An Assessment of Home and Classroom Literacy Environments and the Emergent Literacy Development of Kindergarten Students in Two Southwestern Michigan School Districts

Magdalene Tobias
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AN ASSESSMENT OF HOME AND CLASSROOM LITERACY ENVIRONMENTS AND THE EMERGENT LITERACY DEVELOPMENT OF KINDERGARTEN STUDENTS IN TWO SOUTHWESTERN MICHIGAN SCHOOL DISTRICTS

A Dissertation
Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by

Magdalene Tobias

July 2000
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ABSTRACT

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Chair: Hinsdale Bernard
Abstract of Graduate Student Research

Dissertation

Andrews University
School of Education

Title: An Assessment of Home and Classroom Literacy Environments and the Emergent Literacy Development of Kindergarten Students in Two Southwestern Michigan School Districts

Name of researcher: Magdalene Tobias

Name and degree of faculty chair: Hinsdale Bernard, Ph.D.

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Problem

In some school districts, low literacy proficiency is a problem of tremendous proportion. Assessing whether a solid foundation is being laid is more important than focusing our efforts at remediation in the later years. This study aimed at investigating the illiteracy problem at the "root" level.

The purpose of the study was to determine the characteristics of the home and classroom literacy environments and the development of print, writing, and story
concepts of kindergartners in two selected school districts. It also explored whether there was a difference in the performance of students from morning, afternoon, alternate whole-day, and whole-day kindergarten programs. It also examined the relationships among several home environmental variables. It was envisioned that this study could reveal where children were at in their literacy development and provide teachers and parents with the opportunity to reflect on and improve their practice.

**Method**

One hundred and fourteen kindergartners participated in the study. The Preliteracy Inventory was used to collect data on the kindergartners’ print, story, and writing concepts. The data were analyzed using a one-way analysis of variance (ANOVA) and a one-way analysis of covariance (ANCOVA) to compare the performance of children in the four different types of kindergarten programs. Through a parent survey, data were collected on the home literacy environment. The seven teachers of the kindergartners were interviewed to collect data on the classroom literacy environment. The Chi-square test of independence was performed to test six hypotheses in order to determine whether a significant relationship existed among the selected variables.

**Results**

With regard to the three emergent literacy concepts measured, performance ratings indicated that, for each concept measured, the majority of students were in the process of developing the required skills. However, students were identified who fell below developmentally appropriate benchmarks.
The ANOVA of the four kindergarten programs on each emergent literacy concept indicated that they did not differ significantly except for the “how” component of print concepts—$F(3, 110) = 3.766, p < .05$, and the “writing story” component of writing concepts—$F(3, 110) = 6.779, p < .05$. Using age as a covariate, the ANCOVA for the four kindergarten programs on these two variables found that only the children in the afternoon kindergarten program performed significantly lower than their counterparts in the other programs—$F(3, 109) = 5.796, p < .01$, on the “writing story” component of writing concepts.

Interview data revealed that most homes and classrooms had many characteristics of a literacy-rich environment. Of the six null hypotheses tested with regard to the home environment, only one was rejected. The Chi-square test of independence found a significant relationship between the frequency with which a child is read to and child’s ability to read words and phrases in books ($\chi^2 = 10.37, p < .01$).

**Conclusions**

Assessment of kindergartners and their home and classroom literacy environments appears to be useful. Emerging from the findings are indications of aspects of the home and classroom environment that were satisfactory and others that could be improved. There were 25 (22%) students or fewer who fell below developmentally appropriate benchmarks on the three concepts measured. Comparisons of student performance by type of kindergarten program found no significant differences except for the “writing story” component of writing concepts. A significant relationship exists between frequency of reading to a child and a child’s ability to read words and phrases in books.
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I do dedicate this dissertation to my husband Hamil, and my three children who have been understanding and supportive all along. Indeed this dissertation is as much theirs as it is mine.
CHAPTER I

INTRODUCTION

Background to the Problem

In 1990, the National Governor's Association listed literacy among the six key areas for improvement during this decade. The International Adult Literacy Survey (IALS) of 1994, which assessed adult literacy in Europe and North America, intensified the concern for illiteracy in the United States. The study compared adult literacy skills in the United States with adult literacy skills in the other countries. Bowen (1999) states,

In other words, although the United States by most measures is the richest and most technologically advanced nation of those surveyed, its adult citizens are more likely to read and use information poorly than are adults in any of the other nations surveyed except Poland. (p. 314)

In a letter to Senator Robert Dole, Wood (1996) describes adult illiteracy as the source of the worst ills of the American society. In her view, "When the U.S. Department of Education released the first report on the congressionally mandated National Adult Literacy Survey in September 1993. President Clinton should have declared a period of National mourning" (p. 2).

