Administrative decision: Half-day everyday or all-day alternate day kindergarten programs

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Abstract
Just over one hundred years ago, the first public kindergarten was established in the United States. Historically kindergarten began as an all-day program. Half-day-kindergartens were developed because of the increase in the number of children and the shortages of teachers and classroom space (Oelrich, 1979). Johann Heinrich Pestalozzi (1746-1827) was a Swiss educator who believed education should develop a child morally, physically, and intellectually. He felt that children learned best by using their own senses and by discovering things for themselves. His methods and theories were so successful that educators from all parts of the world came to study with him (Saylor, 1980).
ADMINISTRATIVE DECISION: HALF-DAY EVERYDAY OR
ALL-DAY ALTERNATE DAY KINDERGARTEN PROGRAMS

A Research Paper
Presented to
The Department of Educational Administration
and Counseling
University of Northern Iowa

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Education

by
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June 1985
This Research Paper by: Dean Weldon Flaws, Jr.
Entitled: Administrative Decision: Half-Day Everyday or All-Day Alternate Day Kindergarten Programs

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

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I. INTRODUCTION

Just over one hundred years ago, the first public kindergarten was established in the United States. Historically kindergarten began as an all-day program. Half-day kindergartens were developed because of the increase in the number of children and the shortages of teachers and classroom space (Oelrich, 1979).

Johann Heinrich Pestalozzi (1746-1827) was a Swiss educator who believed education should develop a child morally, physically, and intellectually. He felt that children learned best by using their own senses and by discovering things for themselves. His methods and theories were so successful that educators from all parts of the world came to study with him (Saylor, 1980).

The educational ideas of Robert Owen (1771-1858), a Welch-born social reformer, were greatly influenced by Pestalozzi’s instructional methods and theories. Owen pioneered the cooperative community movement, developed the New Lanark, Scotland community in 1799, and also organized and set up the famous New Harmony, Indiana cooperative community in 1825. In both communities, schools were built to educate the children (Hymes, 1980).

Friedrich Froebel (1781-1852), a German educator and philosopher, was likewise influenced by the thinking of Pestalozzi and was credited with bringing kindergarten
onto the educational horizon. He too believed in teaching the whole child and felt that education should, as much as possible, develop from real-life experiences and not just from experiences with books. Froebel, known as the father of the kindergarten movement, opened his kindergarten in 1837 in Blankenburg, Germany (Hymes, 1980).

In 1860, the first private English-speaking kindergarten was founded in Boston, Massachusetts by Miss Elizabeth Peabody. As the kindergarten movement began to develop and expand, St. Louis, Missouri became the first American city to offer public kindergarten to young children. After this, the kindergarten momentum continued and many cities became active in establishing public kindergartens (Headley, 1965).

As of 1969, 90% of the kindergarten in the United States were half-day everyday programs (NEA research, 1969). This trend is changing though, as evident in these statistics from the Iowa Department of Public Instruction. In 1974, there were 312 schools in Iowa with a kindergarten schedule using the half-day everyday format. By 1984, that figure had decreased to 151 schools. Schools that used the all-day everyday kindergarten schedule in 1974 numbered 77 and in 1984 that number had increased to 104 schools. In a ten year comparison of Iowa schools that have used the all-day alternate day schedule, there seems
to be an increase in this type of kindergarten set-up. In 1974, there were 57 schools as compared to 105 schools in 1984 (Iowa Department of Public Instruction, 1985).

This increasing trend toward some type of all-day program is primarily related to the present day economy; a lack of money in the school systems (Bates, 1980). A school can greatly reduce their budget just through the reduced busing needed, by saving not only on fuel, but bus drivers' salaries and the purchase and upkeep of the vehicles. Also, there is an increased focus on education today, realizing a need to move toward a more basic, quality education. Increasing classroom time by going all-day in the kindergarten may be an added advantage to the children. If given the choice between kindergarten schedules for our children, which one would be the best. There must certainly be advantages and disadvantages of each type of kindergarten program.

Statement of the Problem

The purpose of this study is to evaluate the research literature on the half-day versus all-day kindergarten programs. Specifically the following questions will be addressed: Is there an advantage or disadvantage of one over the other? Which kindergarten schedule suits the social and emotional aspects or needs of the children better? Which schedule has the greatest effect on children for increases in academic achievement? After this extensive
review of literature and by comparing the types of kindergarten programs, the research will be able to support a recommendation of either the all-day program or the half-day program.

