A study of kindergarten attendance patterns

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University of Northern Iowa

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A study of kindergarten attendance patterns

Abstract
In 1956 the first kindergarten was established in the city of Watertown, Wisconsin by Margarethe Meyer Schurz, a disciple of Friedrich Froebel. (Cutright, 1981) The kindergarten and kindergarten curriculum were designed by Froebel in Germany in the 1830’s and 1840’s. The original kindergarten concept was established for preschoolers three to seven years old. Smith (1971) states that the kindergarten was a system of intellectual, moral and physical education, which reflected pedagogical principles considered foolish and extreme in the middle of the 19th century, namely the significance of play and the need to base the curriculum on the child's interest and needs.
A STUDY OF KINDERGARTEN
ATTENDANCE PATTERNS

A Research Paper
Presented to
the Department of School Administration
and Personnel Services
University of Northern Iowa

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in School Administration

by
Clark William Goltz
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has been approved as meeting the research paper requirement for the Degree of Master of Arts in Education

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4/19/83
Date Received

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CHAPTER I
THE PROBLEM

Introduction

In 1956 the first kindergarten was established in the city of Watertown, Wisconsin by Margarethe Meyer Schurz, a disciple of Friedrich Froebel. (Cutright, 1981) The kindergarten and kindergarten curriculum were designed by Froebel in Germany in the 1830's and 1840's. The original kindergarten concept was established for preschoolers three to seven years old. Smith (1971) states that the kindergarten was a system of intellectual, moral and physical education, which reflected pedagogical principles considered foolish and extreme in the middle of the 19th century, namely the significance of play and the need to base the curriculum on the child's interest and needs.

Gorton (1968, p. 14) reports that "historically, kindergartens began as full-day programs. The half-day program developed in response to accommodating large numbers of children." World War II influenced a cutback to half-day kindergartens with the shortage of teachers caused by the mens' involvement in the armed services. Shortages on classroom space and an increased birth rate were causes that encouraged a half-day, every day kindergarten attendance pattern for most students.

Along with the change in the attendance patterns of the original kindergarten program, various forces in the 60's caused a questioning of the way educators were actually
working with young people and the questioning prompted a redefining of primary educational programs.

"Since estimate suggests 17% of the growth takes place between the ages of four to six, we could hypothesize that kindergartens could have far-reaching consequences on the child's general learning pattern." (Bloom, 1964, p. 100)

Thus we saw a trend toward the importance of the kindergarten experience. "Hunt, Deutsch, and Gagne' and other educators contend children can learn at an earlier age than was formerly considered possible, but goals must be structured to aid the child in cognitive, affective, social, and psychomotor development." (Yawley, 1976, p. 25) By 1969, 90% of kindergarten programs in the U.S. were half-day, every day programs. (Cleminshaw, 1979, p. 92) In 1974 and 1982 the Iowa Association of School Boards (1982) reports that the attendance patterns for kindergarten programs in Iowa were:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>1974</th>
<th>1982</th>
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<tbody>
<tr>
<td>half-day/1 semester</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>half-day/2 semesters</td>
<td>312</td>
<td>209</td>
</tr>
<tr>
<td>all-day/1 semester</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>all-day/2 semesters</td>
<td>77</td>
<td>89</td>
</tr>
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<td>alternate day/1 semester</td>
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<td>57</td>
<td>98</td>
</tr>
<tr>
<td>three days per week/1 semester</td>
<td>**</td>
<td>4</td>
</tr>
<tr>
<td>three days per week/2 semesters</td>
<td>**</td>
<td>43</td>
</tr>
<tr>
<td>other</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>TOTALS</td>
<td>453</td>
<td>478</td>
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</tbody>
</table>
Over forty school districts in Iowa have moved toward the alternate day kindergarten pattern since 1974. In addition, there are forty-seven districts who have some form of three day per week pattern. The practice of adopting a new kindergarten pattern away from the "traditional" half-day pattern is rapidly gaining acceptance in Iowa, with part of the reason for change being the cost-saving to the district.

Statement of the problem

The purpose of this study was to evaluate the effectiveness of three kindergarten patterns: half-day/every day, all-day/every day, and all-day/alternate day. The advantages and disadvantages of each pattern were examined.

The major questions derived from the problem were: Why have schools changed to the all-day, alternate day pattern? What research helped districts evaluate their changes? What limitations, if any, are found in the research? Why has the half-day, every day pattern remained dominant? Does research show one pattern superior to another? Since 1974 over forty districts have changed to an alternate day program. The changes which have occurred have been based upon financial concerns. The purpose of this study was to provide a data base which will directly address the problem of the effectiveness of traditional and non-traditional kindergarten attendance programs.

Importance of the study

Kindergarten had its' origin in Froebel's basic tenets of early childhood education, the value of play, self activity
and social interaction. The recent trend has been to an articulated scope and sequence of instructional objectives which have set the tone for school district changes. Declining enrollment, budgetary cutbacks, staff reductions, increased transportation costs, and a demanding society are some of the factors pulling at the traditional "garb" of the kindergarten program.

