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# Impact of Kindergarten Format on First-Grade Phonological Awareness Literacy Screening Assessments

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# Impact of Kindergarten Format on First-Grade Phonological Awareness Literacy Screening Assessments

**A Research Report  
Presented to the Graduate Faculty  
of the Department of  
Occupational and Technical Studies  
at Old Dominion University**

**For Partial Fulfillment  
of the Requirements for the  
Master of Science Degree**

**By  
Gail W. Ricks  
August 2004**

## APPROVAL PAGE

This research paper was prepared by Gail W. Ricks under the guidance and direction of Dr. John M. Ritz in OTED 636, Problems in Occupational and Technical Studies. It was submitted to the Graduate Program Director as partial fulfillment of the requirements for the Master of Science Degree.

APPROVAL BY:

  
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Dr. John M. Ritz  
Advisor and  
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8-9-04

Date

# ABSTRACT

## IMPACT OF KINDERGARTEN FORMAT ON FIRST-GRADE PHONOLOGICAL AWARENESS LITERACY SCREENING ASSESSMENTS

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Kindergarten programs exist in two formats, differing in the length of their classroom time. During their kindergarten time, students encounter key instruction in language art skills that help the learner with future reading skills: phonics, phonemic awareness, vocabulary, fluency, and comprehension. To assess performance of these reading skills, the University of Virginia developed a language assessment test titled Phonological Awareness Literacy Screening (PALS) that is used throughout Virginia schools in kindergarten through third grade.

This research was designed to determine if the kindergarten format (length of the day) impacted the students' performance on the first-grade PALS test. The hypothesis was that full-day kindergarten students would have higher first-grade PALS scores than half-day students due to the additional time available to spend on the reading skills.

Eight first-grade classrooms in two Hampton City Public Schools participated in the study. There were a total of 154 participants. Each classroom teacher administered and scored the test. The data were compiled into a table and analyzed using Chi-Square statistical analysis. The Chi-Square test showed no statistically significant difference at the 0.05 level, therefore the hypothesis was rejected. It can be concluded that

participation in half or full-day kindergarten does not influence scores on the fall first-grad PALS test. Future studies might focus on the length of time a teacher spends on language instruction within the day, regardless of the length of the classroom day.

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# CHAPTER I

## Introduction

Kindergarten is a crucial and exciting time in a young learner's academic life. There are many factors that influence the success of a kindergarten program and one of the key factors is thought to be the length of the school day. The length of the day for a kindergarten student varies from state to state and even region to region. There are typically two kindergarten formats: half-day in which students attend school three and half-hours per day, and full-day in which students attend school for seven hours per day.

Kindergarten classrooms are typically made up of one teacher, one teaching assistant and fifteen to twenty-five students. The age of the kindergarten student ranges from four-years-old to seven-years-old. The kindergarten curriculum includes a large and increasing number of skills. These skills cover many social and academic developments that are crucial to the students' successful progress the following year.

As more and more demands are placed on the school systems (e.g., state and federal standards), kindergarten curriculums expand. Current curriculums already require kindergarten teachers to make the most of each hour the students attend school. The new demands put an extra burden on an already time-constrained half-day kindergarten classroom. The half-day kindergarten format must provide the students with the same exposure to all material as the full-day kindergarten format.

Studies have proven that young learners need a great deal of exposure to many aspects of language and literacy components. The preschools through first grade years



are very crucial to all areas of language development. Kindergarten curriculums emphasize phonological awareness, phonics, fluency, core reading vocabulary, and comprehension, which are five of the key areas that a student needs to become a successful reader, as well as, a well-rounded learner.

New education standards are usually accompanied by assessments that try to determine if students are mastering these standards and critical skills. Phonological Awareness Literacy Screening (PALS) is one such test that is given to kindergarten and first-grade students to evaluate mastery on the five key language areas mentioned above. It is commonly assumed that teachers with more time with their students have more time available to focus attention to areas of language development, and that doing so better prepares the students in five key language areas. If this assumption were true, then the students attending full-day kindergarten would achieve higher first-grade PALS scores than those students attending half-day kindergarten programs.

#### Statement of the Problem

The problem of this study was to determine if students that attend full-day kindergarten would be more likely to achieve higher scores on the fall first-grade Phonological Awareness Literacy Screening (PALS) than students that attended half-day kindergarten programs.

## Hypothesis

To solve this problem, the following hypothesis was developed:

H<sub>1</sub>: Students that attended full-day kindergarten programs will outperform those students that attend half-day kindergarten on the fall first-grade Phonological Awareness Literacy Screening (PALS).