Importance of the Study

Since the change from half-day to all-day kindergarten seems to be the trend, more research needs to be done to give school administrators information in order for them to make the best decision for their kindergarten program. Presently, all research that has been done on the length of the kindergarten day reveals a lack of consensus as to the advantages of the all-day versus the advantages of the half-day kindergarten schedule. There is an urgent need not only for this type of research but also a need for research on other factors relating to kindergarten.

Definition of Terms

For the purpose of this review of literature, the following list of abbreviations will be used:

ADED - A kindergarten program that has an attendance pattern which meets on an all-day, everyday basis.

HDED - A kindergarten program that has an attendance pattern which meets on a half-day, everyday basis.

ADAD - A kindergarten program that has an attendance pattern which meets on an all-day, alternate day basis. It usually consists of a Monday, Wednesday, alternate Friday or a Tuesday, Thursday, alternate Friday schedule.
II. Review of Literature

The review of literature examined the advantages and disadvantages of two types of kindergarten programs. One program examined was the half-day everyday (HDED) program and one program involved the all-day alternate day (ADAD) program. While focusing the attention on the ADAD and the HDED programs and making comparisons, the review of literature focused on two important variables: 1) social and emotional development and 2) intellectual development. Conclusions for administrators, teachers, parents, etc. were offered by many authors. These conclusions, in view of the administrators role in the decision-making process of educational systems, are reviewed in the summary/conclusion part of this review.

What is the best organizational plan (ADAD or HDED) for kindergarten? Traditionally, the kindergarten format was inclusive of a single teacher working with two groups of children per day for approximately 2½ hours. Some schools have extended these half-day sessions to full days which meet everyday or every other day. Research on the desirability and educational results of each pattern has been limited. Pigge and Smith (1978) compared the achievements, attitudes toward school, and peer acceptance of kindergarten students in daily half-day kindergartens with those in ADAD sessions. The students
who attended kindergarten on a HDED basis earned a significantly higher set of mean scores on the Metropolitan Reading Readiness Test than did a group of students who attended school on an ADAD schedule. No differences were apparent in attitudes toward school or in social acceptance.

Another study comparing ADAD kindergarten programs against HDED programs was done by the Minnesota Department of Education (1972). Two groups of kindergarten children attending school for equal amounts of time but under different attendance patterns were compared. The sample in each group was 48 children who were taught by 5 teachers in 3 school districts. The children were given individual tests to evaluate pre-academic skills in reading and math. Children who attended HDED kindergarten scored significantly higher (p .05) on naming numerals from 1 to 10 and on their knowledge of the sounds of 18 letters of the alphabet. In regards to the emotional and social experiences, the children were given the Caldwell Preschool Inventory test. There were no significant differences between the two groups, however, the children in ADAD programs had lower scores and showed a greater variability within the group (Minnesota Department of Education, 1972).

Gornowich (1971-74) collected data on 787 kindergarten children over a four year period. His comparisons were also between two groups of attendance patterns (ADAD vs. HDED).
The Metropolitan Readiness Tests, Form B, were used to measure school preparedness. Analysis of the data indicated that the ADAD programs did not hinder school readiness. A major limitation to this study is that the data was collected over 5 succeeding years with the first three years being in HDED sessions and the last two years being in ADAD sessions. Thus there were many uncontrolled variables (Shulz, 1981).

Mouw (1976) said that not every child will adjust to an all-day program. Teacher instruction (programs used by the teacher), school curriculum, and skill development are factors to be considered before an all-day kindergarten program is adopted by a school system. In Mouw's study, two groups of kindergarten children attending school for equal amounts of time but under different attendance patterns (ADAD and HDED) were examined. Cognitive ability testing resulted in non-significant differences between the two groups. Also in her summation, she noted that large motor and social skills were more easily taught in the ADAD program and that art and language skills were more easily taught in a daily reinforced program.

When continuing the review of literature, two names constantly abound in the bibliography of most of the recent studies. Adding two of the most important studies
done in the area of HDED kindergarten programs vs. ADAD programs include Cleminshaw (1977) and Wenger (1978).
Wenger’s study is considered by researchers to be one of the most accurate. The study is also said to have employed the most controlled variables and guaranteed testing situations that would be similar to those found in most schools.

A two year study by Wenger (1978) in southern Ohio observed 223 school children in four rural school districts. Wenger identified 18 controlled variables, selected the population carefully, and included a follow-up with the same population one year later, when the students were first graders. Wenger found that children in a HDED program did significantly better on every subtest at the end of kindergarten. The examination at the end of the first grade year indicated that the children who had been in HDED kindergarten did significantly better.

