

1994

Advantages and disadvantages of three types of kindergarten schedules

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Advantages and disadvantages of three types of kindergarten schedules

Abstract

The kindergarten experience has traditionally been a bridge between informal home experiences and more formal school experiences. Currently, there is a concern because it appears that more and more children are at-risk for kindergarten failure (Slavin, Karweit, Wasik, 1992). In the 1960's and 1970's, failure prevention in kindergarten had focused on potentially at-risk students who might not have had rich pre-school experiences necessary for school success. Programs such as Head Start were designed to give these potentially at-risk students from lower socioeconomic groups school readiness experiences. Throughout the 1970's, readiness for elementary education was defined in terms of attitudes and motivation rather than specific academic skills (Charlesworth, 1989).

ADVANTAGES AND DISADVANTAGES OF THREE TYPES OF
KINDERGARTEN SCHEDULES

a Graduate Project

Submitted to the

Division of Early Childhood Education
Department of Curriculum and Instruction

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

UNIVERSITY OF NORTHERN IOWA

By

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July, 1994

This Research Paper by: Marcelle Kaduce

Titled: Advantages and Disadvantages of Three
Types of Kindergarten Schedules

has been approved as meeting the research requirement for the
Degree of Master of Arts in Education.

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CHAPTER I

INTRODUCTION

The kindergarten experience has traditionally been a bridge between informal home experiences and more formal school experiences. Currently, there is a concern because it appears that more and more children are at-risk for kindergarten failure (Slavin, Karweit, Wasik, 1992). In the 1960's and 1970's, failure prevention in kindergarten had focused on potentially at-risk students who might not have had rich pre-school experiences necessary for school success. Programs such as Head Start were designed to give these potentially at-risk students from lower socioeconomic groups school readiness experiences. Throughout the 1970's, readiness for elementary education was defined in terms of attitudes and motivation rather than specific academic skills (Charlesworth, 1989).

During the 1980's, the trend shifted to identifying the high risk children from all socioeconomic levels (Charlesworth, 1989). The function of socializing children for future schooling became less important and the kindergarten experience became one in which children needed to be ready when they arrived. In effect, children could be behind before they started. Some children entering kindergarten continued to meet failure. From a traditional early childhood developmental view, the solution is that of matching the curriculum to the children. If children are not, in effect, ready for the

kindergarten experience and expectations, teachers must adjust those experiences and expectations to meet children's developmental needs. Other professionals, with backgrounds in areas other than child development, believe kindergarten academic experiences are appropriate and that many children should enter school when they are more mature and are ready for academic expectations. Consequently, school systems have sought methods to ensure that children entering kindergarten are capable of reaching objectives necessary for success in first grade.

Kindergarten programs in the United States vary in their structure and their focus. Many school systems are experimenting with ways of offering children a quality experience in order to meet their developmental needs. Several of these methods focus on temporal features dealing with the variable of time. According to Nancy Karweit, principal research scientist at Johns Hopkins University, some of these reforms include (1) mandatory kindergarten; (2) increasing the length of the school day by moving to all day kindergarten programs; (3) two year kindergarten programs; and (4) changing the entrance age for kindergarten students.

Each of these reforms focuses on a slightly different aspect of increasing learning time. Currently, kindergarten attendance is mandatory in seven states and the District of Columbia and mandatory in two other states if a student does not pass a specific test (Karweit,

1992). Despite this lack of compulsory attendance for most states, many children do attend kindergarten programs, and some states not requiring kindergarten attendance are considering a shift toward mandatory kindergarten (Karweit, 1992).

The use of increased time is especially apparent in the steady rise in the percent of full-day kindergarten programs (Karweit, 1992). There have been modest, short term positive effects on lengthening the school day through full-day programs but the issue remains the actual use of time rather than just providing more time (Karweit, 1992). The number of studies is limited in size and most of them have focused on disadvantaged students.

Two year kindergarten programs are an attempt to respond to young children's' differences in rates of development and experiences. One approach is to offer a developmental kindergarten prior to the kindergarten year. Other school systems offer a transitional year between kindergarten and first grade for students who have had difficulty in kindergarten. Kindergarten retention gives students a second year of kindergarten after failure the first time. Shephard (1989) reviewed the above three options (developmental kindergarten, transitional first grade, and kindergarten retention) and found all of them to be ineffective.

Some states have altered the entrance age of beginning kindergarten students. Changing this entrance age does not solve the

problem of being the youngest in the classroom; it merely changes the composition of the group of students who are the youngest.

All of the above methods of change have not shown to be effective in providing a quality experience for kindergarten students and in decreasing the failure rate of kindergarten children. With the exception of full-day programs which have shown some short term modest results, the others have shown very little positive effects (Karweit, 1992). Based on these results, it is important to look more closely at the literature concerning the best schedule that is most appropriate for kindergarten instruction.

Purpose of the study

The purpose of the study is to examine and compare the effects of three scheduling forms of kindergarten programs: full-day kindergartens programs, half-day kindergarten programs, and extended-day kindergarten programs. This will be done by answering the following questions:

1. What are the advantages and disadvantages for students in full -day kindergarten programs?
2. What are the advantages and disadvantages for students in half-day kindergarten programs?
3. What are the advantages and disadvantages for students in extended-day kindergarten programs?