According to Binkley and Williams (1996), "The performance of students relative to the achievement standards set by the National Assessment Governing Board suggests that American students do not reach sufficient levels of reading proficiency" (p. 62). In 1996, President Clinton launched the America Reads Challenge to enhance the
reading proficiencies of children. In support of this effort, USS300 million over 5 years was awarded to encourage literacy in the home thus complementing the efforts of "family literacy" programs (Bowen, 1999). However, at the end of this decade, in some school districts low literacy proficiency is a problem of tremendous proportion.

A look at the Michigan Educational Assessment Program further highlights the problem. Test criteria are based on what the students should know and the results could influence the school improvement process. For both districts under study, the scores on the Michigan Educational Assessment Program High School Test (1999) also provided results which suggested that the problem of illiteracy needs to be addressed urgently.

There are four categories of student scores: Endorsed Exceeded Michigan Standards, Endorsed Met Michigan Standards, Endorsed At Basic Level, and Unendorsed. For one of the school districts, the results for the reading test revealed that only 52.1% met Michigan Standards, 21.3% were endorsed at basic level, and 12.8% were not endorsed. For the other district, only 48.4% met Michigan Standards, 14.5% were endorsed at basic level, and 27.4% were not endorsed. With regard to the results for the writing test, for one district, only 41.1% met Michigan Standards, 44.4% were endorsed at basic level, and 8.9% were not endorsed. For the other district, only 32.3% met Michigan Standards, 50% were endorsed at basic level, and 17.7% were not endorsed (Tackett, 1999).

On the Essential Skills Reading Test (Winter 1999), performance was described as satisfactory, moderate, or low. In one of the districts under study, the overall performance of the Grade 4 students was 52.7% satisfactory, 32.7% moderate, and 14.5% low. The reading results for the other district’s Grade 4 students were a little better but still caused concern. Overall performance revealed 60% satisfactory, 29.5%
moderate, and 10.5% low. One district's Grade 7 reading results revealed 52.7% satisfactory, 32.1% moderate, and 15.3% low. For the other district, only 42.1% scored satisfactory. Performance on the Writing Assessments was described as Proficient, and Not Yet Proficient. With respect to the overall performance of one district's Grade 5 students, 75% were proficient, and 25% were not yet proficient. For the other district, only 42.5% of Grade 5 students were proficient. For the Grade 8 students, one district had 69% who were proficient, and 31% who were not yet proficient. The other district had only 48.1% who were proficient. (Michigan Educational Assessment Program Results, 1999).

The above results are indicators of literacy problems in the districts under study. It is evident that further evaluation of reading and writing needs to be undertaken. The earlier that literacy problems are addressed, the more competently children will be able to function in subsequent levels of schooling and to participate actively in a society that is becoming increasingly literate.

**Statement of the Problem**

Currently early literacy achievement is the focus of much attention because of its importance to lifelong success (Morrow, Strickland, & Woo, 1998). Clay (1991) emphasizes that when children enter school it is the teachers who need to know how to create appropriate instruction in order to build on their foundation whether it is rich or meager. Early assessment is needed to determine whether the kindergartners' performance falls within the typical range or whether early intervention is necessary.
Purpose of the Study

The purpose of this research effort was to assess the characteristics of the home and classroom literacy environments and the development of print, writing, and story concepts of kindergartners in the selected school districts. Through qualitative and quantitative analysis it described home and classroom literacy environments and students' emergent literacy development. It also explored differences in the performance of the students from the morning, afternoon, alternate whole-day, and whole-day kindergarten programs. Furthermore, the study investigated the relationship among selected home literacy environment variables.

Delimitations of the Study

The following restrictions were placed on the study by the researcher: (1) The study was conducted in elementary schools; (2) The sample included only those students who had been in regular attendance at school for that part of the school year prior to the collection of data—April 12 to June 11, 1999; and (3) Only three aspects of emergent literacy are investigated—print, writing, and story concepts.

