

A HOLISTIC COMPARISON OF THE WRITING ABILITIES  
OF FIRST-GRADE STUDENTS WHO ATTENDED  
EITHER FULL-DAY OR HALF-DAY  
KINDERGARTEN

THESIS

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## ABSTRACT

Limited research has been conducted to compare full-day and half-day kindergarten programs. Most studies examined reading and math achievement. Standardized tests were generally used to measure achievement. Virtually no studies have been conducted to assess and compare writing proficiency of full-day and half-day students.

The purpose of this study was to determine the difference in the writing scores of first grade students who attended either a full-day or half-day kindergarten program the previous year. Holistic scoring was used in keeping with the need for authentic assessment.

The writings of 65 first grade students from two rural school districts were examined and compared. A writing rubric was used to assess the writings. The rubric assessed written language level, sentence quality, directional principles, spelling development and mechanics.

The research indicated that in all five areas of writing, students from full-day kindergarten programs scored statistically significantly higher than students from half-day programs.

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# **CHAPTER I**

## **Introduction**

### **Overview**

Many studies have compared full-day and half-day kindergarten programs. These studies most commonly assessed and compared reading and math achievement. Standardized tests were generally used to measure achievement. Virtually no studies have been conducted to assess writing proficiency of full-day and half-day kindergarten students. This study compared the mean writing scores of first grade students who previously attended either a full-day or half-day kindergarten program. Holistic scoring was used to measure the students' writing proficiency.

### **Purpose**

The purpose of this study was to compare the mean writing scores of first grade students who attended either a full-day or half-day kindergarten program the previous year.

### **Research Question**

When assessed with a rubric, what are the differences in first grade students' mean writing scores after attending either a full-day or half-day kindergarten program?

### **Null Hypothesis**

There will be no statistically significant difference in the mean writing scores of first grade students who previously attended either full-day or half-day kindergarten programs.

## **Need For the Study**

The subject of full-day versus half-day kindergarten is currently being debated in the educational community. Parents and teachers often have strong feelings about this subject, however, few of their opinions are based on research. As the number of full-day kindergarten programs in this country continues to rise, educators and administrators must become aware of the facts. Decisions to change kindergarten schedules must be based on empirical data, not feelings. Most of the research pertaining to full-day kindergarten has examined reading and mathematics, and to a lesser degree, social development. Most of these studies relied on standardized tests for their data. The comparison of writing in full-day and half-day students has been ignored in the current research, as has the use of more authentic forms of assessment.

In the past decade writing has become an integral part of the early childhood curriculum, thus justifying the need for research to be conducted in this area. Research of this nature warrants less rigid forms of assessment, therefore holistic scoring is an appropriate choice. This research can provide parents, teachers and administrators with valuable information about the difference in writing abilities of students who attended either a full-day or half-day kindergarten program.

## **Definitions of Terms**

Half-day kindergarten: In this study half-day refers to a kindergarten class that is in session for two and one half hours.

Full-day kindergarten: In this study full-day refers to a kindergarten that is in session six and one quarter hours.

Rubric: A rubric is a set of criteria which provides information about student performance at various levels of proficiency (Rotta & Huser, 1995).

Holistic Scoring: Holistic scoring is a method of determining how well an individual's writing skills are developed in comparison to others of the same age or level of education (Harp, 1993).

## **Limitations of the Study**

1. This study was conducted with a small testing sample of rural first grade students.
2. It is difficult to match the samples in a variety of areas such as socio-economic status, percentage of speech and language services received, and prior life experiences.
3. No pre-testing was conducted.
4. Results may have been affected by the differences in classroom teachers, their philosophies and the different language arts programs.

## **CHAPTER II**

### **Review of the Literature**

#### **Purpose**

The purpose of this study was to compare the mean writing scores of first grade students who attended either full-day or half-day kindergarten programs the previous year.

#### **Current Research**

##### **Introduction: A Journey Through a Child's Garden**

Kindergarten attendance in the United States is almost universal. While nearly 95% of our nation's five-year olds are enrolled in school (U.S. Department of Education, 1994), their experiences are far from uniform. The majority of children attend kindergarten in local public schools. Others, however, may get their introduction to formal schooling in a private or parochial school (Karweit, 1987). An increasingly popular trend among some populations is home schooling. This is especially common in the primary years.

Even among kindergartens there are vast differences in educational philosophies and practices. Some programs are developmental in nature. These programs provide curriculum for all areas of a child's development: emotional, social, and cognitive. Learning is seen as an interactive process where students learn through active exploration and interaction with peers, adults and materials. (Bredekamp, 1987). Other programs are considerably more academic, focusing on such things as mathematics, reading readiness and the use of workbooks. Some parochial schools do not participate in traditional classroom teaching but require students to work individually on "paces" primarily through self-directed workbook studies.

In addition to different philosophies and practices, kindergarten scheduling varies from district to district. In 1992, Karweit's research found that most of the kindergartens in the United States still offered half-day sessions. In 1994, 47.4% of children attended full-day programs compared with 32% in 1980, and 17% in 1970 (Digest of Education, 1995). Full-day, alternate day scheduling offers a third, yet statistically less popular, option.

Friedrich Froebel, a German educator, opened the first recorded kindergarten ( or “child’s garden”) in his home country during the year 1837. His kindergarten originated as a full-day program and provided for intellectual, moral and physical growth (Puleo, 1988). His program was teacher-directed and offered activities such as play, exploration, games, songs, and social interactions (Hills, 1985). Nearly 20 years later the first American kindergarten opened in Wisconsin. By the turn of the century many U.S. cities had opened kindergartens. Evidence demonstrated that many early kindergartens operated on a full-day schedule (Hills, 1985). During World War II and the years that followed, kindergarten schedules were generally reduced to half-day due to the shortage of teachers and funds, and the increase in population. Another reason for the development of half-day programs was the increase in the popularity of kindergarten. The added enrollment presented a space problem, forcing schools to explore ways to reduce class size. The changing beliefs of educators also played a major role. Early childhood educators began to feel that five-year olds were simply not mature enough for a full day of school. Oliver (cited in Karweit, 1987) stated, “The kindergarten year was viewed as a year in which students matured to the stage at which they could benefit from formal schooling” (p. 2). Elkind (1990) saw things differently. He stated, “Early childhood is a stage of life that should be considered on its own terms, not as preparation for later stages” (p.13). For many, kindergartens were seen as a gradual transition between home and school (Helmich, 1985).