Need for the study

Many school systems are experimenting with scheduling changes in their kindergarten programs (Karweit, 1992). Some of these focus on the use of additional time as the variable. By comparing these forms of kindergarten programs, the reader will be able to examine the advantages and disadvantages of each type of schedule. By examining the use of an extended-day kindergarten program for at-risk students, the reader will become informed of this alternative form of scheduling as a means of providing additional learning time for those students during the kindergarten year.

Limitations

There have been two major limitations in writing this paper:

- The nearest university library is approximately two hours away;
- There is a lack of recent literature on the subject.

Delimitations

Alternate-day kindergarten programs will not be addressed because the use of this type of scheduling has diminished.

Definitions

Full-day, every-day kindergarten program:

A program in which students who meet acceptable chronological age requirements attend a full-day kindergarten program

(approximately five and one-half hours) each regularly scheduled school day.

Half-day kindergarten program:

A program in which students who meet acceptable chronological age requirements attend a half-day kindergarten program (approximately three hours) each regularly scheduled school day.

Extended-day kindergarten program:

A program in which students who meet acceptable chronological age requirements attend a half-day program and an additional one to three hours of instruction either in the same classroom or different classroom. An additional variable may be the number of days per week spent in the extended-day program.

CHAPTER II

REVIEW OF LITERATURE

Throughout the 1900's, kindergarten programs have appeared in many different scheduling forms. The three basic forms have been full-day programs, half-day programs, and extended-day kindergarten programs.

Full-day, half-day and extended-day kindergarten programs will be reviewed in this paper concerning their effects on academic skills and student behavior. The first section of the literature review will focus on the advantages and disadvantages of full-day programs. The second section will address the advantages and disadvantages of half-day programs. Advantages and disadvantages of extended-day programs will be reviewed in the third section.

Advantages of Full-Day Kindergarten Programs

The full-day kindergarten program was originated by Frederick Froebel and the American proponents of his kindergarten (Puleo, 1988). Kindergarten was reduced to half day double sessions in the 1950's primarily due to cost and space considerations (Puleo, 1988). Although there is some discrepancy in different reports, full-day programs are on the rise. Puleo reported that in 1988, more students were in full-day programs than half-day programs. Karweit (1992) has stated that 58% of today's kindergarteners attend half-day programs.

What effect do full-day versus half-day kindergarten programs have on academic skills? A study by Eleanor V. Anderson (1985), looked at the effects of a pilot program of sixty kindergarten students enrolled in a full-day program in Beach City School District, California. Children who were in the full-day group were matched with those in the half-day group on the following criteria: age, socioeconomic status, entry level scores on the district's Kindergarten Skills Assessment, and boy/girl ratio.

Average daily time allocations were reviewed and a significant number of minutes was scheduled in full-day programs for reading, mathematics, science, social studies, music, and art than in comparison half-day classes. Differences in engaged learning time (time on task), which was thought to be directly related to student achievement, were also compared. Engaged time in reading and language in full-day classrooms was two and one-half times greater than in half-day classes. In mathematics, engaged time was about fifty percent greater in full-day programs than in half-day programs. Scholastic achievement was measured by using the Stanford Early School Achievement Test (SESAT) at the end of the school year with both the full-day students and the half-day students. Full-day students scored significantly higher than children in the half-day classes in reading, mathematics, social studies, and science skills and understandings.

Matthijs Koopmans (1991) also studied the effect of full-day kindergarten programming on achievement by comparing previous half-day students in the years 1985-86 with full-day students from the same eleven schools of Newark, New Jersey in the years 1986-87. This longitudinal study investigated the long term effects of full-day kindergarten in elementary schools. Performance data from the Comprehensive Test of Basic Skills (CTBS) was used in the analysis of the following areas: word attack, vocabulary, reading comprehension, math computation, and math concepts and applications. Evaluation of the first year of the study revealed that the full-day kindergarten students scored consistently higher in elementary school than the half-day group, regardless of the particular cognitive domain considered. However, the significant advantage of the full-day group over the half-day group seemed to disappear because the differences lost statistical significance after the first year. By using analysis of variance models for each cognitive domain and using the school readiness score as a covariate, Koopman attempted to assess differences that already existed in kindergarten prior to students' assignment to a full-day or half-day group. Koopman stated that "... all-day kindergarten attendance only has a lasting effect if elementary schools provide the opportunity for children to build on their acquired strength" (p. 36).

The relationship of full-day kindergarten programming and academic achievement can also be considered by examining the effect of increased learning time on reading scores. Kathleen Sergesketter and David Gilman (1988) looked at the effectiveness of full-day kindergarten over half-day kindergarten by testing and comparing students at the end of first grade.