## Background and Significance

The concept of kindergarten dates back to 1837 in Germany. Friedrich Froebel developed the first kindergarten and is therefore often named the "Father of Kindergarten" (Cremin, 1996). It is in this first kindergarten that future kindergartens began to model theories and practices. A child needing to have time to play in order to learn was the basis behind Froebel's theory of kindergarten. From Froebel's kindergarten, other areas began to adopt this idea and created kindergartens that at first were offered to needy families that had children that were faced with poverty. "Many nurseries at this time would coincide with the kindergartens which were run by the philanthropically minded women in order to serve the families of the poor" (Cremin, 1996).

These students were given the experience of kindergarten to offer them the opportunity to learn skills such as discrimination, cooperation and problem solving. As time passed, the National Education Association in 1872 began to support the idea of kindergarten. This interest in the concept of kindergarten grew into a department of kindergarten in 1884. From that date on, kindergarten has taken hold at many public and private schools worldwide. Although there are many variations in which the curriculum

and formats of these kindergartens are structured, today kindergarten is an accepted stage in the academic process.

Today's kindergartens may vary slightly in curriculum, however the kindergarten formats are limited. Research reveals two basic kindergarten formats: full-day and half-day. Full-day kindergarten students attend school for seven hours per day. Half-day kindergarten students attend school for three-and-a-half hours per day. In both of these kindergarten formats, the same standards and curriculum are introduced. The difference lies in the amount of time in which the teacher has to introduce skills and concepts within instruction and the way in which the school day can be scheduled due to the difference of time available.

Both kindergarten formats are designed to help students develop both socially and cognitively (West, 2001). The kindergarten year is key to students' academic development and interactions with both peers and adults.

Along with the important social developments that are made in the kindergarten year, there are some very important language developments that occur. Five key language-developmental areas for kindergarten are "phonological awareness," "phonics," "fluency," "core reading vocabulary," and "comprehension." These key areas have a great influence on students' future reading success.

Phonological awareness is the ability to deal explicitly and segmentally with sound units smaller than the syllable. Phonics is a method of teaching people to read by training them to associate letters with their phonetic values. Fluency is the ability to read at a consistent rate or speed. Core reading vocabulary is a selective listing of words and

phrases. Finally, comprehension is the ability to relate a previously unseen passage of text with related questions. All of these areas are introduced during the kindergarten year. It is through the introduction and mastery of these skills that students will later become better readers and learners.

As kindergarten programs take on additional academic standards and more skills into their curriculum, it becomes harder for the teacher to adequately cover these skills in the appropriated school year. For half-day kindergarten teachers, this becomes even harder. The standards have not changed for the half-day classroom and the skills become no less important to the learner. The half-day teacher must focus on both the quantity and the quality of the instruction. These classrooms have less time to provide experiences for instruction of these language concepts. In a full-day kindergarten, teachers have a chance to provide a more relaxed academic experience with more time to interact with the students (Rothenberg, 1995). They can spend more time with the students on remediation and enrichment in the areas of language development.

With standards movements in education come the need to evaluate whether these standards are being met. In kindergarten and first grade one such tool of assessment available to schools is the Phonological Awareness Literacy Screening (PALS). This assessment was developed at the Curry School of Education at the University of Virginia. This test assesses the five key language areas mentioned in this paper. PALS is administered in the fall portion of the academic year to assess the skills the students entered school with. It is re-administered in the spring portion of the academic year to assess the growth of the student's skills. Results for these tests are used to guide the teacher in future planning of student language instruction. Identifying areas of student

weaknesses in these crucial language areas helps the teacher aid the student in strengthening these skills. These key areas have been identified as areas that students need to meet success to have confident reading skills in their future academic years.

As stated, kindergarten is a crucial time in the academic life of a student. Phonological awareness, phonics, vocabulary, fluency and comprehension are very important to developing successful readers and learners. With importance of these skills understood, an educator must focus on spending the appropriate amount of time in these areas. While all educators believe these areas to be critical to the curriculum in the area of language development, limited time is available to these language development skills.

Other skills and concepts in various areas of instruction are important as well. Time spent on a given topic or all topics depends on the age of the student. The length of attention and variety of instruction must be matched to the students needs. The more hours available, the more time available to individualize instruction and emphasize skills to the degree needed. The instruction in full-day kindergarten provides the opportunity for the teacher to vary the daily schedule, increase the amount of time spent on key areas of development, and provide remediation and enrichment in all areas of language development. It can provide more opportunities to expose the students to interactions with language development activities with peers and adults.

Full-day kindergarten teachers, with the additional instruction hours, are able to provide students with more language development instruction. Additional classroom instruction time spent in these areas will allow for stronger, more confident students in language skills. As the students advance to first-grade, confidence should be shown in

language areas. The extra classroom instruction, exposure to language concepts and skills and additional time spent on language interactions with peers and adults will provide the full-day kindergarten student with a much-needed strong background in language development.

### Limitations

Limitations of this study were as follows:

1. A limited number (eight) of classrooms were evaluated.
2. The study included only students that attended kindergarten and first grade in the same school district and excluded students that may have attended private kindergarten and then public first grade. This consideration was due to the different approaches that may exist between the two programs, as well as, the difference that may exist in the standards or lack of standards between the two types of schools.