In recent years changing family patterns have affected the issue of kindergarten scheduling. The 1980’s and 90’s have experienced an increase in the number of working mothers and subsequently an increase in the need for child care (Rothenberg, 1984). Working mothers are now the norm rather than the exception (Gullo, 1990). The U.S. Bureau of the Census (1996) reported that in 1995 63.5% of mothers of children under age six worked outside the home. This is in contrast to 53.4% in 1985 and 36.7% in 1975. Additionally, more children attend preschool now than ever before. Elkind (1990) reported that 85% of young children have been in some out-of-home setting before starting kindergarten. Within these settings lies the potential for a variety of background experiences. Children who attended preschool, family daycare, daycare centers, developmental kindergarten, or those who stayed home with a parent during the formative years, certainly arrive at school with vastly different experiences and abilities.

Mongiardo (1988) pointed out that today's teachers must contend with, more than ever before, areas such as individualized instruction, the need to teach to a variety of skill levels and the necessity of providing remediation. She states, "This new role of kindergartens requires more instructional time than a half-day program can offer" (p.7). Teachers cannot simply ignore the wide range in development of individual children. Harrison and McEachern (1989) questioned if children of today have different emotional, physical, social and intellectual needs than children of generations past. Certainly the increase in family mobility and the numerous hours young children spend in front of the television has played a part in this. For these and other reasons, (including transportation costs, school funding formulas and the increased availability of teachers and space), many school districts have contemplated a change to full-day programs. Schulz (1981) questioned if the current movement toward the all-day kindergarten has been prompted more by financial reasons than empirical research. Full-day or half-day kindergarten is a controversial subject (Sergesketter & Gilman, 1988) which warrants research that examines a variety of aspects. The following review of the literature focuses on some of the academic, social, and developmental needs of the kindergarten child.

### **Full-Day Kindergarten: Advantages and Disadvantages**

Full-day kindergartens are on the rise. Considering this resurgence in extending the kindergarten day, one might appropriately wonder what young children have to gain from participating in a full-day program. Research points out that while both full-day and half-day programs have generally the same goals for its students, the full-day program may provide more time in which to encourage student growth and development (Harrison-McEachern, 1989). The time in an extended program is about double that of half-day. Vann (1991) noted that half-day kindergarten seems to be only about an hour of instruction time. Karweit (1992) stated, "Lengthening the school day provides more opportunities for learning, but the actual use of the time is still the critical issue" (p.83). The variances between the two groups in the amount of time spent on learning activities, differences in time-on-task, or time spent on incidental activities has received little attention.

One study by Anderson (1985), that compared full-day and half-day programs, revealed that the full day teachers allocated an average of 90 minutes a day for reading and language while half-day teachers spent about 40 minutes a

day. The additional time in the full-day classrooms would provide many more opportunities for learning and could result in significant gains in achievement. Other advantages to the full-day kindergarten have not been formally researched, however teachers have noted certain trends in their classrooms. Some observations are simply logical outcomes of the additional time spent in school.

One major advantage of a full-day kindergarten program is that teachers are able to expand their curriculum by providing enrichment activities. There is more time for discussions, application of new concepts and hands-on activities (Gullo, 1990). There is also more time for students to participate in school activities such as field trips, assemblies, physical education, art and music classes. Another positive aspect of the full-day kindergarten is the time it allows teachers to screen and assess students. Simply by spending more time interacting with students a teacher may become more aware of students' needs and could more effectively diagnose any difficulties in physical, developmental or academic abilities. Consequently, a teacher in a full-day classroom has more time than a half-day teacher to tailor instruction to meet the individual needs of students. In addition to helping those children who need extra guidance, these teachers have more time to provide challenging activities for more advanced students. A quality full-day program could readily handle a variety of abilities.

Children in a full-day classroom are less rushed and experience a more relaxed atmosphere than their half-day counterparts (Rothenberg, 1984). Young children need many opportunities to use and to explore their new skills. A longer day provides children with extended periods of uninterrupted time (Helmich, 1985) for projects or sharing. There are also no midday disruptions to students' routines as half-day children must move from one site (school) to another (home or daycare). Olsen and Zigler (as cited in Holmes, 1990) noted, however, that even students attending school full-day often require before and after school child care. By eliminating the midday departure, however, transportation and crossing guard costs are greatly reduced. This pragmatic benefit is often an important factor in school districts' implementing full-day kindergarten programs. Schools often benefit from additional funding as well. While these are definite benefits of a full-day program, it should be the students' well-being that determines the programming (Jalongo, 1986).

Opponents of full-day kindergarten have some doubts about the benefits of an extended day. Many are concerned that a full-day program may become too academic and require young children to focus on skills that they are not

developmentally ready for. Gullo (1990) found that full-day programs often push for higher academics. Others feel that five-year-olds are too young to spend a full-day in an academic setting and may become overly fatigued. Some parents' concerns over full-day kindergarten is the lack of time it allows their children to interact with peers in less academic settings (Rothenberg, 1984). Another disadvantage to full-day programs is the additional cost for teachers, aides and classroom space. Additionally, it appears from the research that the benefits of full-day kindergarten may lose their significance in academic gains over time. In response to various negative comments about full-day kindergarten Helmich (1985) stated that, "Although these criticisms merit serious consideration, the lack of evidence to substantiate the problem is in sharp contrast to research in support of full-day programs for kindergarten children " (p.14).

While the debate over the advantages and disadvantages of full-day kindergarten continues, many researchers have stressed that the length of the school day is only one dimension of the kindergarten day. Critical components of the kindergarten are the quality of teaching, the methodologies used and the curricular content. Other areas of importance include class size, the socioeconomic status of students and the educational level of parents (Hatcher & Schmidt, 1980). More than scheduling is the importance of creating a developmentally appropriate learning environment for children (Rothenberg, 1995).

### **How Does Full-Day Kindergarten Affect Achievement?**

Most of the research that has examined the relationship between full-day and half-day kindergarten has focused on achievement. Reading, mathematics and basic skills have been primary areas for comparison with reading achievement receiving the most attention. The majority of research utilized standardized tests for its measures. Research targeted children in grades kindergarten and one, sometimes extending into grade two. Limited longitudinal studies have been conducted as late as sixth grade. Researchers have pointed out, however, the difficulty in isolating the full-day, half-day variables as the children progress through school. The research in this area is not numerous, nor has it been consistent in its findings (Karweit, 1987). Research has revealed a lack of consensus as to the advantages of full-day kindergarten over half-day (Dunn, 1987; Hatcher & Schmidt, 1986 ), however the literature has been generally supportive. These studies have limitations such as no pre-testing of students (Sergesketter & Gilman, 1988),

lack of control for other variables (Jalongo, 1986) and dissimilar samples (McConnell & Tesch, 1986). The limited and inconsistent evidence of the effectiveness of different programs has suggested the need for continued research (Karweit, 1987).