School districts are changing a school's attendance pattern based upon "financial" data rather than empirical data. There is conflicting research as to which attendance pattern is superior. Elementary principals are called upon to make difficult decisions in regard to the kindergarten attendance patterns in their schools. Principals are faced with the conflict of having to make a choice between budgetary principles and programatic concerns.

**Definition of terms**

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

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

**ADAD.** A kindergarten program that has an attendance pattern which meets on an all-day, alternate day basis.

**Attendance Pattern or Pattern.** The schedule followed by a district for its kindergarten program.
CHAPTER II
REVIEW OF RELATED LITERATURE

The Froebelian kindergarten that came to America in the 1850's is greatly different than the kindergarten of today. The emphasis of the Froebelian kindergarten was placed on (a) the significance of play in learning and (b) the fact that young children's learning proceeds from the concrete symbols to the abstraction it represents. (Spodek, 1973, p. 192)

It is necessary to investigate Froebel's early kindergarten objectives to gain a better perspective on just how far the concepts have changed toward today's emphasis on readiness skills. Spodek (1973, p. 192) notes that "Froebel designed and created a series of 'Gifts', 'Occupations', and 'Mother Songs and Games', which he felt would convey, through concrete symbols, an awareness of the unity of man, God and nature. The gifts, a series of graded materials, began with a set of balls, which symbolized unity. The gifts that followed, rectangles and squares, represented unity within diversity. The 'mother songs and games' symbolized the most perfect human relationships, that between mother and child. The philosophy underlying these concepts of the kindergarten was a mystical one."

Spodek goes on to summarize that the kindergarten has gone through several other major concept changes. Following Froebel's early philosophy, the kindergarten changed its focus to "Americanize" immigrant children. In the early
In the twentieth century, kindergartens were formed to help the children and parents fit into the "melting pot" called America.

In the 1920's the focus changed to building "proper habits" to help children develop intellectually. Research was supported which developed mental habits appropriate to train young children. Next Spodek recalls that the kindergarten became a place to provide emotional prophylaxis. Teachers were to set the stage for play and nothing more. They were not to interfere in the play life of the child.

As the kindergarten concept became more popular in the public school, the main role of the educator was to help the child make a good transition from home to school. The major concept for kindergarten at this time was to teach the child proper school behavior. Currently the kindergarten programs emphasize prereading and expressive skills as well as methods of "learning how to learn".

From the past concept changes to today's research, the kindergarten has indeed changed. The first and all-important beginning in the public school is the kindergarten experience. Teachers, parents, and administrators are all eager to learn the effects of the various attendance patterns, especially since much of the research available is unsound. The research presented must be interpreted by each individual as it applies to their particular school.

In 1981, the Wisconsin State Department of Instruction studies the half-day, every day, (HDED) and all day, alter-
nate day (ADAD) patterns. (Schulz, 1981) Schulz and his committee investigates 10 categories: curriculum, personnel, scheduling, effects on children, home-school communications, additional teaching materials, relationship to learning theory, parents' perceptions, transportation and others. Advantages and disadvantages of both patterns were examined. The study consists of interviews, visits to other schools, a review of professional literature, a review of studies conducted by other Wisconsin school districts, and parent input.

Completing the study, Schulz lists advantages and disadvantages of the ADAD over the HDED pattern in regard to the categories listed above. Selected summaries (Schulz, 1981, p. 24-35) of advantages and disadvantages of each include:

**Curriculum**

**Advantages**
- Opportunity to expand the curriculum
- Able to have more activities & specials
- More time to diagnose and record children's needs
- More time for readiness skills
- Able to extend time with individual students
- More instruction time
- More time for stories, cooking, involved art projects
- Able to incorporate more motor activities
- More fun time

**Disadvantages**
- Not able to cover as much as in half day
- Review of skills and content repetitious and extensive
- Children forget concepts
- Lack of researched curriculum to handle this program
- Many five-year-olds just can't cope
- Alternate days break continuity
- Interrupted program due to absence made difficult to pick up
- Too little accomplished in P.M.
Personnel

Advantages- (None listed)

Disadvantages-
  Art, music, phy. ed. specialist needed
  Need enough people to meet needs of whole child—mother—
    caring, meeting physical needs
  Need more hands the first few weeks
  Need help with lunch
  Need more than one aide because teacher gets drained at
    beginning
  Need help outside

Scheduling

Advantages-
  More convenient for parents
  Easier to arrange sitter
  More opportunity for field trips
  Children don’t have to get up so early in the morning
  More opportunity for gross-motor activities

Disadvantages-
  May be 3-4 days between classes - means lots of review
  Confusion over scheduling - especially at the begin-
    ning of year
  Proper time and facilities for rest - 30 minutes - one
    hour
  No rest last quarter
  Attendance pattern
  Include time for teacher prep and working with parents