Limitations of the Study

There are certain limitations in study that emerged as the study was conducted and analyzed. Lack of randomization, manipulation, and control limit the generalizability of the study. There was no randomization for selection of schools and classes; there was no random assignment of subjects to participate in the study. Intact groups were used. Gay and Airasian (2000) stated:

Random assignment of participants to groups is probably the single best way to try...
to ensure equality of groups. This is not possible in causal-comparative studies since the groups already exist and furthermore, have already received the "treatment," or independent variable. (p. 354)

Another limitation was that the study did not control for preschool attendance, for example, eliminating non-preschool attenders from the study, or selecting only students who attended preschool. In addition, the researcher had no control over the independent variables of home and classroom literacy environments and type of kindergarten program. These independent variables were merely selected. Therefore, it is possible that other variables may be the real cause of the observed differences among groups (Gay and Airasian 2000).

Another disadvantage was that there was a limit on sample size due to the individual nature of the assessment of print, writing, and story concepts. Furthermore, due to time and financial constraints, long-term, participant observation of the sample was not possible for the researcher. A longitudinal study that allowed for repeated observations of a child's concepts of print, story, and writing would yield more authentic information than that which is collected at one point in time as this design allows. There would also be more time for observation of social interaction, enjoyment, boredom, attention span, and other affective aspects which are all worthy of notice as the child emerges into literacy.

There were certain limitations imposed on the study by the instruments used. The Home Literacy Inventory collected time-ordered data. The respondents reported on their home literacy environments for current as well as previous times. This may have accounted for a source of error since times referred to may be different from the point in time of data collection on student performance as measured by the Home Literacy
Inventory. Respondents may not have remembered and reported accurately the information related to previous times, especially the distant past. The results of any retrospective, self-report instrument should be viewed with caution as Fox and Siedow (1992) stressed:

> The accuracy of recollections of past practices is not subject to contemporary verification, and responses may be influenced by a variety of factors including respondents’ perceptions of expected answers, interaction dynamics between those administering and those responding to the instrument, and inaccurate memories. Therefore, results are at best considered a basis on which questions for future research might be generated. (p. 145)

Furthermore, the study did not attempt to determine the causes of student literacy performance, but simply to explore possible effects of the independent variables on emergent literacy development. Gay and Airasian (2000) warns:

> Extreme cautions must be applied in interpreting results. An apparent cause-effect relationship may not be as it appears. As with a correlational study, only a relationship is established, not necessarily a causal one. The alleged cause of an observed variable may in fact be the effect, or there may be a third variable that has “caused” both the identified cause and effect. (p. 352)

Therefore, it may not be possible to determine the extent to which the independent variables (classroom and home literacy environments, and kindergarten programs) have affected the dependent variable (emergent literacy development.)

This study was conducted in two school districts only. Whereas generalizations may be made to the population from which the sample was drawn, generalizations to other populations may be inadvisable until further replications of the study are conducted.
Rationale

The above-mentioned indicators of illiteracy were offered primarily to emphasize the urgency of addressing the illiteracy problem. It is a troubling concern that, if not addressed, will negatively impact educational achievement for decades to come. Kindergartners were studied because the researcher wanted to investigate the illiteracy problem at the “root” level. Parents and teachers were able to determine where kindergarten children were at in their literacy development. Intervention measures could be considered.

Since improving our understanding of how best to lay a solid literacy foundation is more important than focusing our efforts at remediation in the later years, any attempt to secure a sound literacy foundation is worthwhile. Focusing on the assessment and development of the emergent literacy of kindergartners is like attempting to shape the twig as you want the tree to grow.

Significance of the Study

Support for the significance of this study can be seen in the opportunity for parents and teachers to examine their beliefs and practices. Parents and teachers were able to reflect on the type of literacy environment they have been providing for the development of emergent literacy in their children. They were required to engage in critical inquiry into their children’s development of print, writing, and story concepts—important concepts to be developed as the children emerge into literacy. This study also has the potential of comparing the practices of parents and teachers with the most current professional knowledge and research on developmentally appropriate
literacy practices. Additionally, teachers and parents will be given suggestions for how they could improve their instruction.