One common assessment used by researchers is the Comprehensive Tests of Basic Skills (further to be known as CTBS). This was the measure used in a study conducted by Harrison-McEachern (1989). She compared the reading achievement of full-day first graders (N=66) to half-day students (N= 67) from an urban setting. The mean score of the full-day students (83.94) proved to be statistically significantly higher than for the half-day students (54.87), showing a positive effect for full-day students through the end of first grade. Another longitudinal study (Koopman, 1991) examined two groups of students from grades one, two and three, using the CTBS. Group one attended full-day kindergarten in 1986; group two attended the following year. In specific, word attack skills, vocabulary, reading comprehension, math computation and math concepts and application were compared. Results of both studies indicated a significant advantage for the full-day program over the half-day. Achievement differences between the two programs lost significance after first grade for the first group, yet remained significant for group two. For example, in the word attack subtest the first group significantly outscored the second in the first grade only, while the second group kept significant results through second grade. The same proved true for vocabulary. Similar results were obtained for the other subtests.

The CTBS was the measure used in a study performed by the Evansville-Vanderburgh (Indiana) School District during the 1978-1979 school year. It was used to investigate the long-term benefits of full-day kindergarten. It was administered to kindergartners at the end of the year, as well as to fourth and sixth graders, all of whom had attended full-day kindergarten. Scores were compared with their peers who had attended half-day programs. Each group (K, 4, 6) was compared a total of 42 times. Results indicated that students who attended full-day scored higher on every test in all three grades as measured by their mean scores. Significance was achieved in 27 of the 42 measures. This demonstrated that the gap (favoring full-day) between students who attended full-day and half-day programs never closed throughout the elementary and middle school years. A follow up study (1983) by the same school district administered the CTBS to third graders who had attended full-day kindergarten during the year the initial study was conducted. Students were compared with third graders who

had previously attended half-day programs. The full-day students scored higher on all fourteen of the various subtests and a t-test showed eleven of the fourteen scores to be significantly higher.

Interestingly, all of the studies using the CTBS demonstrated significant advantages for the full-day participants at least through the first grade. These studies revealed no positive effects for half-day students. Similar to this last finding are the findings of the Pasco (Washington) School District (McConnell & Tesch, 1986). When they compared full-day to half-day students in 64 areas of achievement they found that 40 (64%) of the areas favored full-day while 24 (37%) showed no significant difference. None of the 64 comparisons found half-day students to produce greater gains in achievement than full-day. The only study that indicated a higher effect for a half-day group was conducted by Nunnelley (1996). She compared an extremely small population (F.D.= 9, H.D.= 10) using the developmental checklist of the Work Sampling System and the Peabody Picture Vocabulary Test. While she found no statistically significant results at all, she found the half-day participants to have slightly higher mean gains in achievement. This contradicts all other studies in this review.

The Evansville-Vanderburgh (Indiana) School District (1980, 1983) also assessed its students using the Gates-MacGinitie Reading Tests (further to be known as GMRT). Results of a t-test from students in kindergarten and grades four and six showed that the full-day students outscored half-day students significantly. The results were the same for third grade students during the follow-up study conducted three years later. The scores of the full-day students were significantly higher in vocabulary and comprehension as shown by the mean scores. The purpose of a study completed by Dunn (1987) was to determine if a change from half-day to full-day kindergarten would result in significant differences in students' achievement. Data were collected from students for two years during half-day scheduling and the following two years when a full-day schedule was introduced. The GMRT was one assessment Dunn used to compare the achievement of the two schedules. The Waupun Assessment of Motor and Verbal Development and Auditory/Visual Perception, The Metropolitan Readiness Test and the Iowa Tests of Basic Skills (further to be known as ITBS) were also used. Students were evaluated entering and exiting kindergarten, in the spring of first grade and the fall of second grade. Results indicated that even though there were more language opportunities for full-day students, this was not reflected in a significant difference between the two schedules at the end of

kindergarten. Interestingly, subsequent study of grades one and two did show a positive difference in scores favoring the full-day program.

Another longitudinal study assessed first and second graders who had attended either half-day or full-day kindergarten programs (Sevigny, 1987). While no statistically significant differences were found between the grade one students, grade two results did demonstrate higher scores for full-day. One should note that full-day students in this study were those who were determined to be least ready for kindergarten. Apparently these students achieved even greater gains considering their more challenging beginnings. In a statewide study (N= 8,290) Cryan, Sheehan, Wiecher and Bandy-Hedden (1992) found positive results in favor of full-day students when compared to half-day, at least through the end of first grade. There was also evidence that some positive effects lasted through second grade. The results from the two previous studies are in direct opposition to the Koopman (1991) study which showed no gains after kindergarten for one of its groups on the GMRT. She questioned if all-day programs lost their significant gains because the primary grades may not allow for students to continue learning in the same manner which produced their earlier success. In contrast to all of the previous studies were studies initiated by Sergesketter and Gilman (1988) and McClinton and Topping (1991). The 1988 study compared full-day (N=96) to half-day (N= 148) using the GMRT. No statistically significant differences in reading scores were found. While the full-day students achieved higher total mean scores (F.D. 62.00, H.D. 51.04) on both the comprehension and vocabulary tests, the results did not reach significance at the .05 level. The 1991 study also found no significance in either kindergartners or first graders as measured by the CTBS.

Students from the Evansville-Vanderburgh (Indiana) School District (1980) were administered the California Achievement Test (further to be know as CAT) as part of their longitudinal study. The results showed that in all but one case the full-day students achieved significantly higher subtest and combined scores than the half-day students. In a more recent study, Holmes and McConnell (1990) found less positive results. When they examined the difference between 326 full-day and 311 half-day students on six measures of the CAT they found no significant difference on four of the six subtests. Visual recognition, sound recognition, vocabulary and language expression did not yield significant results while reading comprehension and math concepts and applications did. In addition, upon further investigation of the reading comprehension scores, the

researchers found the positive relationship could not be attributed to the differences in schedule.

Sixteen classrooms in Wichita, Kansas were used to compare full-day to half-day kindergartens (Wichita Public School, 1989). The measure they implemented was the ITBS. Their findings showed a split in the advantages of full-day programs over half-day. Scores indicated a significant effect for full-day students in word analysis and mathematics, no significance for vocabulary, listening or language, and a difference (though not significant) in favor of full-day in the composite score. These findings were similar to those of Dunn (1987) who also found split results using the ITBS. In addition to its other assessments, the Evansville-Vanderburgh (Indiana) School District (1980) also utilized the Boehm Tests of Basic Concepts. When compared to the national norms, statistical significance was found for the students in the full-day kindergartens. On the pre-test the percentile rank for full-day students was 65 while the norming group scored in the 50th percentile. The post-test revealed even more dramatic results. The full-day students scored in the 85th percentile while the norming group ranked at 45. In direct contrast to this study, a pilot study performed in Texas (Hatcher & Schmidt, 1980) found no significant difference when comparing kindergarten students of both schedules in urban, rural and suburban classrooms using the Boehm Tests of Basic Skills.