Effects on Children

Advantages-
  More opportunities for gross-motor activities
  More opportunity for outdoor activities
  More relaxed atmosphere
  More opportunity for social development
  More time to work on manners
  More time to find and work on problems

Disadvantages-
  Children have difficulty remembering lesson on previous
    days
  Bus students more tired than town students
  Some sent back to preschool
  Kids have to grow up too fast
  Students irritable by end of day
  Difficult for generally immature, shy student
  Some children not mature enough
Home-School Communications

Advantages- (None listed)

Disadvantages-
Parents have to work more with kids at home - many notes between home and school
Involves parent in classroom

Additional Teaching Materials

Advantages- (None listed)

Disadvantages-
Need more large muscle equipment
More space, more exploration centers and free play areas
Need space for large motor activities
Need materials for dramatic play
Need more manipulatives
Need more materials for language and math

Learning Theory Relation

Advantages- (None listed)

Disadvantages-
Difficult for kids to remember - learn by repetition which is effected by alternate days missed
Developing concepts and related thinking skill will be hampered by days off
Need for consistent daily environment
Need for more individualization

Parents Perceptions

Advantages-
More convenient for parents
Easier to arrange sitter
Children don't have to get up so early

Disadvantages-
Question attentiveness, retention. Back up review too much
Some are concerned with child care, free time instead of educational value for child
Children very tired at beginning of year
Don't know what to do with kids on day off from school
Difficult to schedule dental appointment, etc.
Bedtime fluctuates

Transportation

Advantages-
Cuts down on transportation cost
Cuts down on time student spends on bus
No need for extra buses

Disadvantages-
Bus scheduling difficult
Small children on bus both times with older children
Bus very traumatic at first

Additional

Advantages-
Adjust to first grade better
Better nutrition

Disadvantages-
More pressure on the teacher
Inattentive by late morning
More absenteeism
Do not master routine

As the committee lists advantages and disadvantages in each category it becomes apparent that the disadvantages of ADAD scheduling far outweighs the advantages not only in number but in impact on children. The committee recommends their present HDED pattern be retained.

The Minnesota State Department of Education compares HDED and ADAD programs. (MSDE, 1972) In this evaluation study, two groups of children who attended kindergarten either one half-day, every day or one full-day on alternate days were compared. A test of pre-academic skills was developed for their study and was administered by representatives from the department. The Caldwell Preschool Inventory was administered too. Both the HDED and ADAD groups were similar on the general readiness tests and dissimilar on two of the pre-academic skill measures. The HDED group has higher scores on numeral naming (1-10) and knowledge on sound/letter association. The Caldwell Preschool Inventory
shows no significant differences. Children in the HDED group were superior to the ADAD pattern program. The HDED pattern shows higher scores and lower group variability.

Wenger (1978, pp. 164-167) studies the effectiveness of alternate-day full-day kindergarten classes as compared with the effectiveness of daily half-day programs of instruction and concludes:

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 children.

4. Sex differences and age differences were found to interact significantly on some measures of the academic achievement.

Wenger finds that students in the HDED pattern did significantly better on every subtest of the Walker Readiness Test. Eighteen variables were identified in this study.
Researchers consider this one of the most accurate studies. Wenger follows up on first grade scores and finds again that the students in the HDED pattern were superior. Wenger summarizes the study with the caution that public school personnel should evaluate carefully the reasons for altering the HDED kindergarten programs and that the aspects of schooling should take precedence over concerns for administrative and financial matters.

Bates (1979) notes that the ADAD program had the following problems:

1. The child's perception of school can be very sporadic.
2. There is much need for re-entry due to the too-long time intervals between lessons.
3. There is interference in learning, between the child's environment and the school experience.
4. Students are bombarded with massive amounts of information rather than spacing material. A young child has too short an attention span for all-day concentrated learning.

Bates summarizes that the HDED attendance pattern be retained. The main reason that schools changed to an ADAD pattern, according to Bates, was purely monetary reasons.

The Amherst Study (1980) is an individual school's study, sponsored by the Tomorrow River School District in Amherst, Wisconsin. The three most common attendance patterns were studied; ADED, HDED, and ADAD. Included in
the study were parent, principal, and teacher surveys. The parent survey had a return of almost 80%. Of those returning the survey 73.2% favored a HDED pattern and 18.7% favored the ADAD program. The teacher survey had a return of 40%. Seventy-three percent of the teachers currently in a HDED program felt that it was the best alternative and that it should remain the same. Only 30% of the returned surveys felt that the ADAD program was the best option. Principals viewed the HDED program as more positive than the ADAD pattern. The final recommendation for the district was to continue the HDED pattern for the kindergarten program.