One hundred eighty-seven students enrolled in full-day kindergarten in Evansville-Vanderburgh School Corporation were randomly selected and compared with two hundred twenty-three randomly selected children who had been in half-day kindergarten programs. Mean scores from the Gates-MacGinitie Reading Tests Primary A, were compared for the two groups. The half-day groups had lower scores in all areas as noted by Sergesketter and Gilman. However, the authors noted that because no pretest was given when selecting groups, internal validity might be questioned. Other variables should also be considered such as curriculum, teacher methods, sampling methods, pupil/teacher ratio and teacher inservice. A statewide longitudinal study in Ohio was launched to investigate the effects of kindergarten scheduling on children's success, including achievement, incidence of grade retention, provision of special educational services, and classroom behavior (Cryan, Sheehan, Wiechel, Brandy-Hedden, 1992). Phase I of the study retroactively analyzed the behavioral outcome from kindergarten students in twenty-

seven school districts on thirteen different standardized tests. Phase II's data was gathered from the Metropolitan Readiness Test (administered in kindergarten), the Metropolitan Achievement Tests (administered in first grade) and the Hahnemann Elementary School Behavior Rating Scale (administered in kindergarten). "Results from both phases of the study indicate that participation in full-day kindergarten is positively related to subsequent school performance, at least through first grade" (Cryan, Sheehan, Wiechel, Brandy-Hedden, 1992, p. 187). The difference between full-day kindergarten and half-day kindergarten was evident with approximately five to ten percentile points difference favoring full-day kindergarten, fewer grade retentions (17-55% favoring full-day kindergarten), and lower incidence of Chapter I placements (50-90% fewer placements favoring full-day).

Another longitudinal study in the Cincinnati, Ohio Public Schools reaffirmed the advantage of full-day kindergarten with four year-old preschool. Four hundred ten kindergarteners in all-day programs (most of the children had attended preschool as four year olds) were compared to one hundred and forty-one children enrolled in half-day programs (most of these children had not attended preschool as four year olds) (Nieman and Gastright, 1981). A pretest, the Kindergarten Goal Card, which was locally designed and administered in September, did not show significant difference between the groups. These children were tested again three months into the kindergarten

year and the full-day group scored significantly higher than the half-day group. Total reading and math subtest scores of these same students in their fourth grade and eighth grade years were again compared and the full-day group retained their advantage by twelve percentile points in the fourth grade year and by six percentile points in the eighth grade year. In addition, the full-day group had fewer retentions (9%) than the half-day group (12%).

Student behavior is another area that was assessed in a comparison of kindergarten scheduling. Anderson's study (1985) used a survey to assess parental attitudes related to student growth in full-day and half-day classes. Sixty-nine percent of parents of full-day students indicated growth in self-confidence and independence in their children as compared to forty-nine percent of parents of half-day students; eighty percent of parents of full-day students reported growth in their children's ability to work/play with others as compared to fifty-six percent of parents of half-day students; and ninety-six percent of parents of full-day students indicated growth in academic learning as compared to seventy-four percent of parents of half-day students. Parents of full-day kindergarten students felt positive about their children's behaviors in academic and other student outcomes.

An Ohio study by Cryan, Sheehan, Wiechel, and Brandy-Hedden (1992) found a clear relationship between kindergarten schedule and children's classroom behavior. Each of the following

differences favored students from full-day kindergartens: originality, independent learning, involvement in classroom activities, productivity with peers, intellectual dependency, failure/anxiety, unreflectiveness, holding back or withdrawn, blaming, and approach to teacher.

Contrary to other studies, Cryan et al. found that full-day and half-day kindergarten classes spent the same amount of time involved in the same type of activities; however, children in full-day programs were allowed more time for free play.

Disadvantages of Full-day Programs

Fatigue has been a concern of parents of children attending a full-day kindergarten program. James Towers (1991) reported on a survey sent to parents opposed to the full-day kindergarten program. The parents named fatigue as a factor that occurred in their children attending the all-day program. All-day kindergarten was considered a “cheap baby-sitter at the cost of depriving some children emotionally” (p. 26), and that it was difficult for children who must ride the bus for any length of time.

Psychosocial development was also addressed in Eleanor Anderson’s study (1985). Four classrooms (two full-day and two half-day) seemed to provide a healthy psychological environment and no classroom appeared to promote self concept more than any other. In a survey that was given to parents of half-day students the following

statements were made:

"Five year olds are not ready for a full-day program."

"Young children need more time at home for nurturing."

"Children would be too tired as a result of going to school all day"

"Half-day kindergarten allows a child to become accustomed to school gradually."

"Children benefit from unstructured time at home" (p. 9).

Advantages of Half-Day Kindergarten Programs

Half-day kindergarten programs in which children attend either a morning or afternoon session became more widespread in the early 1900's (Effects of Kindergarten Scheduling, 1989). This was primarily due to cost and space considerations. One kindergarten teacher could serve two different groups of kindergarten children. By 1912, almost two-thirds of all public kindergartens were operating on the double session schedule (Effects of Kindergarten Scheduling, 1989).

Throughout the 1950's, the post World War II baby boom made the two half-day sessions even more necessary.