Despite the number of studies reviewed, it is evident that there are inconsistencies and contradictions in findings. Important overall trends did however emerge from the research. In all but one of the studies full-day students outscored half-day. Puleo (1988), in his review of the research, revealed that even when there were no statistically significant differences between the two groups, scores were consistently higher for full-day kindergartens. This present review has yielded the same conclusions. In addition to favorable scores for full-day, over half of the studies indicated significant gains in their favor. In most cases gains were sustained through first grade and often into second. It is therefore evident that there are very positive effects for full-day kindergartens in the area of achievement.

### **How Does Full-Day Kindergarten Affect Children's Social Growth?**

Most of the research conducted on full-day versus half-day kindergarten has focused on achievement. Gains in learning have proven easier to measure than affective areas. Hatcher and Schmidt (1990) stressed the need to compare

full-day and half-day children in areas other than cognitive development including social, developmental and psychomotor. Of the research that has focused on the affective areas most has been conducted through observation, questionnaires and other informal means. Much of the information, though anecdotal and informal, has been collected in a systematic way.

One of the most common areas researchers have examined in this domain is fatigue. Opponents of full-day kindergarten have been concerned about the level of fatigue young children have experienced while in school all day. The longitudinal study by the Evansville-Vanderburgh (Indiana) School District in 1980 found that only a few children demonstrated any signs of fatigue. After 150 hours of observation in twelve schools no significant difference in fatigue was found between full-day and half-day students (Hough & Bryde, 1996). The same results were found through observation in the Wichita (Kansas) School District (1989). Anderson (1985) found that early in the year some children were tired during the school day. He found no lasting effects, however, as the school year progressed.

Some researchers have studied the difference in social behavior between these full-day and half-day kindergartners. Through observation Hough and Bryde (1996) determined that there were more social experiences in a full-day classroom. The quality of social interaction, however, was not assessed in this study. Researchers from the Evansville-Vanderburgh (Indiana) School District (1980) administered a questionnaire to classroom teachers on the social behavior of students. Results indicated that 60% of primary teachers felt that students who had attended full-day kindergarten had better work habits than half-day students. Sixty-four percent felt they worked more independently and followed directions better. Fifty-two percent felt they had a longer attention span. A statewide study that assessed social benefits of full-day kindergarten found those who attended full-day programs were more independent, more involved in classroom activities, more productive in working with their peers, and more reflective. They were also found to be less withdrawn, angry, shy and less involved in blaming behaviors (Cryan, Sheehan, Weichel & Bandy-Hedden, 1992). Only one study found that half-day students showed better adjustment skills associated with personal and social growth (Brierley, 1987).

Limited research has been conducted in the area of self-concept and student attitudes with full-day and half-day students. The Evansville-Vanderburgh (Indiana) School District (1980, 1983) used the Piers-Harris Self Concept

assessment. The study from 1980 revealed that first grade students from full-day classrooms had a significantly higher self-concept than half-day students, with a mean score of 58.99 compared to a mean score of 54.81 for the half-day. When the second grade students were assessed it was determined that there was no statistically significant difference. The 1983 study of third and fourth grade students produced similar results. This may indicate the results were not long-lasting. This same study used the Survey of School Attitudes to assess student attitudes. A more positive attitude was found for full-day students. Significance was not mentioned in the study. When children in the Columbus (Ohio) Schools were assessed it was determined that the full-day students exhibited more self-confidence than their half-day counterparts (Brierely, 1987).

Overall, students in full-day programs exhibited more positive social behaviors than half-day. Fatigue was not found to be a disadvantage for these students. Full-day students were also found to have a better self-concept (at least through the first grade), better self confidence and a more positive attitude. While significance was not always achieved, the results of these studies demonstrated a positive trend in social growth for full-day kindergarten students.

### **How Does Full-Day Kindergarten Affect Attendance and Grade Retention?**

Very little research has compared the attendance and retention rates of full-day and half-day kindergarten. It is a concern of some opponents of full-day kindergarten that children will have lower attendance when they are expected to be in school all day (due, primarily to fatigue). Others contend that a parent who feels she may not be spending enough time with her child may be more prone to keeping the child home on occasion. Some have refuted this and claim that parents of students in half-day kindergarten may be more likely to keep their children home because the program is seen as less serious.

One study compared six full-day schools with six half-day schools for attendance (Hough & Bryde, 1996). The researchers found attendance was more regular for full-day students than for half-day. Students who attended school all day attended an average of 40 more hours a year than half-day students. The Wichita (Kansas) Public Schools (1989) examined the attendance rate of their full-day kindergartners after the first year of the full-day program. The control group had a slightly higher attendance record (93.6%) than the full-day kindergarten (92.2%). In her analysis of attendance, Goodwin (1989) found that full-day students average daily attendance in October was 90.3% and 89.1% for

half-day. When she examined the April attendance records for this same group she found full-day averaged 86.8% while half-day averaged 83.5%, indicating a higher rate of decrease for half-day students. Attendance remained more stable for full-day students. The results from these studies were contradictory and revealed little about the effect kindergarten scheduling has on attendance.

Some researchers have been curious about the degree of retention for full-day kindergarten as it compares to students in half-day programs. The Wichita (Kansas) School District (1989) examined school records of retention. Of 28 children who had attended full-day kindergarten 8.3% were retained. Of the fifteen half-day children 4.1% were retained. This statistic was surprising. In the follow-up study completed by the Evansville-Vanderburgh (Indiana) School District (1983) retention among third and fourth grade students was analyzed. The third grade students who had attended full-day kindergarten had a 9% rate of retention for either grades K, 1, 2, or 3. Nineteen percent of the half-day students were retained. Of the fourth grade students 4% of those who attended full-day kindergarten were retained in grades K through 3, and 17% of the half-day students were held back. The chi-square analysis of independence found only a one in one hundred chance that this happened randomly. It was therefore determined that the rate of retention had a significant association. In contrast to this study, Sevigny (1987) found that full-day kindergartners were more likely to be retained than half-day students (FD=7, HD=3). The findings of these studies are extremely contradictory and this area warrants further research.

### **How Do Parents and Educators React to Full-Day Kindergarten?**

Limited research has been conducted on the reactions of parents and educators to full-day kindergarten programs. Some data were collected through surveys, focus groups and questionnaires. A focus group was used by Hough and Bryde (1996) to collect information about parents' impressions of full-day and half-day kindergarten. The researchers found that the overall satisfaction was better for parents of full-day students than for half-day. Parents felt that students in full-day classrooms were better prepared for first grade. Ninety-eight percent of all of the parents favored a full-day program regardless of the type of class their child had been in. A survey was randomly sent to 20% of the parents in the Wichita (Kansas) School District (1989). The district was evaluating the first year of their full-day program. Of the 34 respondents (55% response), 100% liked the full-day program and all of them wanted to see it continued the next year.