The all day, alternate day (ADAD) attendance pattern has research supporting its pattern also. The most significant is that of Cleminshaw. Cleminshaw (1977) studies the difference between social, motivational and academic functioning of students attending ADAD programs over the traditional HDED attendance program. Comparisons were also established on the interactive effects of the length of the day and the classroom approach used; traditional vs. open. Parental attitude as to the convenience of the attendance programs and the child's energy levels were studied.

The schools elected to participate in the investigation were (Cleminshaw, 1977, p. 94) required to meet the following predetermined set of criteria:

1. Children were grouped heterogeneously in the kindergarten class.

2. The kindergarten room was located in an elementary building.
3. The kindergarten teacher held a primary certificate.
4. The kindergarten teacher had at least two years of teaching experience at the kindergarten level.
5. The half-day program met at least 176-180 days during the school year.
6. The all-day program met at least 88-90 days during the school year.
7. The half-day program's daily session lasted at least 2½ hours each school day.
8. The all-day session lasted at least 5 hours per day each school day.
9. The per pupil expenditure exceeded $800 at each school for the school year.
10. The principal of the elementary school held a principal's certificate.
11. The kindergarten teacher had access to a certified elementary supervisor.
12. The elementary school met the minimum standard for Ohio Elementary Schools.

In order to meet the objectives of the study, four instruments were utilized. Two measures, the Metropolitan Readiness Test and Animal Crackers: A Test of Motivation to Achieve, were administered to 96 kindergarteners. The Kohn Social Competency Scale was the third assessment device provided to each kindergarten teacher for the purpose of evaluating social skills in the classroom setting. The fourth instrument was the Parental Attitude Scale, devised
to ascertain parental attitudes towards the kindergarten programs. (Cleminshaw, 1977)

The study reveals five major findings. A significant difference in the academic outcomes for kindergarteners favors the children attending the ADAD program. No significant difference in achievement motivation scores for children in any of the programs was noted. Children in the ADAD program score significantly higher in the social measures of interest and participation. The parental attitude toward the ADAD was significantly more positive with regard to family convenience. No significant results were seen on the child's energy level. A significant interaction between the length of the school day and the program's structural approach was noted whereby the use of the open structure in the ADAD pattern produced higher academic outcomes. The length of the school day and the structural approach of the program in regard to social competency, achievement motivation, or parental attitude toward the program produces no significant interaction. Cleminshaw provides empirical data that positive academic and social effects are associated with the ADAD pattern of kindergarten. He suggests that the ADAD be further explored. Cleminshaw goes on to state that additional research be conducted on the effects of ADED kindergarten.

In 1974, Gornowich observes that the ADAD pattern did not hinder the school readiness as measured by the Metropolitan Readiness Test. This longitudinal study of the HDED and
ADAD kindergarten programs by the Grand Rapids Independent School District in Minnesota compares data on 787 students over a four year period. In comparing the results of data from the 1971 and 1974, pupils in the ADAD programs show significantly superior differences on all areas of the test, when contrasted to students attending the HDED pattern. Responses to a parent questionnaire supply data on the effectiveness of the program in meeting the physical, social, emotional, and instructional needs of the child. Both parent and teacher response to the program was favorable.

Pigge and Smith (1978) compare the achievements, attitudes toward school, and peer acceptance of kindergarten students in HDED with those in an ADAD program. The students who attended kindergarten on a half-day daily basis earned a significantly higher set of means on the Metropolitan Readiness Test than did a group of statistically matched students who attended school on an ADAD pattern. The ADED schedule was more advantageous to boys than girls. No differences were apparent in attitudes toward school or in peer acceptance or isolation. Hanson (1980) in support of ADAD scheduling states that it is important to be honest about the all-day, alternate day program and admit it for what it is - a financial necessity. Hanson goes on to say that if it was such a great educational plan it probably would have been used a long time ago.

In 1977 Mouw researches the ADAD and HDED programs also. A combination of cognitive ability tests and surveys were
used to evaluate the two options. A summary of survey results from parents, kindergarten teachers, and elementary principals turned up different results. CAT scores show no significant differences between the two groups. Teacher opinion surveys find a relationship between the teacher's attitude towards the ADAD program and student responses. Opinion surveys from principals, teachers, and parents show the largest factor for consideration to be the maturational level of the child. Large motor and social skills were more easily taught in the alternate-day program; art and language arts in the half-day, every program. Mouw concludes that not every child will adjust to the all-day, alternate day program. Teacher instruction and program, school curriculum, and skill development are factors to be considered before an all-day, alternate day program is adopted by a school system.

There is also additional study on the all-day, every day (ADED) attendance pattern. The current movement toward this pattern has not been based totally on empirical data. Sometimes the decision to go to an ADED attendance pattern is based upon "financial" data. As was referred to earlier in this review, the Amherst study (1980) did study all three of the options being reviewed. In one part of the summary, the Amherst study states the ADED pattern is shown to be advantageous for several reasons. It offers more instructional time for students, more time for implementing special subject, such as art, music, and physical education, in the
curricula, and prepares the children for the first grade setting better than any other program. It also eliminates the need for mid-day bussing and allows children to be involved in all-school functions such as special assemblies, lunch program, etc.