### Assumptions

It was assumed that all participating teachers were licensed to teach kindergarten, were held to the same state and federal standards, and used consistent curriculums (they were all Virginia public school teachers). It was also assumed that the teachers acknowledged the importance of language development in young students and emphasized language development to the extent that time permitted.

### Procedures

Four first-grade classrooms composed of students that attended half-day kindergarten formats and four first-grade classrooms composed of students that attended full-day kindergarten were selected. Permission to perform this research study was

obtained from the Hampton school district. Permission was obtained from the principal of both schools and the Director of Psychological Services for Hampton City Schools. The data were collected in all five areas, compared and tested. Outcomes were analyzed and reported in the research study.

### Definition of Terms

This section clarifies several study-related terms. The following terms were important for the explanation of information on this topic:

1. PALS: Phonological Awareness Literacy Screening. It assesses skills in the areas of phonological awareness, phonics, fluency, reading vocabulary and comprehension.
2. Half-day kindergarten: A kindergarten program that has student instruction for three and half-hours per day.
3. Full-day kindergarten: A kindergarten program that has student instruction for seven hours per day.
4. Phonemes: a speech sound that distinguishes one word from another, for example, the sounds “d” and “t” in the words “bid” and “bit”.
5. Onsets: the initial sound of a word, for example “b” in the word “bat”.
6. Rime: the ending portion of a word, for example “at” in the word “bat”.

### Overview of Chapters

In Chapter I, emphasis was given to the importance of kindergarten to the academic life of a student. Kindergarten is a time for learners to grow both socially and

academically. As the child enters kindergarten in Virginia, they may be enrolled in one of two different formats: full-day kindergarten and half-day kindergarten. In full-day kindergarten students receive double the hours of instruction in an academic year than a half-day kindergarten student receives.

At this critical time in the student's life there are key language development areas that teachers focus on throughout the school year. Phonological awareness, phonics, vocabulary, fluency and comprehension are five of those key skills and concepts that young learners need to meet with confidence and success in order to become a successful reader in the future. In a full-day kindergarten class, the additional hours could mean additional hours of instruction focused on the key language development areas. As these students face assessments in areas of language concepts and skills, the student will meet greater success. PALS is one such test that many first-grade students encounter. The additional instruction in the kindergarten year may give students more confidence and experience in the areas the test assesses.

In Chapter II, information was provided on the two types of kindergarten, areas of language development, information on PALS testing and support for full-day kindergarten. This was done through a review of literature that was relevant to this study. In Chapter III, explanation was given of the data that served as the support for the study. The methods used to collect the data were also presented. In Chapter IV, researcher findings were revealed that were discovered through this research. Finally, a summary and conclusions was recorded in Chapter V. Recommendations were also provided as a potential follow-up to this research study.



## CHAPTER II

### Review of the Literature

This chapter provides a literature review of four aspects investigated in this study. The focus of the literature review was studies providing information on half-day kindergarten, full-day kindergarten, kindergarten language development skills, and PALS assessment.

#### Half-day Kindergarten

Half-day kindergarten is one type of kindergarten program. With this format, students are in the classroom setting approximately three and a half hours. Supporters of half-day kindergarten consider the length of the half-day program are most appropriate considering the age of the children and the typical attention span of kindergarten children.

Studies have also found that a kindergartener's level of interest and familiarity with the home setting contributes to separation problems. Shorter days allow a young child more time in familiar settings such as home or childcare programs that are typically less focused and structured (Rothenberg, 1984).

Half-day kindergarten programs are often abandoned due to the standards-based movement in which it is believed that more academic school time is needed in kindergarten. Some studies contradict this belief. In these studies, parents, educators and administrators are urged to consider the age and ability of the child within the program and the relationship of academic instruction on stress of younger learners (Olsen & Zigler, 1989).

Another cited concern of moving away from half-day kindergarten instruction is that teacher's may just extend the day but not add anything of true academic or social value to the student's classroom environment. Extending the day does not guarantee that the teacher will be offering such things as a well-balanced literacy program with more emphasis placed on phonological awareness, phonics, fluency, vocabulary and comprehension, key areas of language development for the kindergarten years. More time does not mean better instruction (Katz, 1995).

### Full-day Kindergarten

Full-day kindergarten is another option for the kindergarten program. Full-day kindergarten students are in a classroom environment for the entire school day. Due to the extended time in a classroom environment, studies have found increased academic progress while in kindergarten, as well as, first grade readiness. Studies found more academic success in areas such as literacy (Elicker & Mathur, 1997).