After the first year of a full-day kindergarten program in Omaha, Nebraska (Drew & Law, 1990) parents were surveyed. Results demonstrated that parents were pleased with the program. They indicated that full-day students had less stress in their day because of the extended time in school. They felt there were more opportunities for exploration and interaction with their peers. They also noted that their children had a greater ability to transfer their learning from school to home. A more positive self-esteem was noticed as well. Parents of full-day and half-day students also completed a survey in a study conducted by Anderson (1985). The results were positive in favor of the full-day program. Sixty-nine percent of full-day parents felt their children had grown a great deal in self confidence; 49% of half-day parents felt this way. Sixty-nine percent of full-day parents noticed growth in their child's level of independence while 44% of half-day parents noticed the same. Eighty percent of full-day parents felt their child worked along better with others because of their school experience; 56% of half-day parents felt this way about their children. Ninety-six percent of parents of full-day children felt their child had grown in the area of academic learning; 74% of half-day parents could say this about their children.

Eighty-five percent of parents from the Pasco (Washington) School District (McConnell and Tesch, 1986) were satisfied with their child's placement in either full-day, half-day or full-day/alternate-day kindergarten. This finding supported what Anderson (1985) found: She noted that parents' beliefs about the advantages of one program over another seemed determined by their personal experience with either full-day or half-day kindergarten. Additionally, Jalongo (1986) pointed out that parents' concerns revolved around their child and their family situation. Mothers who stayed at home, for example, may have preferred a half-day program, while a working mother who must pay for child care might prefer a full-day situation.

Educators, on the other hand, must be responsible for making decisions that meet the needs of the majority of students. Principals and teachers were surveyed in the Wichita (Kansas) School District (1989). Five principals (100% response) felt that the first year of the full-day kindergarten was effective. All of them agreed the program should continue. The benefits they noted included a more language-rich environment for students, easier scheduling and consistency for teachers, parents and students. Eighty-one percent of the teachers responded to the survey (N=13). Seventy percent felt these students progressed more in the area of readiness than previous students who had attended half-day classes.

One-hundred percent felt that full-day students were more socially developed. Like the principals, 100% felt the program was effective and wished to see it continued. Teachers noted positive aspects of full-day kindergarten including more language experiences, more time for enrichment activities such as manipulatives, centers and cooking, quality time with struggling students, and a more relaxed atmosphere.

Teachers were involved in a focus group in a study by Hough and Bryde (1996). Ninety-eight percent of these teachers (both full-day and half-day) favored full-day programs. A questionnaire was administered to teachers in the Evansville-Vanderburgh (Indiana) School District (1980) to get their opinions on full-day kindergarten. Results showed that many advantages were found for this program including more time for readiness skills, concept development, enrichment and individual instruction. Some negative aspects were noted, including class size, fatigue for some students, and more work for themselves as they were now required to plan for a full-day of instruction. McClinton and Topping (1981) administered a rating scale to teachers to determine their perceptions of students' adjustment to first grade. Results indicated that first grade teachers judged children coming from full-day kindergartens to be generally more capable than half-day students.

Overall, parents and educators were very positive in their opinions toward full-day kindergarten. Since they are the people directly involved in the home and academic lives of children, their opinions must be taken seriously when evaluating full-day and half-day kindergartens.

### **How Does Writing and Writing Assessment Fit into Kindergarten?**

Most of the research conducted that compared full-day and half-day kindergarten has investigated reading achievement, mathematics skills and social adjustment. Little attention has been given to the writing capabilities of young children. One reason for this may be the difficulty in accurately assessing writing. Standardized tests were primarily utilized to measure gains in reading or math. Such assessments are not generally appropriate for evaluating writing.

There has been much discussion of the validity of standardized tests, especially in the primary grades. Many have postulated that standardized tests are artificial and do not accurately reflect the learning that has taken place (Wichita Public Schools, 1989). Many teachers of young children have felt pressured to increase rigid, formal instruction because of the standardized tests

their students face. Some schools have eliminated standardized tests from their primary grades when it was realized that teachers had moved to formal instruction and “drill and skill” tasks from a curriculum that had previously provided developmentally appropriate activities (Steinberg, 1990).

The assessment of writing does not lend itself to using a standardized test. “Traditional types of assessment are simply not appropriate for assessing and evaluating process writing because of their rigidity, total focus on the product, and sense of completeness” (Rotta & Huser, 1995). Educators have searched for more effective ways to assess writing. In recent years holistic scoring has allowed teachers a systematic way to evaluate writing. This form of assessment is simple for teachers to use, flexible and can be used for large-scale evaluations. Holistic scoring focuses on recognizing patterns in students’ writing (Johnston, 1987 as cited in Bainer & Porter, 1992). Using this form of assessment a teacher should be able to see the strengths and weaknesses of each piece of writing and use the information for evaluative and instructional purposes. Rubrics are valuable tools in the holistic assessment of writing.

When Rotta and Huser (1995) measured teachers’ reactions to using holistic scoring for the first time, results indicated general satisfaction. In particular they appreciated the concise format of the rubric and the specific guidelines for the evaluation it provided. They were concerned, however with words like “often” and “generally,” considering them to be vague. They also had some minor difficulty adjusting to the time it initially took to score the writings. They understood it would become easier with time. The teachers also demonstrated some concern about explaining the scoring to students and parents so there would be no misinterpretation of the scores.

Holistic scoring can be used at all grade levels. Even the writings of primary students can be assessed using appropriate rubrics. In recent years writing has become an important part of the curriculum in kindergarten and the primary grades. “The ascendance of the Whole Language movement has boosted the amount and role of writing in the primary grades curriculum (Stahl, Pagnucco & Suttles, 1996, p.132). The importance of writing for communication purposes and as a means for improving the reading skills of children is an important part of the whole language program. One kindergarten teacher noted spending 20-30 minutes a day in journal writing activities ( Button, Johnson & Furgerson, 1996).