Based on four years of observation with five different standardized tests, Nieman (1973) shows positive relationships between IQ, readiness and achievement for children who attend ADED attendance pattern programs. Nieman states that "the more experience, the better the school success." All of the gains were independent of teaching styles, materials and methodologies. Nieman identifies three treatment groups: children who have had preschool and all-day kindergarten, those who have had preschool and half-day kindergarten, and those who have had half-day kindergarten only.

A study conducted during 1969-70 in the Cincinnati Public School by Nieman (1970) reports significantly higher performance on the Metropolitan Readiness Test among children attending ADED classes than children attending HDED. As the program continued for the 1970-71 school year, results from the Metropolitan Readiness Test indicate almost double the mean for the all-day kindergarteners compared with the half-day children.

Oelerich (1979) reports the ADED attendance pattern to have positive effects on kindergarten children as measured by the Metropolitan Readiness Test. Oelerich includes in
The Minnesota Association for Childhood Education believes that kindergarten is a vital and important school experience for all children. It is a year in which positive or negative attitudes towards school are formed. It should also be a year in which a child's strengths and weaknesses may be assessed and programs planned which will meet the individual needs of the child, his interests, his particular level of maturity and his unique mode of learning. Therefore the Association believes that a good-quality all-day program should be a goal toward which school districts should strive. The Minnesota Association for Childhood Education believes that the quality all-day program must meet the following criteria:

1. The full-day program should provide more time for the child to engage in activities that will provide him an opportunity to learn at an unhurried pace so that he can get from each experience all that he is able to understand at any given time. It will provide time for him to become deeply involved in play experiences so that from them he may develop concepts that are vital to later learning experiences. It will also provide time for the more formally structured experiences that are also a part of a good kindergarten program. This also means that space must be available so that materials with which a child is working may be left undisturbed so that he may return to his work with them the next day and develop more fully his ideas and interests.

2. A full day in kindergarten should be approximately four hours, including the lunch hour. In some instances longer days may be necessary. In that case provision must be made for an extended rest period and cots and blankets should be available.

3. The quality kindergarten program must provide a balance of activities including activities that require the use of large muscles such as block building, and many kinds of vigorous outdoor play, opportunities for dramatic play, quiet times in
which music and stories may be enjoyed, opportunities to work with a wide variety of appropriate art media and rest. Five year olds are not ready for long periods of quiet, small muscle activities. However, they need to have some quiet activities and the opportunity to choose these when they want to.

4. A quality kindergarten program must provide space and materials that will stimulate a wide variety of learning experiences for children and guidance in their use. These should be learning experiences which would be difficult, if not impossible, for parents to provide in their homes.

5. A quality kindergarten program must provide for an individualized program for children. Therefore, each teacher should work with one group of children.

6. Parent education should be an integral part of a quality kindergarten program. Planning for this and executing it takes time. Therefore, the kindergarten day needs to provide time for this as well as time for teacher-parent conferences.

7. A quality kindergarten program should provide continuity from one day to the next day.

The Association recognizes that recent developments in elementary education are making greater demands upon the kindergarten teacher. For this reason, the inadequacies of the "traditional" half-day program are becoming increasingly apparent and new programs must be developed. It is important that the welfare of the children holds the highest priority when developing the new programs. This consideration must be given to the health factors, emotional growth of the child, as well as to the intellectual development.

Oelerich conducts a study in 1974 which involved kindergarteners whose teachers were graduates of the author. The Metropolitan Readiness Test was given in the spring of that year. Significant differences were found between the
ADED and each of the other groups. In some instances, differences were found between the ADED and the HDED; wherever differences existed, they favored the ADED group. A follow-up study is now in the process.

Mueller (1977) states that at the end of third grade, those students who attended the ADED kindergarten programs evidenced greater achievement than others on a grade three reading test and the Kuhlmann-Anderson Verbal IQ. A Cincinnati, Ohio study (1974) reports that students attending the ADED pattern shifted from the 44% to the 75% on the Boehm Test of Basic Concepts. IQ scores, measured on the PPVT rose from 83.9 to 91.2.

Lysiak and Evans (1976) compare seven kinds of curricula in relation to socio-economic status (SES) and kindergarten attendance patterns. ADED patterns were favored by the low SES children. Evans (1975) observes a significant interaction between time, all-day vs. half-day, and the structural approach open vs. traditional. Children attending open classrooms in all-day programs achieved significantly higher scores on certain subtests of the Metropolitan Readiness Test, when compared to those in open half-day programs. The open-approach suggests a student-oriented program wherein the child learns at his own pace in small groups, often on self-directed activities. The study did not suggest that one particular attendance pattern was superior on academic outcomes, it did show clearly that the open-class approach is facilitated by the all-day pattern.
Alper (1979) states that the ADED program fosters a faster acquisition in the rate of reading skills and an increase in the reading readiness skills themselves at the kindergarten level. Two different designs were utilized for the research in order to provide a dual basis on which decisions were made. In the first design, nine groups of the twelve lowest achieving children from each classroom were assigned to the Extended Day Kindergarten experimental treatment and nine matched groups of children were assigned to the non-extended day kindergarten control condition.