In comparing half-day kindergarten programs to full-day programs, the number of variables in the studies caused concern as to the validity of these studies. Variables such as curriculum, teacher methods, sampling methods, pupil/teacher ratio, and teacher inservice

all must be considered. Concerning pupil/teacher ratio, Sergesketter and Gilman (1991), state in their study, "Perhaps the lower scores in all areas by half-day students could, in part, be attributed to the larger average number of students in the half-day classes" (p. 26).

The number of studies definitely favoring half day programs is limited. In the Effects of Kindergarten Scheduling: A Summary of Research (1989), five studies found at least one positive effect that favored half-day kindergarten students over full-day students. Three of those studies found positive effects in at least one area of academics, while one study found a positive effect in social skill development and another study found that parental attitudes were more favorable for half-day programs.

Disadvantages of Half Day Kindergarten Programs

Engaged learning time is directly related to student achievement (Anderson, 1985). In Anderson's study, full-day and half-day students were observed for varying periods of time and the percent of engaged learning time was calculated during instruction in reading, language, and mathematics. The greater amount of engaged time in reading/language and mathematics in full-day classrooms over half-day classes was a disadvantage for half-day classrooms. It can be assumed according to Anderson that less time for instruction in half- day kindergarten classrooms may account for less achievement in those kindergarten students (1985).

Some of the literature reviewed results of kindergarten scheduling for disadvantaged students. The New York City Board of Education tested English-speaking children with poor readiness skills in full-day and half-day classrooms for academic progress and they also tested Spanish-speaking children for improvement in English language proficiency (Effects of Kindergarten Scheduling, 1989). In each instance, results showed a significant difference in favor of full-day students over half-day students. This would indicate that half-day kindergarten programs have less of an advantage for improving language skills.

Advantages of Extended-day Kindergarten Programs

Extending the kindergarten school day has been another option in meeting children's needs, especially for those children who may be at-risk for kindergarten success. The research on extended-day programs is limited and often terms such as extended-day kindergarten are interchangeable with all-day kindergarten or full-day kindergarten. Jessie Johnson (1991) has continued to study over several years the effect of an additional one half-day of kindergarten programming on underachieving students in the Columbus, Ohio Public Schools. Using pretest data from the Composite Test of Basic Skills (CTBS), five hundred and sixty-five underachieving students were given an additional 13.8 hours of instruction per week. The hypothesis consisted of three parts: 1) fifty percent of pupils who attended 80% of

the time would gain at least 3.0 NCE (Normal Curve Equivalent) in total reading; 2) fifty percent of pupils who attended at least 80% of the time would gain at least 3.0 NCE in oral comprehension; and 3) fifty percent of parents would spend 75 minutes per week listening to their child read or reading to their child. Results were: 84.7% of pupils gained 3.0 NCE in total reading and 82.3% of pupils gained 3.0 NCE in oral comprehension. The third part of the hypothesis was not met as only 31.8% of parents achieved the total amount of minutes reading goal.

Another study by Irene Warjanka (1982) also focused on additional time for high-risk students but provided this additional time in an extended-day program (EDK) at a different location from the regular half-day program. The hypothesis in this study was that extended-day kindergarten pupils will reach the level of readiness skill development of those pupils attending a regular half-day session of kindergarten. Thirty students were screened as being severely deficient in readiness skill development using the Metropolitan Readiness Test, Level 1, Form P. A score of 6.5 or below in auditory memory, rhyming, letter recognition, visual matching, school language and listening, and quantitative language was measured. Those students were then invited to attend an extended-day program. The EDK programs focused especially on language development and experiential activities. Classroom time in EDK programs amounted to two

additional hours per day, 10 hours per week. A post test (Metropolitan Readiness Test, Level 1, Form 0) was administered after six months and results indicated that students had achieved the same level of readiness skill development as half-day participants. Warjanka summarized that EDK programs may be used as a means to bring children who were deficient in readiness skills up to a comparable level as their peers in traditional half-day programs.

A longitudinal study in the Detroit Public Schools compared the achievement of students in extended-day programs with those in traditional Chapter 1 kindergarten programs through grades one, two, and three (Svigney, 1987). Students were identified in the kindergarten year using KIDS (Kindergarten Inventory of Developmental Skills). Those students were placed in either Chapter 1 programs or extended-day kindergarten (EDK) programs. In 1979-80, four schools were involved in this study, twenty-five schools were involved in 1983-84, eighty-seven in 1986-87 with a total of 2,600 students by 1987. The experimental group was the EDK students and the control group was students in traditional Chapter 1 kindergarten programs. The dependent variable included report card marks, attendance, and scores from the California Achievement Test, and Assessment of Basic Curriculum Skills test. All EDK groups performed significantly better than traditional kindergarten groups at the end of the kindergarten year. In the Primary 1 year, there was no

significant difference in any area although scores were higher. In Primary II, there was a significant difference for EDK groups in reading and math tests but no significant difference in language arts marks, attendance, or report card marks. Primary III saw a significant difference for EDK groups who scored higher in reading and math test scores but again there was no difference in language arts marks. Primary III did show significant differences in attendance. The author acknowledged the need to continue the longitudinal study in order to obtain additional data.