A range of written language forms are evident in the writings of young children. Children can go from scribbling and copying to captioning and invented spelling (Collins, Shaeffer & George, 1992). Peterson (1995) noted that research indicated that young children go through progressive stages in their writing. Children did not all progress at the same rate, nor did they always go through each stage, but trends did emerge. Smith (1995) found the same patterns as Collins et al. (1992) and stressed the importance of young children needing to see themselves as writers. When comparing two groups of kindergartners, one in an academic program and the other in a more developmental program, one researcher found that students in the developmental program saw themselves more as writers than did students in the academic group. The developmental group saw writing as being an author or writing stories while the academic group saw it as handwriting or copying teacher-written sentences. Two-thirds of the developmental group, when asked why people write, stated that they liked to write stories. The academic group noted getting good grades as a reason to write. This study demonstrated the effects an appropriate kindergarten program can have on writing. In the youngest writers, drawing can even be considered to be a form of writing if it is seen as communication rather than just a pretty picture (Hipple, 1985). Children learn to write by being in a language-rich environment and by writing. Just as parents encourage babies' early attempts at speaking, so should they encourage early writing attempts. Too often adults ... "are more concerned with the conventions of print than with validating children's honest attempts to communicate" (Danielson, 1992, p. 274). In a study by Stine, (cited in Haas-Dyson, 1982), he found writing to be the most popular beginning reading activity for children.

Freeman and Sanders (1989) assessed young children's concepts of the function of writing in community contexts. Children viewed videotapes of people writing in familiar settings such as the pediatrician's office, a restaurant, and the post office. When answering the researchers' questions, the children demonstrated a knowledge of who was writing, what they were writing, and the purpose for their writing. They also possessed the necessary vocabulary to discuss writing. Researchers also examined the written language use of young children within the context of their play (Taylor-Schrader, 1989). Pre-school children were observed writing for real purposes during their play. Researchers noted children writing checks for goods and services, making written appointments, addressing envelopes, and writing prescriptions and directions.

One study used writing samples to assess the writing abilities of children in two kindergarten programs (Brierley, 1987). One kindergarten program emphasized personal and social development as well as instruction in art, music and physical education. The other program emphasized using a microcomputer and the "Write to Read" program. The children were divided into four groups: a half-day and full-day group of each program. The full-day kindergarten in the "Write to Read" program scored the highest in writing. Interestingly, the full-day program that emphasized social growth scored higher in writing than the half-day "Write to Read" program. Researchers speculated that just the added time in each day (for the full-day group) positively affected their writing. It is expected that children in full-day programs in general will write more than half-day students simply because of the additional time in class (Fromberg, 1992). As writing has become such an important part of young children's curriculum, more research comparing the writing abilities of full-day and half-day students needs to be conducted.

## **CHAPTER III**

### **Design of the Study**

#### **Purpose**

The purpose of this study was to compare the mean writing scores of first grade students who attended either a full-day or half-day kindergarten program the previous year.

#### **Null Hypothesis**

There will be no statistically significant difference in the mean writing scores of first grade students who previously attended either full-day or half-day kindergarten programs.

#### **Methodology**

##### Participants

The participants for this study were first grade students from two different rural school districts in Upstate New York. Participants from one school attended full-day kindergarten the previous year (N= 36). The participants from the second school attended half-day kindergarten the previous year (N= 30). Participants were chosen randomly from the schools, but students who attended developmental kindergarten or were retained in either kindergarten or first grade were ineligible for the study.

##### Materials

A writing sample from each participant was collected between the fifth and sixth month of first grade. A writing rubric developed by one of the participating schools was used to assess the writing (see Appendix ).

##### Procedures

Participants from each group produced a short personal narrative in their classrooms. The students were instructed to write about a topic of their choice. Students wrote without help from their classroom teachers. Each sample was scored by two raters (first grade teachers) using the rubric in the Appendix. In the case of any inconsistencies, a third rater was used.

## **CHAPTER IV**

### **Analysis of the Data**

#### **Purpose**

The purpose of this study was to compare the mean writing scores of first grade students who attended either full-day or half-day kindergarten programs the year before.

#### **Null Hypothesis**

There will be no statistically significant difference in the mean writing scores of first grade students who previously attended either full-day or half-day kindergarten programs.

#### **Findings and Interpretations**

A writing rubric was used to rate the participants' writing. The rubric assessed five areas of writing development. Written language level, sentence quality, directional principles, spelling development, and mechanics were examined. Two-sample  $t$ -tests of independent means were used to determine whether the difference between the mean writing scores of the full-day kindergarten group and the mean writing scores of the half-day group, as determined by the rubric, was statistically significant. These data are presented in Tables 1-5.

The first writing sub-category assessed was written language level (see Table 1). The mean score for the half-day group was 4.12. The mean score for the full-day kindergarten group was 4.79. The two-sample  $t$ -test measure was used to determine statistically significant differences between the mean raw scores of the two kindergarten groups. A  $t$ -test value of (+/- 2.00) would indicate a statistically significant difference between the two variables. The obtained  $t$ -test

value for the two variables in the area of written language level was -2.56. The calculated  $t$  value was greater than the critical  $t$  value demonstrating that there was a statistically significant difference between the half-day and full-day kindergarten groups. Therefore, the null hypothesis must be rejected.

**Table 1.  $t$ -Test: Two-Sample Assuming Equal Variances**  
*Written Language Level*

Group	Mean	SD	DF	$t$ -Obtained
Half-Day	4.12	1.211	58	-2.56
Full-Day	4.79	.845		

Critical  $t = (+/- 2.00)$

The second writing sub-category assessed was sentence quality (see Table 2). The mean score for the half-day group was 4.15. The mean score for the full-day kindergarten group was 4.88. The two-sample  $t$ -test measure was used to determine statistically significant differences between the mean raw scores of the two kindergarten groups. A  $t$ -test value of (+/- 2.00) would indicate a statistically significant difference between the two variables. The obtained  $t$ -test value for the two variables in the area of sentence quality was -2.23. The calculated  $t$  value was greater than the critical  $t$  value demonstrating that there was a statistically significant difference between the half-day and full-day kindergarten groups. Therefore, the null hypothesis must be rejected.

**Table 2.  $t$ -Test: Two-Sample Assuming Equal Variances**  
*Sentence Quality*

Group	Mean	SD	DF	$t$ -Obtained
Half-Day	4.15	1.567	58	-2.23
Full-Day	4.88	.946		

Critical  $t = (+/- 2.00)$

The third writing sub-category assessed was directional principles (see Table 3). The mean score for the half-day group was 3.00. The mean score for the full-day kindergarten group was 3.58. The two-sample  $t$ -test measure was

used to determine statistically significant differences between the mean raw scores of the two kindergarten groups. A  $t$ -test value of ( $\pm 2.00$ ) would indicate a statistically significant difference between the two variables. The obtained  $t$ -test value for the two variables in the area of directional principles was  $-3.36$ . The calculated  $t$  value was greater than the critical  $t$  value demonstrating that there was a statistically significant difference between the half-day and full-day kindergarten groups. Therefore, the null hypothesis must be rejected.