In the second design, two schools were selected and children were randomly assigned to the experimental group or control group with the twelve lowest achieving students selected from each class to receive treatment. There were general differences between the two groups, but the only area which showed a statistically significant difference was the letter recognition category, favoring the experimental group.

Barbato and Wright (1980) state that the ADED kindergarten pattern had positive results for the Township of Union, New Jersey. Declining enrollment prompted the school district into using empty classroom space by extending the kindergarten program. Two pilot classes during the 1979-80 year showed the flow of the kindergarten program benefitted by the lengthened day. Teachers have responded enthusiastically to the program and even recommended that it be instituted.
In another recent study (Humphrey, 1980) about 200 children enrolled in a full-day kindergarten program were compared to a random sample of students enrolled in a half-day program. The purpose of the two programs was the same, to help children grow in cognitive, psychomotor, affective, and linguistic skills. The only difference in the two programs was the time allotment. Results from the California Achievement Test, the Boehm Test of Basic Concepts, and the Gates-MacGinitie Reading Test indicated significantly higher scores for students in the all-day, every day program. Furthermore, follow-up testing when the children were first graders, indicated significantly higher reading scores for the students who had attended the ADED kindergarten compared to those who attended the HDED program. Personal interviews, questionnaires, and observations were used to collect additional information from teachers and parents. Most parents (91.6%) of children who attended the ADED program prefer that attendance pattern. According to the research, kindergarten teachers who teach the ADED pattern prefer it, while first grade teachers are undecided about the all-day classes.

In 1970, Winter and Klein complete a study which looked at the cost of kindergarten programs and the extended day. The kindergarten program itself was developed around an individualized curricula. Two pilot studies were conducted. Educationally advantaged kids judged 'least ready' on the basis of standardized test results and teacher rating were selected for inclusion in the extended day kindergarten and
the control group. Both extended day groups participated in the regular kindergarten in the morning and received an additional 90-minute period of structured activities in the afternoon. The activities varied according to the needs of the individual child.

Pupil selection for the students in the group 'least ready' was based upon the students performance on the Peabody Picture Vocabulary Test and the Lee-Clark Readiness Test. Low teacher rating of pupil maturity in personal and social adjustment, response to learning activities as demonstrated in their first month of attendance in the kindergarten program and ability to attend to tasks were also used as criteria for selection. The extended day kindergarten was tutorial in nature and was remedial in the sense that it was designed to overcome learning deficits that had been discovered at the beginning of the year. During the three hour morning session the children in the extended day program were grouped according to their needs in cognitive, visual, auditory, and motor skill development. The students in the extended day program did not join the afternoon children for physical education, art, music or outdoor play. During these times they were tutored individually or in small groups by the teacher or the instructional aide. This extension of the kindergarten day provided for an additional 90 minutes of individualized instruction daily.

The extended day group exceeds the half-day group on several subtests of the Metropolitan Readiness Test as well
as on the total score. Extended day students had higher mean scores on Listening, Matching, Alphabet, Numbers, and Total Score. Follow-up data was conducted on students who remained in the district until the end of first grade. Using the Stanford Early Achievement Test, it was noted that the extended day group had higher mean scores on four of the six subtests as well as on the Total score. Extended day students had higher mean scores on Environment, Math, Word Reading, Sentence Reading, and Total score.

The second part of the research deals with the effect of the extended day on the different type of learner. In this part of the study, only those students who were considered 'most ready' were included in the extended day program. The program was designed to broaden the kindergarteners curriculum through creative approaches to learning, in-depth pursuits of children's interests, and individualized instruction. As in the study for disadvantaged students, the pupils were provided with an additional 90 minutes of learning experiences. The additional learning experiences included: independent activities in the learning center, special projects in art, music, science, social studies and dramatics, and individualized instruction in the language arts.

The comparisons made between the advantaged children participating in the extended-day program and the half-day programs revealed that no statistically significant differences existed at the end of the kindergarten year based on
the Metropolitan Readiness Test or the Stanford Early Achieve-
ment Test. However, wide differences were found to
exist between the groups on teacher-reported progress of
children's performance in the reading and math programs.
These differences were found to favor the extended-day
student.