Other studies found that effective teaching practices are exercised more in full-day kindergarten. In full-day kindergarten programs, teachers increase the use of small-group and individualized instruction. The advantage of having more time to tailor instruction to individual needs has a great impact on literacy achievement. These areas are often the place where literacy instruction takes place. When used effectively, increasing these teaching practices are of great benefit to the young learner (Hough & Bryde, 1996).

Full-day kindergarten has also been found to decrease the stress on teachers that are trying to provide the same academic experience and content that half-day teachers

must accomplish. These studies found that longer days and less teacher stress promote better flow of the school routine and more time to delve into topics for extended periods of time (Clark, 2001).

### Language Development Skills

Phonological awareness, phonics, comprehension, vocabulary and fluency are five key areas of focus in an early literacy. When met with confidence, these crucial areas make a great difference in a student's reading success. These five areas carry such importance they have been named the reading priorities by the federal government's "No Child Left Behind" legislation.

Phonological awareness is the ability to process sound units smaller than a syllable, which includes onsets, rimes and phonemes. Studies showed that students that meet success in phonological awareness areas have an easier time learning to read. Phonological awareness importance lies in sound interpretation. If students struggle with hearing and interpreting sound segments then they struggle with fluent and accurate reading. These struggles often lead to later reading problems.

Phonics instruction makes a connection between print and sounds. Students need this part of language development to decode words correctly. Studies have found that when phonics instruction is applied systematically, students experienced increased academic achievement.

Comprehension is the ability to read for meaning and vocabulary. Comprehension is the ability to understand the meaning of words, along with the ability to apply the word to the appropriate setting. Since a great deal of comprehension focuses

on vocabulary these two areas go hand-in hand. Increasing success met in these two areas increases reading competency. Studies have found that comprehension and instruction of vocabulary should be matched (Smith, 2000).

Fluency is the speed in which a reader is able to read and comprehend what is read. Fluent readers are able to self-correct when a reading mistake occurs. Studies have found that fluency improves when hearing other fluent readers read aloud. Increasing the opportunities to read books that are matched to a student's reading level build confidence and fluency in a reader.

#### Phonological Awareness Literacy Screening (PALS)

Phonological Awareness Literacy Screening (PALS) is a test provided by the state of Virginia to assess key language development concepts in kindergarten through third grade. The test is designed to identify students that may be below grade level in reading. After identification, weak areas can then be targeted for remediation instruction. The test can also show strengths in students so that instruction can be tailored to the students' ability level.

In developing the test, researchers administered the test to over 4000 students. The student's results on these tests helped to show the reliability and validity of the test. Each word on the assessment was analyzed to determine if it would be used on the assessment. It looked at teacher feedback, amount of variance, item to total correlation, as well as, Cronbach's alpha. Cronbach's alpha is an analysis test used to determine consistency within a test. If a correlation lower than .80 occurred, which indicates low item to total correlation, or negative feedback from a teacher, the item would not be used

on the test. They also depended on grade-level placement for words through crosschecking the word within frequency bands found in the American Heritage Word Frequency Book (Egerston, 1987).

The PALS test is administered in the fall and spring of the school year. Scores are then compared to identify growth areas. The test assesses students in the areas of letter recognition, sound recognition, word recognition, spelling, fluency and comprehension. Studies have found that increased exposure in tested areas and successful encounters with reading development scores may increase performance on the test. The test is used in 29 states and six countries.

#### Summary

Studies have found that half-day kindergarten performance is increased with the benefit of less stress achieved through more exposure to familiar environments (e.g., home) and decreased need to stretch beyond their normal attention span. Full-day kindergarten has been found to increase student performance through increased individualized instruction and less stress on the teachers to meet their performance requirements.

Studies have found that there are five key language development skills (phonological awareness, phonics, vocabulary, fluency and comprehension) that when emphasized in early development, increases academic reading performance. PALS has been found to be an effective assessment tool for measuring and improving language development skills by gathering the data needed to identify areas for individualized instruction.

## CHAPTER III

### Methods and Procedures

The study was experimental research. The purpose of an experimental research study is to examine a comparison of two groups. The focus of the research was to examine cause and effect. In this study, the research assessed whether the type of kindergarten program affected the performance of student's outcome on the fall first-grade Phonological Awareness Literacy Screening (PALS) language test.

To test the research objective, a chi-square test procedure was used. This chapter describes the PALS user population, the research variables and the instrument design used to sample the population. It also includes the methods and procedures used in the classroom testing procedure, the methods of data collection, and statistical analysis.

#### Population

The research study population consisted of 154, first-grade students (M age = 6.2 years). Of the students included in the population, 51% of the students attended a full-day kindergarten format and 49% of the students attended a half-day kindergarten format. The gender analysis of the population was as follows: 58% males and 42% females. The students all attended an ethnically diverse kindergarten in Hampton, Virginia. Participants, within a classroom, that attended kindergarten in another school system were not included in the research sample. The ethnic breakdown of the study sample was as follows: 60% African Americans, 30% Caucasian, 6% Spanish and 4% Asian. School records determined the ethnic breakdown of the student sampled.