The overall effect of the findings, which can be used as a needs assessment, can make curriculum planning, design, and implementation more relevant to the needs of the students. Pratt (1994) warns that "curriculum committees working at the state and district level frequently continue to establish priorities not on the basis of empirical needs assessments, but on the basis of tradition and political pressure" (p. 60).

Most importantly, findings from this study revealed where children were along the literacy development continuum. Teachers and parents can use the findings to inform the instruction they provide so that they can take children from where they are to where they should be. More specifically, it is hoped that teachers and parents would improve their practice.

It is the intention of this study to add some new information to the knowledge base concerning emergent literacy, a relatively new paradigm in the field of reading. This study focuses directly on the literacy practices of parents and classroom teachers of students who attend half-day and whole-day kindergarten programs. This research builds on previous investigations by comparing morning, evening, alternate whole-day, and whole-day programs. Consequently, this study makes a significant contribution to the current knowledge base of emergent literacy, and to the ongoing debate on the achievement of students in whole-day and half-day kindergarten.

**Research Questions and Hypotheses**

Following are the research questions and hypotheses which set the priorities and
parameters for the study. Hypotheses #1, #2, and #3 test for differences among student performance in the different types of kindergarten programs. Hypotheses #4, #5, #6, #7, #8, and #9 test for relationships among selected home literacy environment variables.

Research Questions

1. Is there a relationship between the type of kindergarten programs and the performance levels of the kindergartners on print concepts, writing concepts, and a concept of story?

2. What are the essential characteristics of the home literacy environment of the kindergartners in the study?

3. What are the essential characteristics of the classroom literacy environment of the kindergartners in the various kindergarten programs?

Hypotheses Tested

The following three hypotheses are related to question 1 which investigated the relationship between type of kindergarten program and performance on print, writing, and story concepts.

1. There is a significant difference in performance on print concepts among the students in the four kindergarten programs in this study.

2. There is a significant difference in performance on story concepts among the students in the four kindergarten programs in this study.

3. There is a significant difference in performance on writing concepts among students in the four kindergarten programs in this study.
The following hypotheses are related to testing for relationships among the selected home literacy environment variables.

4. There is a significant relationship between how frequently a child is read to in the home and the child's ability to read words and phrases in books.

5. There is a significant relationship between how frequently a child is read to in the home and the child's ability to retell stories using the pictures in storybooks.

6. There is a significant relationship between how frequently a child is read to in the home and how frequently a child goes to the public library.

7. There is a significant relationship between emphasis placed on reading (reflected by the number of children's books in the home) and the children's pattern of television viewing.

8. There is a significant relationship between emphasis placed on reading (reflected by the number of children's books in the home) and the children's pattern of video viewing.

9. There is a significant relationship between emphasis placed on reading (reflected by the number of children's books in the home) and the children's pattern of educational television programs.

The first three hypotheses were tested using non-parametric and parametric ANOVA which yielded similar results. ANCOVA was used to test for differences among the groups on two variables—the "How" component of print concepts, and on the "Writing story" component of writing concepts. Chi-square was used to test for relationships among the selected home environment variables.
Definition of Terms

Emergent. "Teale and Sulzby (1986) pointed out that the term emergent has two facets: a continuation of old development and the beginning of something truly new" (Sulzby, 1994, p. 278).

Emergent Literacy. "The term emergent literacy conveys a different paradigm for understanding how children become print-savvy people. It suggests that we surround young children with books and with storytelling rather than simply try to teach them a specific sequence of letters, sounds, and high frequency words" (Smith, 1989, p. 528). "I have used the term emergent literacy to mean those reading and writing behaviors and concepts that precede and develop into conventional literacy" (Sulzby, 1994, p. 278).

Conventional. "Conventional . . . denotes a cultural agreement about a particular linguistic phenomenon—it is through convention or social agreement that we consider a particular linguistic usage to be proper or of a particular character" (Sulzby, 1994, p. 278).

Conventional Reading. "I defined it as the point at which children read from unfamiliar (or familiar) text and move flexibly and in a coordinated fashion across all aspects of reading to interpret a text" (Sulzby, 1994, p. 278).

Conventional Writing. "The definition of conventional writing that I have suggested (Sulzby, 1989) is that the child produces a text that another conventionally literate person can read conventionally and that the child also reads conventionally" (Sulzby, 1994, p. 278).