Winter and Klein state part of the lack of statistical
data could be based on the fact that all of the students in
the extended-day program were achieving at the first grade
level in reading and math at the time these standardized
tests were given. It was therefore questionable whether
the tests had items which were sufficiently difficult to
discriminate among the extended-day pupils. Follow-up
testing was done one year after the program ended. On five
of the six comparisons, significant differences were found
after the Stanford subtests were adjusted for Preschool
Inventory differences.

Edith Munro, Iowa DPI consultant, states that "it is
not in the interest of young children to attend school under
an every other day pattern." (1978) Munro states that
five year olds need continuous, steady progress and daily
reinforcement.

As have been cited, there have been many studies which
show that one attendance pattern is better for students than
another. In reviewing the research there were also studies
which were inconclusive as to the strength or weakness of
a particular attendance pattern.
Beckner (1979) studies the length and time scheduling of the school day, class sizes and teacher self concept and their influence on the academic success and development growth of children in the kindergarten year and beyond. The literature review on class size generally supported the smaller class size as being more beneficial than larger classes in the areas of cognitive development, academic development, social development, emotional development, teacher effectiveness and teacher satisfaction. A review of literature on length of the kindergarten day did not reveal conclusive evidence as to the advantages of the HDED or the ADED program. Teacher self-concept appeared to be a variable that affected student self-concept and school achievement.

Another study of HDED and ADED was conducted by Bagley (1974). Bagley analyzes the daily activities of children in kindergarten classes to determine differences in the full-day and half-day programs. Significant differences were found in nine of the twenty-five categories. These areas were rest activities, stationary activities, free play, story time, small motor activities, small group activities, teacher-selected activities, activities focusing on student behavior and activities focusing on intellectual behavior. There was no statistical data shown favoring one pattern of attendance over another. Bagley states that the leisurely pace of the ADED is an advantage while the teacher's self-concept has a great effect on program success.
A three-year study by Johnson (1974) compares the effectiveness of ADED and HDED kindergarten attendance patterns in promoting academic achievement. Each group of students contains equal numbers of culturally disadvantaged, economically disadvantaged, and middle class children. Readiness scores and achievement test scores for the children in both groups were obtained at the beginning and the end of the kindergarten year. Subsequent first grade placement and reading level at the end of the first grade were recorded. Results indicate that there was no significant difference between the full-day and the half-day groups on any of the measures. Results were measured by the Walker Readiness Test and the Stanford Early School Achievement Test.

A Texas study (1972) compares kindergarten pupils enrolled in urban, rural and suburban classrooms on the Boehm Test of Basic Concepts and the Metropolitan Readiness Test. No significant results were found between the pupils enrolled in the half-day or the all-day programs. An investigation into half-day and full-day kindergarten programs by the Governor's Office of Research and Planning in Texas (1974) sampled 43 school districts with all of the kindergarten students taking the Metropolitan Readiness Test. Findings indicated test score difference could not be attributed to the fact that a child was enrolled in either a half-day or full-day program.

Hatcher (1978) concludes that there was no significant difference in achievement in HDED or ADED patterns in cog-
nitive, affective or psychomotor abilities as measured by the California Test of Personality and the Valett Developmental Survey of Basic Learning Abilities.

As Ramsey (1980, p. 279) states attendance is impacted by the energy crisis, the weather, in-service days for teachers, bus problems, illness, holidays, school facilities, and parent teacher conferences, to list the common factors. If all of the holidays were on Monday, and the kindergarten child is programmed for a Monday, Wednesday, half-day Friday program, think what happens to the quality of learning.
CHAPTER III
SUMMARY AND CONCLUSIONS

The purpose of this study was to evaluate the effectiveness of three kindergarten patterns of attendance; half-day every day, all-day, every day, and all-day alternate day. A review of literature shows a lack of consensus as to the advantages or disadvantages of the half-day, all-day, or alternate-day program. One problem lies in the mechanics of the research studies themselves. The studies were not well constructed and there were too many variables which could have affected some of the results that were achieved in some of the studies.

Mouw (1977) based some of his data on how teachers like the program. The data from Gornowich (1974) was gathered under uncontrolled variables. The data was collected over five succeeding years with the first three years including the HDED pattern and the second two years an ADAD pattern. Johnson (1974) compared the HDED and ADED patterns yet found no significant differences. This study did not take into account other variables which could effect the study's results. Sometimes the mechanics of the research studies were not well constructed and focused on only one of the attendance patterns, not all three. In contrast, Wenger (1978) identified eighteen controlled variables, selected the population carefully and included a follow-up with the same population one year later.
It does demonstrate that clear cut advantages or disadvantages can't at this point be found in research. Very little hard data was evident which demonstrates a superiority of one pattern or another. Another problem with the research is that it examines only academic growth and there are many other problems to be addressed in terms of effects on children before schools make changes to new patterns of attendance.

The kindergarten child's ability to observe, discover, generalize, experiment, and solve problems in both the HDED and ADED programs needs to be assessed. Further assessment is needed to compare the ability of half-day and full-day kindergarten students to express thoughts and feelings more creatively through language, movement, music, and art. No studies have examined intangible qualities such as independence, creativity or self-discipline of children in half-day and full-day programs.

