school personnel (including teachers) would likely be more interested in information related to that particular district. State level personnel should utilize both state and local data. Programs showing exceptional characteristics should be closely examined to identify strong points. Apparently weak programs should be assisted in identifying and overcoming those weaknesses.

6. *Select kindergarten year which will be observed throughout the study.* The particular year selected should be the school year starting after the initiation of the study. This will allow for preliminary preparation such as working with the kindergarten teachers to obtain social security numbers for students. The kindergarten group selected is the group that will be followed throughout the entire study. The use of social security numbers for identifying the study group would also allow a follow up of the group after high school if desired.

7. *Conduct informational sessions with participating local school district personnel.* An enormous amount of information is already being collected about students by the Department of Education. Therefore, very little additional effort should be required from the school districts. The major responsibility of the districts will be to obtain a social security number for each of the kindergarten students in the selected year and to see that all information submitted for the student is referenced by that number. The Department of Education will provide the social security application forms to the kindergarten teachers. The teacher will be responsible for getting the application completed by the parents. Since this is to be a continuing program, local personnel should be fully informed concerning its purpose and procedures and must receive rapid feedback on results, especially as related to that particular district.

Limitations:

1. As the state supported kindergarten program continues to expand, fewer students will begin the first grade without having some type of kindergarten experiences. In addition, this system ignores other kinds of pre-first grade experiences such as Head Start and private, proprietary, and locally funded programs.

2. The three largest school systems in the state are not presently participating in the CTBS service, although there are indications they will participate at a later date.

3. The study group is an intact sample rather than randomly selected. The requirements that the district participate in the CTBS service and also agree to participate in the evaluation system eliminates any random selection. However, the cost of establishing a separate testing system for an extended period exceeds the benefits which would result.

4. Although the use of social security numbers provides the best tracking device, a percentage of the group will be lost over a period of time. One major problem is being sure the social security number continues to be used throughout the years. This will require a follow up each year with reminders to the district of the purpose.

Types of Analysis:

The CTBS will provide the major items for analysis. Scores are provided in the following ten areas:

1. Reading vocabulary
2. Reading comprehension
3. Spelling
4. Language mechanics
5. Language expression
6. Mathematics computation
7. Mathematics concepts and applications
8. Reference skills
9. Science
10. Social studies

These subtest scores will allow specific areas of strengths and weaknesses to be identified. At the same time, district data can be used to assist those schools in need of improvement.

Those students attending full day programs can be compared with those attending half day programs to determine what advantages, if any, exist in one program or the other.

At a later date, various other statistical reports being submitted to the Department of Education, such as the annual principal's report, can be entered into the system to greatly expand the data base.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

The State Department of Education developed statewide kindergarten goals during the initial stage of program development. (A summarized list is given in Appendix A.) These goals are intended to be used by the local school as a basis for developing specific learning objectives.

Section 5 of the Kentucky Administrative Regulation pertaining to public school kindergarten programs (704 KAR 5:050) states:

> The program shall include desirable experiences in social living, physical development, emotional growth and stability, language arts, science, music, art, and creative activities. The program shall provide opportunities and experiences in accordance with each child's level of comprehension and rate of growth.

Almost all schools use some variation of the goals developed by the Department of Education. In some cases, these take the form of specific measurable objectives with pre-post test measures, while in other cases the teacher operates more or less on intuition as to what will best meet the needs of the students.

As an example of an organized approach, one district in the sample uses a forty item yes/no check list of activities with which the teacher indicates a child's mastery of specific activities within the five major goal areas. Although each goal has a number of related activities, only one per goal area will be given in the example that follows:

A. Social living (goal)
   1. Is at ease with children and adults in the school setting.

B. Communication and Math Skills (goal)
   1. Can name and tell the value of a penny, a nickel, a dime.

C. Perception and Motor Skills (goal)
   1. Can pitch beanbag in wastebasket six feet away.

D. Creative Activities (goal)
   1. Can stack cubicle blocks five high.

E. Health and Safety (goal)
   1. Upon request, can point to parts of the body: nose, ear, eyes, elbow, neck, knee.

Although some programs stress academic preparation more than others, all provide some activities in each of the five major goals listed above. The majority of all programs in the state attempt to provide a balance of academic and social concepts.

Personal interviews were conducted with twenty-seven individuals directly involved with the four selected districts. The largest segment of those interviewed was first grade teachers. The assumption was made that the first grade teacher is in the best position for judging the accomplishments of the kindergarten program. All persons interviewed expressed the opinion that the program is accomplishing its objectives. The first grade teachers were especially

supportive of the program. In those cases where placement in groups in the first grade is based on some testing procedure, they reported that the child who had attended kindergarten *at that school* is usually in the highest group. Those who have attended some other pre-first grade program tend to score higher than those who have not attended a program, but not as high as those who attended the program in that school.

This may be explained in part by the fact that a child who attends kindergarten and first grade in the same school is familiar with the routine, the teachers, and the older children by the time he enters first grade. While the child who attends kindergarten at some other location will have an advantage over the child who has not attended a program, he will not be continuing in the same familiar routine as will the one who attends kindergarten and the first grade in the same school.

Recommendation One

In those districts where the teacher is working without a set of written objectives, the Department of Education should work with the local elementary supervisors and teachers to develop a set of specific performance objectives for all kindergarten programs. Although the State Department of Education supervisory staff for kindergarten programs is limited to one person, each local school district has instructional supervisory personnel.