The students participating did not attend schools that qualified for Title I compensatory education funds. By the principals' request, no other data were gathered on the socioeconomic status of the students. All students were educated in classrooms that used the same city-mandated academic curriculum. They were all exposed to skills and concepts that came from the same Virginia Standards of Learning. The entire research population took the identical fall first-grade PALS test regardless of their different classroom location. Based on academic skills, the population was a heterogeneous group of students.

#### Research Variables

There was one research independent variable in this study: the type of kindergarten program the students attended. Kindergarten programs were either half-day or full-day. Students that attend half-day kindergarten attended school for three-and-a-half hours a day. Students that attend full-day kindergarten attend school for seven hours a day. The dependent variable was the expected change in PALS test scores.

#### Instrument Design

Each first-grade participant involved in the research study took the fall first-grade PALS language test developed by Curry School of Education at the University of Virginia. The PALS language test is used in Virginia, as well as other states, to assess basic language skills and concepts. The test is a state-provided screening that is used by school systems, on a voluntary basis. If chosen, the assessment is given in kindergarten through third grade. The test is administered in the fall and spring of the academic year. All first grade tests are identical and are administered in the same format based on written guidelines provided to each teacher. PALS was designed to assess a student's knowledge

of important literacy fundamentals, including phonological awareness, alphabet knowledge, knowledge of letter sounds, spelling, concept of word, word recognition in isolation, and oral passage reading.

#### Classroom Testing Procedures

The fall first-grade PALS test is given by the classroom teacher and with the help of a teaching assistant, if available. It is given in short time segments over a period of approximately two weeks. The majority of the test is administered one-on-one with the exception of the spelling test that can be administered in a small group setting. The students are not restricted by a time limit.

Due to the age and reading ability of the test taker, the person administering the test gives the test through oral directions. There are guidelines provided to the tester concerning how many errors a student is allowed to make that dictate the stopping point of each portion of the test. Once the test is completed the number of correct responses are totaled to determine a level of language development for each student in a given category.

#### Methods of Data Collection

The research study used the scored data that was collected on each student in the test population. The test measures five language components (sound recognition, word recognition, spelling recognition, oral reading and comprehension). Approval to request consent to use the data was gained through the Hampton Public School administration and each school principal. Consent to use the student's data was not from each guardian due to the fact that the research study will be used as a program evaluation for Hampton Public Schools.



Once consent was granted, the data could be compiled. Confidentiality measures included preventing teachers from identifying students by name. A random number was assigned to all first grade students participating.

Since the research focused on the two different types of kindergarten classroom experiences, the total scores for each group were compared against each other. The comparison was used to see if either type of kindergarten had an effect on the student's performance on the fall first-grade PALS results. Data were used to answer questions for future understandings concerning the advantages of kindergarten preference in relation to length of day.

#### Statistical Analysis

The research study used Chi-Square as the means to gain information concerning the data. Chi-square was chosen because the research dealt with nominal data. This form of statistical analysis best allowed the researcher to draw conclusions about the proposed hypothesis and its level of statistical significance.

#### Summary

The population of the research study was a group of first grade students that had attended half-day kindergarten and a group of first grade students that had attended full-day kindergarten. The setting for the testing was eight first grade classrooms in two different schools in the Hampton Public School System. Once this population had taken the fall first-grade PALS test, the data were recorded and collected. A chi-square test was applied to the data so that the hypothesis made in the study could be assessed. The data collected in the research study was used to yield information concerning the effects of the type of kindergarten program on the fall first-grade PALS language test results.

## CHAPTER IV

### Findings

The research study described herein was designed to determine if the kindergarten format (half-day or full-day) impacted performance on the First Grade, Fall Phonological Awareness Literacy Screening (PALS) assessment. Data from 154 PALS assessments were collected and analyzed.

#### Data Analysis

The data were accumulated from both groups of kindergarten students, half-day and full-day, once they completed the fall, first-grade PALS assessment. Each classroom teacher participating in the study administered and scored the assessment in each classroom setting. The data were then collected and compiled.

The fall, first-grade benchmark score was 39. The benchmark was calculated by assigning points for correct answers within key sub-tests language areas within the tests. The language areas of each sub-tests focused on phonics, phonemic awareness, vocabulary, fluency and comprehension. Each sub-test receives points based on each correct answer attempt, which is then totaled for the final benchmark score. Comparing the student's assessment score to the PALS benchmark score is used to make instructional guidelines and evaluations. Instructional plans can then be made for future remediation or enrichment in the key language areas tested.

For statistical analysis, a table was compiled of the participant scores, the PALS benchmark, and whether the participant passed or failed. There were 154 participants in the study, so the table was segmented for this report. The data for the full-day

participants (1-78) are in Tables 1. The data for the half-day participants (79-154) are in Tables 2.