Wenger (1978) concluded in his study: 1. The type of kindergarten organization in which the child was enrolled was a significant factor contributing to observed differences in achievement among children. 2. Sex differences, within levels of organization were not a significant factor contributing to the observed differences in achievement among kindergarten pupils (overall, girls, regardless of the type of organization, often achieved
significantly higher scores than boys). 3. Age differences within levels of organization, were not a significant factor contributing to the observed differences in achievement among kindergarten pupils. 4. Sex differences and age differences were found to interact significantly on some measures of academic achievement. Wenger summarized the study with the caution that public school personnel should evaluate carefully the reasons for altering daily half-day kindergarten programs and that substantive aspects of schooling should take precedence over concerns for administrative and financial matters (Ramsey/Bayless, 1980).

Cleminshaw writing in the *Journal of Educational Research* says, "The scarcity of research on all-day kindergartens makes it clear that the current movement toward the all-day program has not been prompted by empirical research, but rather, in many instances, by financial problems." In analyzing the study that was done by Cleminshaw/Guibaldi (1971), the results demonstrate significant differences in academic and social skills favoring children attending all-day programs. Ninety-six kindergarten children were randomly selected from four public kindergartens in northern Ohio. The schools were chosen to represent the following combinations of structural approach and time schedules: a) traditional, HDED;
b) open classroom, HDED; c) traditional, ADAD; and
d) open classroom, ADAD kindergarten. The results from
this study were based upon the following instruments:
1) The Metropolitan Readiness Test, Form A, was devised
to assess skills and abilities related to readiness for
the first grade. 2) The "Animal Crackers" test, which
is a unique noncognitive test for young children designed
to evaluate motivation to achieve. Motivation to achieve
is inferred from the child's responses to descriptions
of achievement-oriented behaviors. 3) The Kohn Social
Competence Scale was designed to be a rating "of a
child's social functioning skills within a school
situation," by the teacher. 4) The Parental Attitude
Scale was developed specifically for this study for the
purpose of ascertaining parental opinion and feelings
relating to the child's kindergarten program.

An analysis of variance procedure was utilized in
order to statistically analyze the data that were collected.
The results indicated that children attending an ADAD
kindergarten do, in fact, score significantly higher on
an academic measure than those in a HDED program. The
study provides evidence that positive academic and
social effects are associated with the ADAD kindergarten,
as well as positive parental attitudes toward the program.
The research does support the maintenance of currently
functioning ADAD kindergarten and encourages the implementation of additional ADAD programs. These results conflicted with those found by Mouw (1976) and The Minnesota Department of Education (1972). Investigation of further research will continue to find inconsistencies in the advantages/disadvantages of a particular attendance pattern.

Stinard (1982) conducted a study that compared student outcomes on the HDED kindergarten program and the ADAD kindergarten program. Stinard looked at the study done by the Minnesota Department of Education (1971-72), Gornovich (1971-74), Cleminshaw (1976-77), Wenger (1976-77), R. Smith (1977-78), and C. Smith (1978-79, 74-75). All of these studies attempted to compare ADAD programs with HDED programs in regards to two major variables: academic outcomes and emotional-social outcomes.

Five of the six studies compared HDED with ADAD on subtests of the Metropolitan Readiness Test. This standardized test was devised to measure skills and abilities that contribute to readiness for first grade instruction. Such skills as word meaning, listening, matching, alphabet and quantitative skills were included in the test. After all types of academic outcomes were
combined, a total of 55 comparisons were made - 44% favored ADAD, 16% favored HDED, and 40% favored neither.

A wide variety of measures in nonacademic areas were represented in three of the studies. Some of the tests included social competency, motivation, attitudes toward school, social isolation, self-confidence and social maturity. A total of 17 comparisons of emotional-social measures were conducted - 18% favored the ADAD schedule, none favored the HDED schedule, and 82% favored neither. With respect to the outcomes, the results clearly show that the type of schedule has little effect upon the emotional-social development of kindergarten children (Stinard, 1982).

Bates (1980), after analyzing the same research studies listed by Stinard, goes on to list four reasons why she feels that the HDED kindergarten provides the best learning opportunities for young children. Bates lists the child's perception of school, pacing, quality of instructional time and interference in learning as her reasons. These are discussed in detail in her unpublished paper "HDED Kindergarten vs. ADAD Kindergarten". She goes on to discuss why districts have changed to alternate schedules.

"The tradition of kindergarten programming being a HDED program for the child is based on child growth and development, learning theory
and 105 years of successful programming. Why have some Wisconsin school districts changed to an ADAD program? It is believed that this change has been made because of monetary constraints on school budgets. A fiscal consideration not an educational consideration has precipitated the decision by the school board, which indeed, has the power under s. 120.138 to "establish rules scheduling the hours of each school day which the schools of the district shall be in session."