Cleminshaw (1977) states that the scarcity of research on all-day kindergartens make 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. The Minnesota Department of Education (1972), Wenger (1978), and the Amherst Study (1980) show that students in a HDED program did better than students in an ADAD program. The Wisconsin State Department of Education (1981) and Bates (1979) also reveal that the HDED pattern of attendance is superior in many ways to the alternate day pattern.
Cleminshaw (1977) revealed that students in the ADAD program showed significant gains over students in the HDED program. Gornowich (1974) observed that the ADAD pattern of attendance did not hinder school success. In contrast Mouw (1977) concludes that not all children will adjust to the all-day, alternate day program. Pigge and Smith (1978) show that the ADAD was more advantageous to boys than girls.

Nieman (1973) showed that the all-day, every day pattern produced the most academic gain. Oelerich (1979), Mueller (1977), Lysiak and Evans (1976), Alper (1979), and Barbato and Wright (1980) all concur that the all-day, every day kindergarten program produces the most positive academic gains over any other pattern available.

Winter and Klein (1970) state there is a need for specific programs which are individualized to the students as having a significant impact upon academic success.

In summary, each program attendance pattern has strengths and weaknesses. Those strengths must be matched beside the role of the kindergarten program as proposed by a local district. The kindergarten program for today must assume a demanding and forward position in the school's total educational philosophy. Contemporary kindergarten programs must account for the widely diverse abilities of the student with a focus not only on the social and emotional development but also the cognitive areas of learning. Contemporary kindergarten programs must emphasize the students need to be a child, to be cared for, to feel secure,
to feel warm and loved, to feel important and capable. This can be met by a kindergarten program which is structured and developed around the child.

The program should include an all-day attendance pattern which provides for a time-on-task curriculum based on the particular needs of the district's students. The district must look at their kindergarten program goals and objectives to see how the scheduling pattern chosen effects students. Tests are now taking into consideration broader areas of knowledge other than reading and math.

Changes toward the all-day, alternate day pattern has been based upon financial concerns rather than educational ones. In addition to economic considerations; declining enrollments, staff reduction and our demanding society also affected current trends away from the half-day attendance pattern. Munro (1978) states that it is not in the best interest of young children to attend school under an every other day pattern. Much of the effectiveness of the kindergarten program will be lost when children attend school every other day. Five year olds need continuous, steady and daily reinforcement.

Contemporary kindergarten programs need to include more instructional time and better instructional tools than currently exist in the traditional half-day programs. The all-day pattern should enrich and expand upon skills and objectives presented in an earlier setting. The student attend-
ing all-day requires a carefully structured program, focusing on academic areas in the morning, and relaxation, art, free-play, and enrichment experiences in the afternoon. The all-day, every day kindergarten program can not be a "stretched out" half day program. If a district must make changes because of financial concerns, the kindergarten program developed must provide the best possible time-on-task program.

Factors other than length of time spent in kindergarten are equally important and should also be considered when comparing half-day to full-day kindergarten programs. Variables such as differences in programs, age, class size, socioeconomic status, and education of parents, and cultural values need to be investigated as well as the qualifications characteristics, and methods employed by teachers who provide effective kindergarten programs. Further investigation is necessary on all these variables in addition to the development of more definitive assessment instruments for young children before the half-day/full-day kindergarten controversy can be resolved.

Kindergarten should not only be a place where children learn finger plays, sing songs or play with toys. Contemporary kindergarten programs should also not be a place to get ready for first grade or to only teach reading and math. Each of these philosophies encourages only one aspect of the child's development. Five year olds are capable of an educational setting which can be a fused approach of both.
The kindergarten program needs to be:

" - a program where each child should be helped in developing as a curious, intelligent, caring, self-confident and responsible person

- a program where the kindergarten child has the guidance of a professionally qualified, caring teaching - a teacher who remains a constant learner

- a program based on a mutual interdependence of the home and school

- a program where the kindergarten child has respect for the individual and in the necessity for providing activities, experiences, materials and equipment that are appropriate to each child's maturity level and developmental need

- a program in a rich, multisensory environment

- a program where the setting has the kindergartener's active participation in their own learning experiences

- a program where children are motivated and encouraged to stretch their minds and use their bodies to the degree to which each is capable

- a program where divergent and creative expression should be encouraged

- a program where the kindergarten is a place where children feel comfortable, where their minds and bodies are stimulated, where they enjoy learning, and where they look forward to coming each day." (Ramsey, 1980)

A quality, contemporary kindergarten program should be based upon an all-day, every day pattern and be: structured, organized, sequential, unhurried, creative, caring, social, stimulating and provide for continuous student progress.

The paramount concern is and must always be what is best for four and five year old children who are beginning a career in the public educational system.
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