**Table 1: Full-day Scores**

Participant Number	Participant Score	PALS Benchmark	Pass/Fail
1	45	39	Pass
2	76	39	Pass
3	55	39	Pass
4	56	39	Pass
5	65	39	Pass
6	77	39	Pass
7	47	39	Pass
<b>8</b>	<b>27</b>	<b>39</b>	<b>Fail</b>
<b>9</b>	<b>35</b>	<b>39</b>	<b>Fail</b>
10	46	39	Pass
11	50	39	Pass
12	75	39	Pass
<b>13</b>	<b>29</b>	<b>39</b>	<b>Fail</b>
14	76	39	Pass
15	47	39	Pass
16	73	39	Pass
<b>17</b>	<b>34</b>	<b>39</b>	<b>Fail</b>
18	63	39	Pass
19	82	39	Pass
<b>20</b>	<b>35</b>	<b>39</b>	<b>Fail</b>
21	65	39	Pass
<b>22</b>	<b>35</b>	<b>39</b>	<b>Fail</b>
23	74	39	Pass
24	78	39	Pass
25	47	39	Pass
26	60	39	Pass
27	71	39	Pass
<b>28</b>	<b>31</b>	<b>39</b>	<b>Fail</b>
29	69	39	Pass
30	52	39	Pass
31	74	39	Pass
32	68	39	Pass
<b>33</b>	<b>35</b>	<b>39</b>	<b>Fail</b>
34	53	39	Pass
35	57	39	Pass
36	67	39	Pass
37	60	39	Pass
38	65	39	Pass
39	42	39	Pass
40	41	39	Pass
41	63	39	Pass
42	56	39	Pass
43	75	39	Pass
44	65	39	Pass
<b>45</b>	<b>35</b>	<b>39</b>	<b>Fail</b>

<b>46</b>	<b>38</b>	<b>39</b>	<b>Fail</b>
<b>47</b>	<b>18</b>	<b>39</b>	<b>Fail</b>
<b>48</b>	<b>37</b>	<b>39</b>	<b>Fail</b>
49	56	39	Pass
50	83	39	Pass
<b>51</b>	<b>34</b>	<b>39</b>	<b>Fail</b>
52	55	39	Pass
53	57	39	Pass
<b>54</b>	<b>38</b>	<b>39</b>	<b>Fail</b>
55	72	39	Pass
56	72	39	Pass
<b>57</b>	<b>37</b>	<b>39</b>	<b>Fail</b>
58	48	39	Pass
59	49	39	Pass
60	60	39	Pass
61	54	39	Pass
<b>62</b>	<b>29</b>	<b>39</b>	<b>Fail</b>
63	48	39	Pass
64	65	39	Pass
65	70	39	Pass
66	55	39	Pass
67	57	39	Pass
68	39	39	Pass
69	49	39	Pass
<b>70</b>	<b>36</b>	<b>39</b>	<b>Fail</b>
71	74	39	Pass
72	59	39	Pass
73	42	39	Pass
74	62	39	Pass
<b>75</b>	<b>29</b>	<b>39</b>	<b>Fail</b>
76	61	39	Pass
77	59	39	Pass
78	43	39	Pass

**Table 2: Half-day Scores**

<b>Participant Number</b>	<b>Participant Score</b>	<b>PALS Benchmark</b>	<b>Pass/Fail</b>
79	76	39	Pass
80	64	39	Pass
81	41	39	Pass
82	45	39	Pass
83	53	39	Pass
<b>84</b>	<b>34</b>	<b>39</b>	<b>Fail</b>
85	66	39	Pass
86	46	39	Pass
87	72	39	Pass
88	53	39	Pass
89	40	39	Pass
90	46	39	Pass
91	45	39	Pass
92	88	39	Pass
93	75	39	Pass
<b>94</b>	<b>33</b>	<b>39</b>	<b>Fail</b>

95	40	39	Pass
96	75	39	Pass
<b>97</b>	<b>37</b>	<b>39</b>	<b>Fail</b>
98	39	39	Pass
99	41	39	Pass
100	41	39	Pass
101	44	39	Pass
102	46	39	Pass
103	48	39	Pass
104	51	39	Pass
105	54	39	Pass
106	55	39	Pass
107	56	39	Pass
108	56	39	Pass
109	60	39	Pass
110	62	39	Pass
111	64	39	Pass
112	64	39	Pass
113	68	39	Pass
114	72	39	Pass
115	73	39	Pass
116	86	39	Pass
<b>117</b>	<b>23</b>	<b>39</b>	<b>Fail</b>
<b>118</b>	<b>25</b>	<b>39</b>	<b>Fail</b>
<b>119</b>	<b>25</b>	<b>39</b>	<b>Fail</b>
<b>120</b>	<b>29</b>	<b>39</b>	<b>Fail</b>
<b>121</b>	<b>37</b>	<b>39</b>	<b>Fail</b>
122	41	39	Pass
123	42	39	Pass
124	43	39	Pass
125	45	39	Pass
126	45	39	Pass
127	46	39	Pass
128	46	39	Pass
129	46	39	Pass
130	49	39	Pass
131	52	39	Pass
132	57	39	Pass
133	59	39	Pass
134	63	39	Pass
135	70	39	Pass
<b>136</b>	<b>37</b>	<b>39</b>	<b>Fail</b>
137	40	39	Pass
138	40	39	Pass
139	40	39	Pass
140	44	39	Pass
141	46	39	Pass
142	47	39	Pass
143	57	39	Pass
144	59	39	Pass
145	59	39	Pass
146	60	39	Pass
147	61	39	Pass