"The decision has not been based upon a needs assessment of students, but a cost effective assessment which decided transportation costs would be cut if a noon kindergarten bus was not run."

"School transportation costs should not affect or dictate the instructional program of the school. The rationale for changing the kindergarten program from a HDED to an ADAD program should be closely examined and analyzed. The five year old child and the kindergarten program should not be made the "fall guy" of school transportation costs and budget restraints." (Bates, 1979).
Hanson of the University of Minnesota disagreed with Bates and says the ADAD kindergarten programs are a financial necessity (Hanson, 1980). Hatcher (1979), in an article which appeared in Phi Delta Kappan discussed the lack of research on the subject. She said, "Other objectives in programs for young children remain to be assessed: a child's ability to observe, discover, generalize, experiment or solve problems; the ability to express thoughts and feelings in music, art and movement; self-motivation, independence, creativity, and self-discipline." Further investigation in these areas and on the variables relating to children's backgrounds, programs, and teachers is still needed to resolve the HDED vs. ADAD kindergarten controversy (Hatcher, 1979).

A project was undertaken in an elementary school in Amherst, Wisconsin in 1980. The staff, administrators, and parents were all involved in the project which was trying to determine the advantages and disadvantages of three types of programs: ADAD, HDED, and ADED. For the purpose of this review of literature only the results of the HDED and ADAD programs will be cited.

Questionnaires were sent to teachers, parents, and principals in school districts across the nation. Visitations were made to school districts in Wisconsin, Ohio, and Minnesota. There was a return of 77.8% of the
parents survey. The majority of the parents preferred the HDED program (73.2%) to the ADAD program (18.7%). The comment was that the HDED program best fit the maturational level of the children.

The return on the teacher survey was 40%. Of those in a HDED program, 73% felt this was the best schedule. Only 30% of those in an ADAD program felt that this was the best schedule. From their comments, the ADAD program was the least desirable. There were more disadvantages listed for the ADAD program and the advantages for the HDED program outweighed those of the ADAD program.

The principal survey resulted in a 72% return. 83.3% of those with a HDED program preferred their program, 32% of those with an ADAD program preferred their program. The HDED program was viewed more positively by most principals than the ADAD program.

Based on the Amherst survey results, following are three of the conclusions:

1. The only significant advantage to an ADAD program is a cost savings in transportation and this is at the expense of the educational and emotional needs of the kindergarten child. This program lacks in continuity, instructional time, and management efficiency. The majority of teachers currently working with this program
would not choose it again if given the option.

2. HDED programs have the advantage of daily continuity for the development of the curriculum, parental support because of tradition, appropriate length of day for the maturity level of the young child at the beginning of the school year, and researched curriculum. The programs also use a larger percentage of the time in instructional activities compared to other program types.

3. HDED programs often lack in sufficient time for meeting curriculum goals. Mid-day busing is cumbersome and costly. Children are often unable to participate in some all-school functions and work with special subject teachers. (Amherst Study, 1980).

The school board of the school district, which included Amherst Elementary School, decided, after the study, to continue the 1981-82 school year with the extended HDED program (3 hr. 15 min.).

A review of studies conducted by other Wisconsin school districts who have tried alternate day scheduling ranged from excellent to disastrous. Similar school districts (compared to Amherst) seem to have had opposite results. Again, lack of evidence of the effects on children seems to create a large void in the necessary
information. Only the Amherst Study stands out with any degree of consistency and it clearly recommends staying with the HDED schedule (Schulz, 1981).

Munro (1981), consultant in elementary education for the Department of Public Instruction of Iowa provided the following information. "It is not in the best interests of young children to attend school under an every other day pattern. Much of the effectiveness of the kindergarten program will be lost when these children attend school every other day. Five year olds need continuous, steady progress and daily reinforcement." She continues, "The paramount concern is and must always be what is best for boys and girls in these formative years. The effort we expand in providing the best possible program for children in terms of their physical, mental, and emotional needs will be the basis for their success as they continue in school."

A survey that was implemented by the West Branch Community School District of Iowa (1980) listed several advantages and disadvantages of the ADAD kindergarten schedule. The questionnaire indicated responses from over 44 school districts in the state of Iowa. Advantages cited include: 1) money saved through bus transportation, 2) better utilization of time for instruction, and 3) preparation for a full day of school. Disadvantages included: 1) lack of continuity, 2) too long of a day
for the students, 3) disruption of schedule because of holidays or illness, and 4) parental confusion.