McClinton and Topping (1981) sought to determine the effects of extending the school day for the purpose of easing first grade adjustment to full-day scheduling when the basic kindergarten curriculum remained essentially unchanged. Forty children in first grade from a Colorado school district who had attended extended-kindergarten day (EKD) were compared with forty children who had attended regular length kindergarten. EKD classrooms met for 4 hours 15 minutes while regular kindergarten met for 2 hours 40 minutes. On a rating scale given to first grade teachers who did not know which children came from the two types of classrooms, first grade teachers judged children coming from EKD classrooms to be more capable students. At least in the eyes of the teacher, EKD students seemed to have an advantage over students in regular kindergarten classrooms.

In 1992, a study was conducted in the Mason City, Iowa Community Schools which compared sixty students identified as at-risk early in their kindergarten year by using the Early Prevention of School Failure assessments to seventy-two randomly selected students in regular half-day kindergarten classrooms (Appendix A). The at-risk students were given an additional four one-half days per week of instruction in an extended-day kindergarten program for eight months of their kindergarten year. Two questions were addressed:

1. Does an extended day kindergarten program reduce the number of at-risk students as identified by the Early Prevention of School Failure assessments?
2. How do the extended day kindergarten students compare to children attending a half day kindergarten program using the Early Prevention of School Failure assessments in the fall and spring of their kindergarten year?

Pretest and post test data indicated that fifty percent of the students attending the EDK program were no longer at-risk at the end of the kindergarten year. Of the remaining EDK students, seventy percent of these students demonstrated greater gains than the randomly selected students in regular half-day kindergarten classrooms.

Disadvantages of Extended-day Kindergarten Programs

A primary consideration for school systems in making a transition from a half-day kindergarten program to an extended-day

kindergarten program is the cost factor. Providing additional time for underachieving kindergarten students with an extended-day program involves the use of an another teacher and salaries of certified personnel are a school system's largest expenditure. Again, school systems must justify the cost by weighing the benefits against the added expenditure. Other weaknesses of extended-day programs are consistent with the discussion of weaknesses of full-day programs. Fatigue is one of those factors along with parental concern for more unstructured time in the home.

CHAPTER III

ANALYSIS OF FULL-DAY, HALF-DAY AND EXTENDED-DAY KINDERGARTEN PROGRAMS

The review of literature in this paper has addressed the three types of kindergarten schedules: full-day, half-day, and extended-day kindergarten programs. An analysis of each type of program is done to compare these programs and to become more informed of the advantages and disadvantages of each type of program.

The number of full-day kindergarten programs has increased in the United States (Puleo, 1988). Some of this increase has been due to a decline in student enrollment that has allowed smaller school districts to make an easy transition from a half-day kindergarten schedule to a full-day schedule without excessive costs because of teacher salaries. Other reasons for school systems making the transition from a half-day kindergarten program to a full-day kindergarten program are based on research indicating greater student achievement in full-day programs. Still other reasons are based on a need for child care because of working parents. Although all of these reasons appear to be valid, educators must first examine benefits to students as the top priority in making decisions about kindergarten schedules. Benefits for students in both achievement and student behavior are important areas on which to base decisions concerning which kindergarten schedule is best.

Analysis of Full-day Kindergarten Programs

In analyzing the research concerning forms of kindergarten schedules, the lack of sound empirical studies has been apparent. Although more literature existed for full-day programs versus half-day programs, this research often contained variables such as curriculum used, teacher methods, sampling methods, pupil/teacher ratio and teacher inservice that questioned the validity of these studies. The difficulty has been in the planning and implementing of studies which contain the least amount of variables.

Children in full-day kindergarten programs versus children in half-day kindergarten programs did demonstrate a greater degree of student achievement according to the majority of the studies previously named. That benefit existed in almost all academic areas, including reading and math scores, fewer retentions, and lower incidence of Chapter I placements. A longitudinal study by Nieman and Gastright (1981), found that the statistical significance of the full-day kindergarten group versus the half-day group continued into the eighth grade year. Another study by Cryan, Sheehan, Weichel, and Brandy-Hedden (1992), found participation in full-day kindergarten was positively related to subsequent school performance through the first grade year. Other studies by Koopman (1991) and Sergesketter and Gilman (1988), revealed full-day kindergarten students scored consistently higher than half-day students in all cognitive domains

tested. Although these researchers noted that the statistical significance did not have long term effects through subsequent grades, it could be conceived as Koopman noted, "...all-day kindergarten attendance only has a lasting effect if elementary school provides the opportunity for children to build on their acquired strength" (p. 36). Thus, children in full-day kindergarten programming did seem to demonstrate greater academic achievement than children in half-day kindergarten classrooms. Educators who are interested in an increase in achievement for kindergarten students in half-day programs might consider the transition to a full-day kindergarten program as a solution to that concern.

Student behavior was also assessed in some studies. Although this number of studies was limited in size, most studies saw no significant difference between either group of children in full-day or half-day kindergarten classes. Both groups of students, according to their parents, demonstrated characteristics such as independence, originality, and healthy attitudes toward school. The reader may assume that in the area of student behavior, neither kindergarten schedule saw an advantage for its students over other forms of scheduling.