148	62	39	Pass
149	67	39	Pass
150	69	39	Pass
151	71	39	Pass
152	75	39	Pass
153	79	39	Pass
154	88	39	Pass

The data were analyzed using the Chi-Square tests to determine if there was a statistically significant difference between the scores of the half-day format participants and the full-day format participants (Table 3).

**Table 3: Chi-Square Matrix**

	<b>Pass</b>	<b>Fail</b>
<b>Full-Day Kindergarten</b>	<b>60</b>	<b>18</b>
<b>Half-Day Kindergarten</b>	<b>67</b>	<b>9</b>

Completion of the Chi-Square statistical analysis resulted in a Chi-Square value of 3.36. The degree of freedom was one. The research hypothesis of this study was directional, meaning that it stated the expected outcome. Directional hypotheses, or one-tailed hypotheses, are required when analyzing numbers on the Chi-Square Critical Value table. The level of significance was examined at the 0.05 and 0.01 level. The value at the 0.05 level of significance was 3.84 and the value at the 0.01 level of significance was 6.64.

### Summary

The research study was created to establish the relationship between students that attended half-day kindergarten programs and students that attended full-day kindergarten

programs in the area of performance on the fall, first-grade PALS language assessment. The data were gathered from 154 first grade students that attended kindergarten in two local elementary schools in the Hampton City School System. Students were assigned a pass/fail label based on comparison of their score with the PALS assigned benchmark score. The data were then analyzed. To determine if there was a significant difference in the frequencies between the two groups' scores, a Chi-Square test was done. Based on the results, conclusions were drawn and recommendations made.

## CHAPTER V

### Summaries, Conclusions, and Recommendations

The research study compared half-day kindergarten formats with full-day kindergarten formats through comparison of student performance on the fall, first-grade Phonological Awareness Literacy Screening (PALS) assessment. The research and testing took place at two Hampton City Public Schools using eight first grade classrooms. Four of the first-grade classrooms were made up of students that had attended half-day kindergarten programs and four of the first-graded classrooms were made up of students that had attended full-day kindergarten programs.

#### Summary

Kindergarten is a crucial time in the early learner's academic years. Kindergarten programs consist of half-day and full-day formats. Due to the difference in instructional hours between the two formats, this research study was used to determine the impact of kindergarten formats on the students' fall, first-grade PALS scores. To solve this problem, the following hypothesis was developed:

H<sub>1</sub>: Students that attended full-day kindergarten programs will outperform those students that attend half-day kindergarten on the fall first-grade Phonological Awareness Literacy Screening (PALS).

Virginia public schools use PALS language assessment to assess kindergarten through second grade students in five key language areas. The language areas include phonics, phonemic awareness, vocabulary, fluency and comprehension. The research



study focused on kindergarten format in relation to these key language performance areas. It was driven by new debates on the choice in length of day for the kindergarten students. This research study was independent of studies completed by the creators of the PALS test, at the University of Virginia. The PALS assessment was the measurement used to assess students' language performance.

Limitations existed within the research study. The study included a limited number of classrooms from two elementary schools within the Hampton City Public School System. The research study included only students that had attended kindergarten in Hampton City Public Schools so that instruction, curriculum and teaching expectations were assumed consistent. PALS assessments were given with the same administration guidelines. The PALS assessment is identical for each first-grade participant and the benchmark is the same for each student.

Population of the research study included first graders from two elementary schools in Hampton, Virginia. The study included 76 (49%) half-day kindergarten students and 78 (51%) full-day kindergarten students. The total number of students participating was 154 first grade students with a mean age of 6.2 years. The gender breakdown of the population was as follows: 58% males and 42% females. The students all attended an ethnically diverse kindergarten in Hampton, Virginia. Participants, within a classroom, that attended kindergarten in another school system were not included in the research sample. The ethnic breakdown of the study sample was as follows: 60% African Americans, 30% Caucasian, 6% Spanish and 4% Asian.