Recommendation Two

Communications between supervisors and teachers and between the teachers themselves should be improved. Those kindergarten teachers who started with the program in 1973 were very enthusiastic about the in-service training and assistance provided by the State Department of Education for developing the initial program. However, they also feel that since the first year, they have somewhat lost contact with the Department of Education and with other kindergarten teachers. Several activities to promote communications were suggested.

1. Publication of a periodic newsletter for and about kindergarten programs. This could be used as a means of sharing the better aspects of different programs with all kindergarten teachers.
2. Special short seminars for kindergarten teachers where problems, accomplishments, etc., could be discussed.
3. Organized meetings for kindergarten teachers in conjunction with regular state wide and regional meetings. This would provide an opportunity to learn from persons with a successful comprehensive background in kindergarten work.

In addition to the above suggestions, a variety of activities can be used as in-service training and to improve communications. For example, those programs which appear to be most effective could be identified by local and state supervisory personnel and information on the most successful aspects of the programs shared with other kindergarten teachers. Dissemination may be through one or more of the previously suggested activities or by direct mailings to the districts.

Recommendation Three

As one means of reducing the number of students repeating one or more elementary grades by providing a more sound basis for later educational development, those school districts which have high retention rates and/or low student achievement should be identified to receive top priority in obtaining kindergarten units and assistance in developing a sound program.

Although the statewide retention rates for the first and second grade have declined to some extent since 1970, the rates are still high, especially for the first grade. There is sufficient nationwide evidence that the number of students repeating the first grade is much lower for those students who have attended kindergarten.

Recommendation Four

The Department of Education should establish a procedure through which reliable information can be obtained on the long term results of kindergarten instruction. As indicated earlier, most studies have not extended past the second or third grade. Little is known about kindergarten effects on educational achievement in later years.

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APPENDIXES

APPENDIX A

LEARNING OBJECTIVES OF THE KINDERGARTEN PROGRAM

This list of thirty-seven "learning needs" were summarized from those developed by the Kentucky Task Force on Kindergarten, and were used as the basis of a 1975 evaluation report by the Center for Professional Development, University of Kentucky.

1. Accepts and adjusts to success and lack of success.
2. Expresses positive emotions (affection, pleasure, sympathy, humor, etc.).
3. Refrains from hurting others when expressing negative emotions and shows development of self control.
4. Displays positive self control.
5. Shares with others.
6. Accepts responsiblility for welfare of others.
7. Respects the rights, opinions, and property of others.
8. Plays and works well in a group.
9. Listens and follows instructions.
10. Has adequate attention span in group setting.
11. Persists in efforts on individual projects.
12. Remembers information important to him.
13. Shows positive attitude toward learning.
14. Works well independently.
15. Shows initiative and imagination.
16. Expresses ideas with an adequate vocabulary.
17. Speaks in sentences.
18. Has adequate auditory discrimination skills.
19. Recognizes likenesses and differences in letters and other written symbols.
20. Speaks distinctly.
21. Recognizes and can name simple geometric forms (circle, square, rectangle, curve, etc.).
22. Understands one-to-one correspondence.
23. Understands mathematical concepts of simple relationships (more-less, larger-smaller, taller-shorter, etc.).
24. Demonstrates curiosity of things and phenomena in the environment.
25. Understands simple concepts of time, weather, how things change, etc.
26. Compares and classifies objects by shape, size, texture, use, etc.
27. Expresses awareness of beauty in the environment.
28. Enjoys listening to varying kinds of music.
29. Sings with adequate attention to tempo, tone, and volume.

30. Recognizes and names colors.
31. Experiments with art media.
32. Expresses ideas using art.
33. Enjoys participating in story-telling, dramatization, dancing, etc.
34. Shows adequate development in gross motor activities (running, jumping, balancing, etc.).
35. Shows adequate development in fine motor activities (tracing, manipulation of small objects, etc.).
36. Practices good health habits (hand-washing, nutrition, brushing teeth, etc.).
37. Observes safety rules and understands reasons for the rules.

APPENDIX B

IN HOUSE

REGULAR SESSION 1976

HOUSE RESOLUTION NO. 124

WEDNESDAY, MARCH 17, 1976

Representative Joe Clarke introduced the following resolution which was ordered to be printed.

A RESOLUTION directing a study of the public kindergarten program in Kentucky.

WHEREAS, the citizens of Kentucky deserve and desire the best possible educational programs for their children; and

WHEREAS, the State Department of Education has operated a pilot Kindergarten program since 1973 and has not presented satisfactory evidence of the successful application of the Kindergarten theory in Kentucky; and

WHEREAS, 300 additional Kindergarten units have been authorized for the 76-78 biennium at an addition cost to taxpayers of over five million dollars; and

WHEREAS, a full state Kindergarten program will cost taxpayers in excess of thirty million dollars annually;

NOW, THEREFORE,

<u>Be it resolved by the General Assembly of the Commonwealth of Kentucky:</u>

1 Section 1. That the Legislative Research Commission
2 shall in conjunction with the interim joint committee on
3 education and with the assistance as required of the
4 Department of Education, conduct a study of the state
5 Kindergarten program. The study shall be designed to
6 ascertain the goals of the program, to report the extent

1 to which these goals and objectives are being met, and to
2 devise a method to measure the import of kindergartens on
3 student achievement in Kentucky.
4 Section 2. Staff services to be utilized in
5 completing this study are estimated to cost $25,000. The
6 staff services shall be provided from the regular commis-
7 sion budget and are subject to the limitations and other
8 research responsibilities of the commission.