**Table 3.  $t$ -Test: Two-Sample Assuming Equal Variances**

*Directional Principles*

Group	Mean	SD	DF	$t$ -Obtained
Half-Day	3.00	.800	58	-3.36
Full-Day	3.58	.557		

Critical  $t = (\pm 2.00)$

The fourth writing sub-category assessed was spelling development (see Table 4) development. The mean score for the half-day group was 4.85. The mean score for the full-day kindergarten group was 5.47. The two-sample  $t$ -test measure was used to determine statistically significant differences between the mean raw scores of the two kindergarten groups. A  $t$ -test value of ( $\pm 2.00$ ) would indicate a statistically significant difference between the two variables. The obtained  $t$ -test value for the two variables in the area of spelling development was  $-3.05$ . The calculated  $t$  value was greater than the critical  $t$  value demonstrating that there was a statistically significant difference between the half-day and full-day kindergarten groups. Therefore, the null hypothesis must be rejected.

**Table 4.  $t$ -Test: Two-Sample Assuming Equal Variances**

*Spelling Development*

Group	Mean	SD	DF	$t$ -Obtained
Half-Day	4.85	.925	58	-3.05
Full-Day	5.47	.662		

Critical  $t = (\pm 2.00)$

The fifth writing sub-category assessed was mechanics (see Table 5). The mean score for the half-day group was .346. The mean score for the full-day kindergarten group was 1.382. The two-sample  $t$ -test measure was used to determine statistically significant differences between the mean raw scores of the two kindergarten groups. A  $t$ -test value of (+/- 2.00) would indicate a statistically significant difference between the two variables. The obtained  $t$ -test value for the two variables in the area of mechanics was -7.59. The calculated  $t$  value was greater than the critical  $t$  value demonstrating that there was a statistically significant difference between the half-day and full-day kindergarten groups. Therefore, the null hypothesis must be rejected.

**Table 5.  $t$ -Test: Two-Sample Assuming Equal Variances**  
*Mechanics*

Group	Mean	SD	DF	$t$ -Obtained
Half-Day	.346	.562	58	-7.59
Full-Day	1.382	.493		

Critical  $t$  = (+/- 2.00)

### Summary

The results of this study demonstrated that the full-day kindergarten group out-performed the half-day kindergarten group in all five of the writing areas assessed. All of the scores attained statistical significance. The greatest variance occurred in the areas of mechanics ( $t = -7.59$ ), followed by directional principles ( $t = -3.36$ ), spelling development ( $t = -3.05$ ), written language level ( $t = -2.56$ ), and sentence quality ( $t = -2.23$ ). The analysis of the data indicated that in each area the null hypothesis must be rejected.

## CHAPTER V

### Conclusions and Implications

#### Purpose

The purpose of this study was to compare the mean writing scores of first grade students who attended either full-day or half-day kindergarten programs the previous year.

#### Conclusions

The results of this study substantiated most of the findings of the current research pertaining to full-day versus half-day kindergarten. In areas such as reading achievement, mathematics and social growth, research has demonstrated that students from full-day kindergartens perform better than students from half-day kindergartens. This study found very favorable results for full-day students in the area of writing as well. In all five of the writing areas assessed in this study, statistically significant results occurred in favor of full-day students. Several conclusions can be drawn from analyzing the data from the first grade writing samples.

- Of the five areas assessed by this study the written language level was the most critical. It most clearly represented the students' ability to express themselves in a coherent manner. Seventy-six percent of full-day students were able to produce a sequenced piece of writing consisting of two or more sentences or a compound sentence, Half (50%) of the half-day students were able to write at this level. Thirty-one percent of the half-day students could only produce simple sentences at this point. Certainly the students from full-day classrooms had more opportunity to practice their writing skills giving them an edge over the half-day students in this area.
- Sentence quality was another critical area that was assessed in this study. The score represented the students' ability to focus on meaning-making in their writing. The scores for the half-day group indicated that 12% of the

students were unable to express their own ideas in their writing. Only 3% of the full-day group were still found to be at this level. At the other end of the scale, 21% of the full-day group reached the highest level of using sentence variety, including appropriate length, use of story starters and descriptors. In contrast, only 4% of the half-day students reached this point in their writing. Meaning is generally of primary importance in quality language arts programs. It can therefore be assumed that teachers from both groups encouraged students to express themselves meaningfully with less focus on spelling or mechanics. It must therefore be concluded that the difference in scores between the two groups was most likely a result of the additional time full-day kindergarten students spent immersed in literacy experiences. The substantial time involved in listening to stories, sharing, and writing activities has positively affected their writing abilities.

- The rubric for this study also assessed students' directional awareness. While this area did not focus on meaning, it did look at the students' understanding of the conventions of print. Nineteen percent of the students from half-day kindergartens were found to be at the second level, correctly using the top to bottom and left to right directional patterns. These students were yet inconsistent in their spacing and arrangement of print. Only 3% of the full-day group were found to be still writing at this level. Sixty-two percent of the full-day group had achieved the highest level of directional awareness. Their writing samples demonstrated their ability to consistently write with correct arrangement of print and appropriate spacing. Twenty-seven percent of the half-day group exhibited this level of writing. Without further exploration of the individual writing programs of both groups of kindergartens and first grade classrooms it is difficult to ascertain to what extent each group focused on correct spacing and formation of letters. These results could instead be attributed to the additional exposure full-day kindergarten students had to printed material, and time to explore the conventions of print. By having virtually twice the amount of time to be involved in learning activities, the full-day kindergarten seemed to have an advantage over half-day kindergartners in this area.

- A major contrast in scores occurred in the area of spelling development. Fifty-three percent of the full-day group were found to be approaching standard spelling. A scant 8% of the half-day group were at this point in their spelling development. This study did not examine the individual spelling programs of the various classrooms. Different approaches could have contributed to the results. It is very possible, however, that these results could again be due to the additional time students in full-day classrooms were involved in language activities.
- In a quality whole language program the mechanics of writing, including capitalization and punctuation, are not of primary focus. Emergent writers need opportunities to explore writing and to focus on content without being encumbered with all of the formalities of writing. Interestingly, the most significant differences between the two groups occurred in the area of mechanics. Sixty-nine percent of the half-day kindergarten group demonstrated abilities that ranked them at lowest level indicating they were yet unaware of the use of capitals and punctuation. None of the students from the full-day classrooms were found to be at this level. The majority (62%) of full-day students demonstrated occasional use of capitals and punctuation in their writing. A substantial portion (38%) showed frequent use of them. Only 4% of the half-day students were assessed at this level. Again, it must be concluded that the variances in scores must be due, at least in large part, to additional exposure to literature, writing opportunities and classroom instruction time.
- In all five of the writing areas assessed, statistically significant differences in favor of the full-day kindergarten students emerged. It is unlikely that “other” circumstances affected all of these areas. It is therefore the conclusion of this researcher that students in full-day kindergarten have a significant advantage over half-day students in the area of writing.