The main disadvantage for full-day kindergarten programming was expressed by some parents who observed fatigue in their five year

old children. Most of these parents noted that this fatigue was short term as their children adapted to a school routine.

Analysis of Half-day Kindergarten Programs

The majority of kindergarten children in the United States (58%) attend a half-day schedule (Karweit, 1992). However, the need for child care has led to a steady rise in the percent of full-day programs (Karweit, 1992).

In a study by Eleanor Anderson (1985), engaged learning time was calculated in full-day kindergarten programs and half-day programs. Anderson concluded that the greater number of minutes of engaged learning time may account for the greater achievement of full-day students while the lesser amount of time spent on instruction for students in half-day classrooms could account for less achievement.

Some studies focused on disadvantaged students attending half-day kindergarten programs. The New York City Board of Education tested English-speaking with poor readiness skills and also Spanish-speaking children for improvement in English language proficiency (Effects of Kindergarten Scheduling, 1989). Results showed that half-day kindergarten programs have less of an advantage for improving language skills.

In summarizing the findings concerning half-day kindergarten programs, the researcher found that they were less costly than full-day programs. Half-day programs utilize one teacher to serve two different

groups of children, thereby reducing the cost of teacher salaries. School systems interested in a transition to a full-day program must weigh the additional cost as opposed to the advantages of full-day kindergarten. Some of the research available favoring full-day programs over half-day programs contain additional variables which influence the outcome of this research. Sergesketter and Gilman (1991), acknowledged that variables such as class size and sampling methods may have influenced the results of their research. School systems must also take these factors into account when making a decision about kindergarten scheduling.

School systems that presently offer a half-day kindergarten program and consider a transition to full-day kindergarten sessions will need to consider factors such as additional cost and space considerations. However, the assumption can be made that achievement of children in kindergarten will increase when school systems change to a full-day kindergarten program.

Analysis of Extended-day Kindergarten Programs

For some school systems, the cost of offering all children a full-day kindergarten program was unrealistic because of the higher cost of teacher salaries and additional rooms. However, these school systems desired to increased student achievement especially for at-risk students. This was attempted by providing those at-risk students an additional half day of learning opportunities through the use of an

extended-day kindergarten program. Those children than, in effect, received an equivalent of a full-day of kindergarten programming, either in the same setting as their regular kindergarten classroom or at another site.

The research for extended-day kindergarten programs was also limited and focused primarily on providing additional learning time for at-risk students. In all studies addressed here, underachieving students attending an extended-day kindergarten program were at the end of the kindergarten year: (1) able to reach the level of readiness skill development of those pupils attending a regular half-day session of kindergarten, or (2) judged by their first grade teachers as more capable students than students coming from regular kindergarten classrooms.

Extended-Day Action Research Study

A study conducted in the Mason City, Iowa Community Schools in 1992 also addressed the needs of at-risk kindergarten students by offering these students an extended-day kindergarten (EDK) program (Appendix A). These children attended their regular half-day kindergarten program and also attended an additional half-day extended-day kindergarten program for four days per week. Pretests were given in the fall of that year to extended-day students and a randomly selected group of students from regular half-day classrooms. Post tests were then administered at the end of the year to these same

students. More extended-day students than half-day students gained in levels of development on the Early Prevention of School Failure (EPSF) assessments (Appendix B). The average gain for extended-day students on the Early Prevention of School Failure assessments was greater than for half-day students (Appendix C).

In analyzing this study that the researcher was involved in, fifty percent of EDK students who were considered at-risk according to the EPSF assessments at the beginning of their kindergarten year were no longer at-risk at the end of that year. Extended-day kindergarten programs can be an option for school systems seeking to increase student achievement, especially for underachieving students. By providing additional learning time, students who may be at-risk for failure in kindergarten can reach the same level of development as their peers in half-day classrooms.

CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Often, decisions about public education issues are prompted by concerns other than sound principles or empirical research. This is evident in the shortage of empirical studies concerning kindergarten scheduling (Cleminshaw & Guilubaldi, 1979).

It was the purpose of this study to examine and compare different forms of kindergarten scheduling: full-day kindergarten programs, half-day kindergarten programs, and extended-day kindergarten programs. The following questions were asked:

1. What are the the advantages and disadvantages for students in full-day kindergarten programs?
2. What are the advantages and disadvantages for students in half-day kindergarten programs?
3. What are the advantages and disadvantages for students in extended-day kindergarten programs?

Kindergartens in the United States vary in uniformity, not only in purpose and experience but also in structure. A variety of kindergarten schedules include these three main forms: full-day kindergarten, half-day kindergarten, and extended-day kindergarten. School systems are continuing to attempt strategies to better meet the

needs of kindergarten age children by establishing two year developmental programs, changing entrance age requirements, mandating kindergarten attendance and retaining underachieving children for another year. Many early childhood educators find these options ineffective in establishing long term positive gains.