The students participating did not attend schools that qualified for Title I compensatory education funds. All students were educated in classrooms that used the

same city-mandated academic curriculum. They were all exposed to skills and concepts that came from the same Virginia Standards of Learning. The whole research population took the identical fall first-grade PALS test regardless of their different classroom location. Based on academic skills, the population was a heterogeneous group of students.

The fall, first-grade PALS assessment was the instrument used to measure language skills in the areas of phonics, phonemic awareness, vocabulary, fluency, and comprehension. The instrument was used consistently based upon guidelines designated by the PALS testing format. The testing instrument was administered in short time segments over a period of approximately two weeks. The majority of the test was administered one-on-one with the exception of the spelling test that could be administered in a small group setting. The students were not restricted by a time limit. Nominal data were used to evaluate the hypothesis. The data were analyzed through Chi-Square analysis.

### Conclusions

The research study had one hypothesis.

$H_1$ : Students that attended full-day kindergarten programs will outperform those students that attend half-day kindergarten on the fall first-grade Phonological Awareness Literacy Screening (PALS).

Completion of the Chi-Square statistical analysis resulted in a Chi-Square value of 3.36. The degree of freedom was one. The research hypothesis of this study was directional, meaning that it stated the expected outcome. Directional hypotheses, or one-

tailed hypotheses, are required when analyzing numbers on the Chi-Square Critical Value table. The level of significance was examined at the 0.05 and 0.01 level. The value at the 0.05 level of significance was 3.84 and the value at the 0.01 level of significance was 6.64.

The Chi-Square test showed no statistically significant difference between the two groups' scores. Therefore, the hypothesis was rejected, and it can be concluded that participation in half- or full-day kindergarten does not influence scores on the fall first-grade PALS test.

### Recommendations

Findings from this study may lead to further research of factors influencing the fall, first-grade PALS scores. Future studies may investigate the amount of time spent, per classroom, on language instruction independent of the length of the day. Sub-tests within the PALS assessment could be further analyzed to determine if one language skill received higher mastery per students than another. Future studies may want to focus more on areas outside the kindergarten setting, such as if the students attended preschool programs or if the students have had outside remediation in language areas. PALS assessment is only one language assessment; additional language studies may be a focus for new research study.

Training for teachers may be another area of future study replications. Focus could be placed on number of years of experience in the kindergarten setting. Style of teaching and amount of time spent in the areas of language may also be estimated to narrow the study for more direct results.

## References

- Bromley, Anne. (2003). UVA Top News Daily.
- Clark, Patricia. (2001). Recent Research on All-Day Kindergarten. ERIC Clearinghouse on Elementary and Early Childhood Education.
- Clark, Patricia, & Kirk, Elizabeth. (2000). All-day Kindergarten. Review of Research. Childhood Education, 76(4), 228-31. (ERIC\_No. EJ606950).
- Cremin, Lawrence. American Education. (1996). Ed. Vol.14. Colliers Encyclopedia.
- Dunne, Diane Weaver. (2000). All Kids Make Progress in Kindergarten. Education World.
- Egertson, Harriet A. (1987). The Shifting Kindergarten Curriculum. ERIC Clearinghouse on Elementary and Early Childhood Education.
- Elicker, J. and Mathur, S. (1997). What Do They Do All Day? Comprehensive Evaluation of Full-Day Kindergarten. Early Childhood Research Quarterly, 12(4), 459-480. EJ 563 073.
- Hough, D. and Bryde, S. (1996). The Effects of Full-Day Kindergarten on Student Achievement and Affect. ERIC\_NO. EJ395 691.
- Katz, L.G. (1995). Talks With Teachers of Young Children.. ERIC\_No. ED 380 232.
- Olsen, D. and Zigler E. (1989). An Assessment of the All-day Kindergarten Movement. Early Childhood Research Quarterly, 4(2), 167-186. ERIC\_No. EJ 394 085.
- Rothenberg, Dianne. (1995). Full-Day Kindergarten Programs. ERIC\_NO. EJ436702.
- Sensenbaugh, Roger. (1996). Phonemic Awareness: An Important Early Step in Learning To Read. ERIC\_No. ED4233523.
- Shepard, Lorrie A. and Smith, Mary Lee. (1998). Escalating Kindergarten Curriculum. ERIC\_No. ED317935.
- Smith, Carl B. (2000). Vocabulary Instruction and Reading Comprehension. ERIC\_No. EJ236146.
- Walker, Barbara J. (2000). Diagnostic Teaching of Reading 4<sup>th</sup> edition. Merrill Prentice Hall.

Stanovich, Keith E. (1994). Romance and Reality (Distinguished Educator Series). *Reading Teacher*, 47(4), 280-91. ERIC\_No.EJ 477302.

West, Jerry, Denton, Kristin, and Reaney, Lizabeth M.(2000). The Kindergarten Year. *Education Statistics Quarterly*.

Yopp, H.K. (1992). Developing Phonemic Awareness in Young Children. *The Reading Teacher*, 4. 696-703.