It appears that the main reason for adopting the ADAD kindergarten schedule has been busing/economy. The advantage of the ADAD program for better utilization of time seems to be offset by the loss of program continuity, requiring relearning because of the day between classes and a longer adaption period for the younger students (West Branch Community School District, 1981). A further complication occurs when holidays, snow days, and absences because of illness cause an extended time between school days. Utilization of time is, also, questioned when the length of the school day makes frequent play periods and a naptime necessary (West Branch Community School District, 1981).

Tephly (1982) also makes a comparison between ADAD programs and HDED programs. Her main concern is, "What will children forget?" A concern often voiced among teachers regarding ADAD scheduling is that the children will experience difficulty remembering from one session to the next (Shulz, 1981; Wisconsin Department of Public Instruction, 1980). Indeed time lapses between sessions can be as long as five days.

Tephly used 35 kindergarten and 28 pre-kindergarten children in her study to determine the amount of forgetting that children experience in different attendance patterns.
The findings of her studies demonstrate that forgetting does occur and, in general, increases with time. Children in ADAD schedules will experience less recall from session to session than children in HDED schedules (Tephly, 1982).

Most recently, another study (Robertson, 1984) tried to compare emotional-social gains and academic achievement in the contrasting types of kindergarten schedules (ADAD vs. HDED). She made comparisons by using the Hahnemann Elementary School Behavior Rating Scale to test the social development. In academic achievement, the Metropolitan Readiness Test, Form II, was used. Her results showed no significant differences on both academic and social measures in the two types of programs. The evidence seemed to show that the ADAD schedule worked every bit as well as the HDED program.

In the spring of 1985, a team of University of Iowa College of Education personnel concluded a two-year study evaluating the effects of a shift from HDED to ADAD kindergarten. The study was done in selected schools in the Iowa City Community School District. They found that ADAD kindergarten was not detrimental to most children. There was evidence, however, that children in the bottom third of their classes in learning ability profited more from going to school daily (Iowa University Newsletter, 1985).
III. Summary and Conclusions

A review of the literature was conducted to examine the advantages and disadvantages of two types of kindergarten programs. The HDED schedule was compared to the ADAD attendance pattern of kindergarten programs.

In comparing these two kindergarten schedules, this review of literature was particularly interested in the social-emotional and academic performances of the children in each program. Three studies (Minnesota, 1972; Mouw, 1976; Ulrey, Alexander, Bender, and Gillis, 1982) indicated no significant differences on measures of readiness and cognitive abilities. Three others (Cleminshaw, 1979; Gornowich, 1974; Smith, 1980) found a significant difference favoring the ADAD kindergarten format on achievement-oriented readiness tests and social competency. Two studies (Pigge, 1979; Wenger, 1978) suggested that the HDED schedule led to greater gains in readiness. The many limitations of these studies even further complicate the broad picture of which program is more advantageous. Pretesting was not used by many of the studies, making it impossible to know for certain if differences were a result of scheduling alone or whether there were other factors involved. Only a few of the studies examined measured social and emotional differences.
Several studies did not take into account differences in teachers and curriculums.

Based on the results of this study and trying to decide which schedule (ADAD vs. HDED) is the most advantageous for our kindergarten children, this author must first answer, "What is the purpose of the kindergarten programs?" Programs should be designed to help children grow in cognitive, psychomotor skills generally taught by direct instruction; for example, teaching letters of the alphabet by using flashcards. The affective and linguistic skills are usually taught by informal instruction; for example, in interest centers such as a playhouse or in show-and-tell situations (Humphrey, 1983).

It seems with the extension of the kindergarten day more formal learning can take place in the kindergarten classroom. Additional subject areas in music, physical education, and art may be easier to schedule into the curriculum if there is more time allotted. A major concern in this study in regards to the ADAD program is the lack of continuity. Recall will also be affected because of the time between learning experiences (Tephly, 1982).

Because the findings indicate that there are no significant differences between ADAD and HDED kindergarten formats regarding academic achievement and social-emotional behavior, one should focus their attention toward other variables. All school districts are not going to be the
same, just as the children will have a many varied social and academic background. Because of these differences schools must take into consideration other factors, such as socioeconomic conditions and the teacher/community attitude. Other variables such as age, class size, cultural values, and qualifications, characteristics, and methods employed by the teacher should also be considered.

In light of the fact that more research needs to be done in the direct comparison between the HDED and the ADAD kindergarten programs, it is the recommendation of this author to use the HDED schedule, increasing school time to a 3 hour day (as compared to a 2 hr, 15 min. - 2hr, 30 min. day in most studies). Again, emphasis should be made to those who must decide on a particular format that many variables, other than time, must be examined by each individual school district to determine which schedule will suit their needs the best. Most importantly, the needs of the kindergarten children must be the upmost concern.
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