In answering the first question, the advantages of full-day kindergarten programming outweighed the disadvantages in all studies previously named. Students who were offered a full-day program scored significantly higher in reading, mathematics, social studies and science areas than students in half-day programs. However, some studies disagreed on the long term effectiveness of full-day programming. In some studies the advantages of students in full-day kindergarten groups lost their statistical significance in later elementary years while other studies found that students in full-day kindergarten classrooms retained their advantage over half-day students with fewer grade retentions and lower incidence of Chapter I placements.

Student behavior was also assessed in comparing full-day kindergarten classrooms to half-day classrooms. Higher percentages of parents of full-day students felt their children demonstrated more growth in self-confidence and independence and in their ability to work and play with others.

The main weakness of full-day kindergarten programs according to parents was fatigue in their five year old children. Some parents of

full-day students who were surveyed expressed concern that their children were extremely tired at the beginning of the school year. However, these parents also responded that the fatigue was short-lived as their children adapted to the school routine.

Five studies found advantages favoring half-day programs. Three of these studies found one positive effect in one area of academics, one study found a positive effect in social skill development and another found that parental attitudes were more favorable for half-day kindergarten programs over full-day programs.

Anderson's study (1985) addressed the area of psychosocial development. She found both full-day kindergarten classrooms and half-day kindergarten classrooms provided a healthy self-concept and neither classroom appeared to promote self-concept more than any other.

One weakness of half-day kindergarten programs was the reduced amount of engaged learning time. Engaged learning time according to Anderson (1985), is directly related to student achievement. In her study, students in full-day kindergarten classrooms were two and one-half times more engaged in learning than students in half-day classrooms.

Extended-day kindergarten programs (giving additional time to half-day kindergarten students) that focus on disadvantaged or at-risk children appear to have modest positive effects for students. By

offering students additional learning time in an extended-day classroom either at the same site as their regular kindergarten classroom or at another site, these students were able to reach the same level of readiness as their half-day kindergarten peers. In Clinton and Topping's study (1981), first grade teachers who were surveyed judged children coming from extended-day kindergarten classrooms to be more capable than students coming from traditional half-day kindergarten programs.

Conclusions

Merely looking at additional time for at-risk children does not seem to be the total solution to meeting the needs of kindergarten children. Early childhood educators and researchers are urging school systems to provide developmentally appropriate practices in their programs, no matter what the structure of the kindergarten program may be. School personnel need to have the capacity to identify individual differences in children and link the assessment of those differences with appropriate curriculum (Cryan et al.). As Nancy Karweit, principal research scientist at Johns Hopkins University, (1991) states: "Although it is useful to guarantee that all children have the same opportunities for the same amounts of kindergarten education, the real issue is the quality of the experience" (p. 84).

Although kindergarten scheduling is not the only solution to the problem of school failure for young children, it can, in combination

with other practices, be effective for preventing school failure. In an effort to offer children the most appropriate kindergarten program and to provide for their successful school experiences, educators must look at a variety or combination of solutions. Adequate kindergarten programs and schedules, class size, and curriculum and instruction are all part of a comprehensive approach to prevention and early intervention. As stated in the article, Preventing Early School Failure: What Works, Slavin, Karweit, and Wasik (1992) state: ... "a one year program, whatever its quality, cannot be expected to solve all the problems of at-risk children" (p. 16). However it is equally clear that children must successfully negotiate key developmental hurdles in their first few years of life and programs designed to assist at-risk children in that direction show strong evidence of effectiveness (Slavin, Karweit, and Wasik, 1992).

Recommendations

It is important to base decisions regarding educational issues on sound research. Thus, empirical studies are extremely important as school systems make decisions affecting students. Replications of some of the above studies would be beneficial for school systems seeking to alter kindergarten schedules for their students. The Mason City, Iowa Community Schools will need to continue its action research concerning extended-day kindergarten programming in order to further study its effectiveness for at-risk students.

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Appendix A
An Action Research Study on the Effects of an Extended-day
Kindergarten Program

Appendix A

The extended day kindergarten program used in the Mason City Community Schools, Mason City, Iowa during the 1992-93 school year was initiated as an option to address the needs of at-risk kindergarten students. Mason City Community Schools' vision for the future includes an all-day kindergarten program for all students using developmentally appropriate practices. Because of lack of facilities and the lack of support in bond issues for additional facilities, Mason City Community Schools needed to look at other options for its kindergarten students. A decision was made to discontinue the use of a kindergarten readiness classroom (a year previous to a kindergarten placement) based on National Association for the Education of Young Children Position Statements and lack of evidence supporting an extra year. Shephard and Smith (1986) state: "Providing an extra year before first grade does not solve the problems it was intended to solve. Children in these programs show virtually no academic advantage over equally at-risk children who have not had the extra year" (p. 101).