## Research Implications

While the findings of this study proved significant, there were also many new questions raised by the research. Further research comparing the writing abilities of students who attended either full-day or half-day kindergarten is suggested. Areas for further research include:

- In similar research it would be beneficial for researchers to pre-test students before kindergarten to assess the differences in abilities that are present. By eliminating the differences in the students before they are exposed to either a full-day or half-day kindergarten setting, the study would prove to be more valid.
- It is recommended that research comparing the writing of full-day and half-day kindergarten students be conducted with a larger testing population.
- It is recommended that future research also include samples from more homogeneous settings including classrooms with similar language arts programs.
- Longitudinal studies are recommended to follow and to compare students throughout successive years of schooling.
- It would be interesting to determine the effects of pre-school, daycare, and other early learning experiences on students' writing abilities in later grades. Before children enter school they are exposed to a variety of environments that are sure to influence future learning. A comparison of children from different backgrounds could be beneficial to the educational community.
- Further research could assess gender differences as they relate to full-day and half-day kindergarten achievement.

- The significant findings of this study warrant the continued use of holistic scoring/ authentic assessment in research.
- It would also be interesting to study if students from full-day and half-day kindergarten programs differ in their interest or desire in writing.
- Additional research should use observation as a tool. By noting what specific activities students are involved with in their classrooms, researchers would be able to more accurately determine the effects of kindergarten schedules. It would also be beneficial to determine how much time is actually devoted to learning activities in each kindergarten schedule.
- In future research the use of a more complete rubric could be used to further identify differences in students' writing.
- School administrators would benefit from conducting research in a variety of educational and social areas when debating the status of their current kindergarten schedules. Results could aid in important decision making.

### **Implications for the Classroom**

The research on the writing abilities of first grade students who previously attended either full-day or half-day kindergarten programs revealed practical applications for classroom teachers.

- Foremost, it is imperative that teachers from either kindergarten schedule provide a learning environment in which students can get a good foundation in writing and will *want* to write. Students need an environment that is not restrictive, in which they can fully explore writing. They should be encouraged to discover the strategies needed to make them good writers. Students need ample time for writing. Teachers in half-day kindergarten classrooms need to

be especially vigilant in providing enough time for exploration through writing. Writing should be an important part of each day.

- This research indicated that children benefit from slower paced, enriching environments. Teachers must be cognizant of developing appropriate schedules for their classrooms.
- First grade teachers need to be aware of the potential for differing writing abilities in their students from various kindergartens. Children may come from private kindergartens, full or half-day schedules or home school environments. Teachers need to compensate for the differences and provide enrichment activities and extension activities for those students requiring it. By realizing that all of the students enrolled in her class are not “equal” in their writing abilities, a teacher can adequately plan to meet the needs of individual students.
- Students should be encouraged to write daily on topics of their choice. Assigned topics should be reserved for content areas. Children will be more likely to stay interested if they can write about what is important to them.
- Teachers should continually assess their writing and spelling programs to see if students are making adequate progress. This is especially vital at the beginning of each year.
- It is imperative that teachers become increasingly more familiar with authentic assessment. Rubrics are useful tools that teachers can use to gain insight into their students writing. Checklists and observations are helpful too. Authentic assessment “fits” better with writing than formalized assessments. Additionally, parents must be made aware of the purposes, processes and implications of authentic assessment.

## Summary

Full-day kindergarten schedules are becoming increasingly common in American public schools. Decisions to operate full-day kindergartens have often been based on economic criteria. Little primary research has been conducted to determine the benefits and draw-backs of implementing full-day schedules. Of the research that has been conducted, most has focused on reading and math achievement based on the results of standardized testing. Results from this research has identified full-day kindergarten students as generally scoring higher than half-day students. No published research has examined the effect kindergarten schedules have on writing proficiency. Additionally, holistic scoring has not been previously utilized to compare the two groups.

The purpose of this research was to compare the writing abilities of first grade students who attended either full-day or half-day kindergarten programs the year before. A writing rubric was used to assess students' writing. Using the rubric, scorers compared the writings of the students in five areas: Written language level, sentence quality, directional principles, spelling development and mechanics. A t-test of independent means was used to analyze the students' writing.

Results indicated that in all five of the areas assessed, the full-day kindergarten group achieved statistically significant higher scores than the half-day group. These results demonstrated that the students greatly benefited from the slower paced, enriching environment of full-day kindergartens. These data provided practical application for classroom teachers and educational administrators. Additional research is needed to determine the benefits of full-day kindergarten programs. It is imperative that young children be provided with developmentally appropriate learning environments that challenge them to reach their fullest potential.

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APPENDIX

**Writing Rubric - Grade 1**

**Written Language Level**

0. Picture stories
1. No consistent message (print letters only, can't read it or rereads differently)
2. An incomplete thought
3. A simple sentence
4. Simple sentences (not sequenced, the written message corresponds with the verbal message)
5. A sequenced piece (two or more sentences, or a compound sentence)
6. A story with two or more themes ("paragraphs" but does have to be in paragraph form)

**Sentence Quality**

0. Uses symbols to represent ideas (scribble writing, letters - no meaning)
1. Understands that print conveys meaning ("reads" his/her marks on the page as though it were a message)
2. Copies a message but doesn't understand what it means
3. Copies a message and understands what it means
4. Uses repetitive sentence patterns (I like \_\_\_\_.)
5. Can write own ideas and experiences (uses little sentence variety/simple sentences)
6. Uses sentence variety (length, starters, descriptors)

**Directional Principles**

0. Has no directional awareness
1. Shows awareness of a directional pattern (top to bottom **or** left to right)
2. Uses correct directional patterns (top to bottom **and** left to right)
3. Uses correct directional patterns and spaces between words, but spacing may be inconsistent
4. Writes consistently with correct arrangement of print and appropriate spacing

**Spelling Development**

0. No attempt at spelling, may use symbols or marks for sounds and/or words
1. Random letters to represent sounds or words
2. Initial sounds to represent words
3. Initial and final sounds to represent words
4. Initial, final and medial sounds to represent words
5. Vowels used as placeholders
6. Approaching standard spelling

**Mechanics**

0. Not yet aware of correct use of capitals and punctuation
1. Occasional use of capitals or punctuation
2. Frequent use of capitals **and** punctuation

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	A WRITTEN LANGUAGE LEVEL	B SENTENCE QUALITY	C DIRECTIONAL PRINCIPLES	D SPELLING DEVELOPMENT	E MECHANICS
Beginning (Not yet satisfactory)	1-4	1-4	1-3	1-4	1
Secure (Probably satisfactory)	5-6	5-6	4	5-6	2