By comparing gains made by children in the extended-day program to gains made by randomly selected students in regular kindergarten programs, Mason City Community Schools looked at benefits gained by offering at-risk students an additional half-day of programming while maintaining their participation in a regular kindergarten. Identification of students for extended-day kindergarten

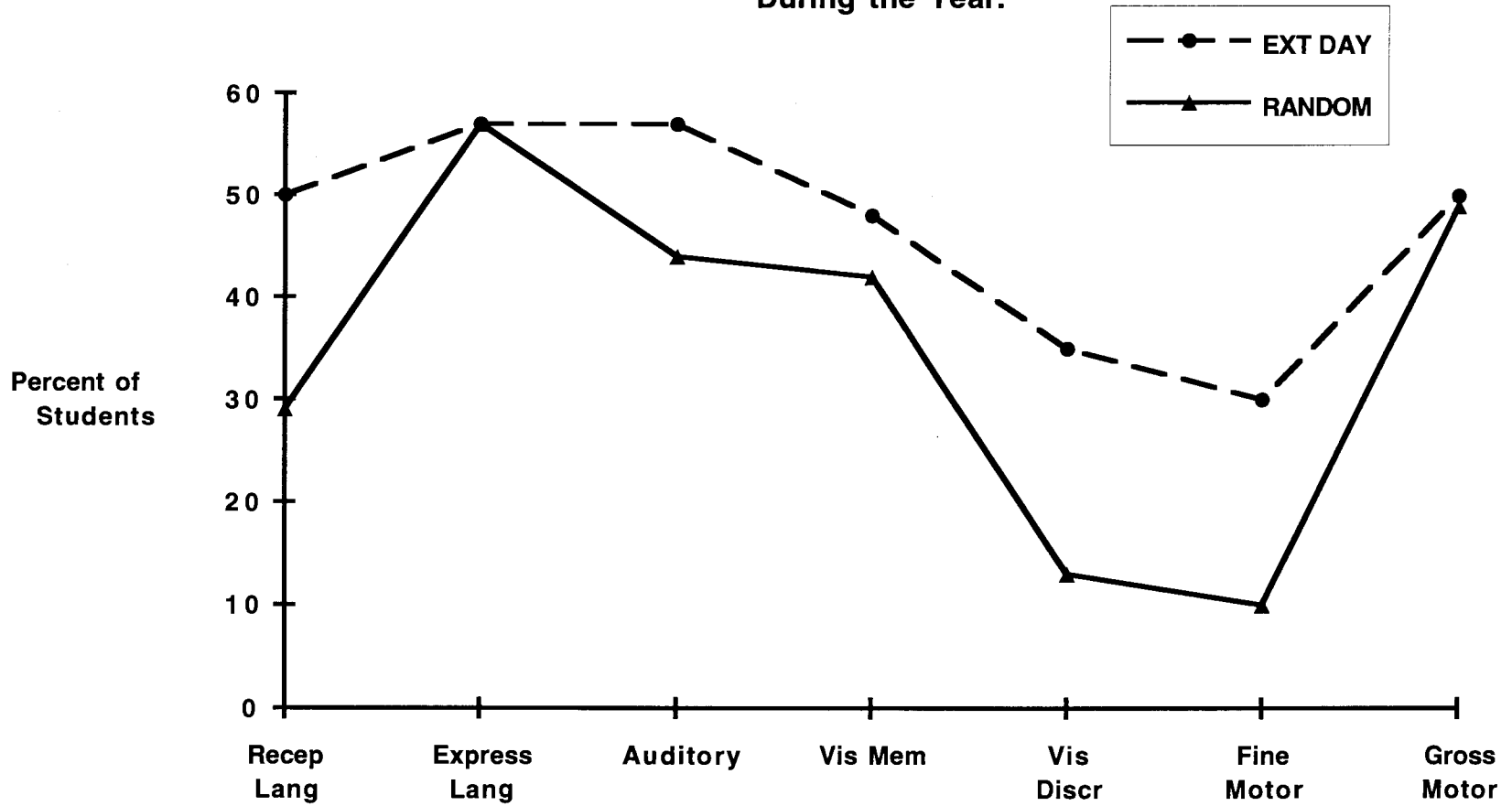
(EDK) programs was based on several forms of input: three to four weeks of observations by the kindergarten teachers and extended-day teachers; use of standardized, normed assessments from the Early Prevention of School Failure (EPSF) program; and input from a parent questionnaire. Sixty students were then invited to attend the EDK program using all the above criteria. Important in the EDK program is the use of small group instruction in areas of need plus experiential learning using a theme-based curriculum initiated by teacher and students.

Although the research method that was used for this study was not empirical by design as the two groups (sixty EDK students and seventy-two randomly selected half-day kindergarten students) were not matched according to similar criteria, the evidence does indicate positive gains between fall and spring EPSF assessments for the EDK students and gives the Mason City Community Schools some basis on which to evaluate the program. The following charts show the percentage of students who gained a level or more on the EPSF tests during the year and the average gain on the EPSF tests for students in the EDK classroom and the regular half-day kindergarten classroom. In all areas except expressive language, the percentage of students in EDK programs gained more than randomly selected students in regular half-day kindergarten programs. The Mason City Community Schools has decided to continue the EDK program based on the above data.

Appendix B
Percentage of Students Who Gained a Level or More on the EPSF
Tests During the Year

Appendix B

Percentage of Students Who Gained
a Level or More on the EPSF Tests
During the Year.



Appendix C

Average Gain on EPSF Tests of Extended-day and Randomly Selected
Half-day Kindergarten Students

Appendix C

Average Gain or EPSF Tests