Print Concepts refers to the three separate strands of reading behavior that may develop simultaneously. They are the functions of print (why we read), the forms of print
(what we read such as print as opposed to pictures), and the conventions of print (how we read, which includes the understanding that print is read from left to right, that a space is used to separate letters and words, and the identification and functions of a period and other punctuation marks.) (Morrow et al., 1998).

*Writing Concepts* refers to the developmental progression in learning to communicate through writing that includes the young child's drawings, scribbles, letter-like characters, invented spelling, and finally correct letter formation and spelling.

*A Concept of Story* in this study refers to the understanding of the basic story elements used in the instrument—beginning, setting, characters, sequence, feelings, description, conversation, and ending (Nurss, 1995).

*Home Literacy Environment* refers to those influences in the home that have an impact on a child's emergent literacy development. These include story reading, writing, environmental print, opportunity to participate in oral language, and other activities initiated by the home, that foster the acquisition of emergent literacy skills.

*Classroom Literacy Environment.* According to Brooks and Brooks (1999), "The efficacy of the learning environment is a function of many complex factors" p.20. In this study, it refers to those influences in the classroom that contribute to the literacy environment. These include the teachers' teaching experience and knowledge about emergent literacy, the physical setting, the curriculum documents that guided literacy development, reading and writing materials, student- and teacher-initiated literacy activities, as well as activities that incorporate oral language.

*Authentic Assessment* refers to "assessment activities that reflect the actual
learning and instructional activities of the classroom” (Valencia, Hiebart, & Atterbach, 1994, p. 11).

*Thick Description* means a thorough, literal description of the phenomenon being investigated. According to Guba and Lincoln (1981, p. 119; cited in Merriam, 1998) it involves “interpreting the meaning of demographic and descriptive data in terms of cultural norms and mores, community values, deep-seated attitudes and notions, and the like” (p. 11).

**Organization of the Dissertation**

The study is organized into five chapters. In chapter 1, the writer has provided the background to the problem, the statement of the problem, the purpose of the study, and an explanation of the delimitations and limitations of the study. A rationale for and significance of the study are delineated, followed by the research questions and hypotheses, and definitions of terms used in the study. The remainder of the study is organized into four chapters.

Chapter 2 presents a review of the literature related to emergent literacy. It is intended to highlight the historical perspectives on kindergarten that (1) gave rise to the increase in whole-day kindergarten programs in the United States; and (2) to research comparing the achievement of children who attend whole-day kindergarten with those who attend half-day kindergarten. Chapter 2 also highlights the emergent literacy perspective on early literacy and presents the theoretical underpinning of the study.

Chapter 3 delineates the methodology of the study. The type of research design is described. Chapter 3 also describes the sample, research instruments, and the procedures followed in data collection, the questions and hypotheses, and the statistical techniques.
used in analyzing the data.

Chapter 4 deals with the results of the data analysis. This includes the categorizing and coding of the qualitative and quantitative data. Each research hypothesis will be tested and the results presented.

Chapter 5 presents the summary, conclusions, and a discussion of the findings. Several recommendations are forwarded. The appendix includes supporting materials used in the development of the study.
CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This review of the literature discusses several aspects important to the study that include: the historical perspectives of kindergarten programs, research related to whole-day and half-day kindergarten programs, the emergent literacy perspective on early literacy, the theoretical framework of the study, the importance of the literacy environment, and developmentally appropriate practices. The review shows that, historically, kindergarten programs began as whole-day programs but today there is a debate on the benefits of whole-day and half-day programs. More studies favor whole-day over half-day programs.

The emphasis on an emergent literacy perspective shows that the reading readiness concept is replaced by the view that experiences from birth and throughout early childhood affect literacy development. Therefore, the literacy environment is very crucial to early literacy development. The reading theories presented show that the text, the reader, and the social context interact with each other as the reader constructs meaning. By presenting current findings on early literacy practices that are developmentally appropriate for instruction and assessment, the review of the literature enhanced the significance of the study.
Historical Perspectives of Kindergarten Programs

Kindergarten programs have their beginnings in 1837 with Friedreich Froebel, a German philosopher. In 1856, Margaret Schurz, one of Froebel's students in Germany who was greatly influenced by his work, started the first kindergarten program in German, in the United States. Impressed by the results of Schurz's work, Elizabeth Peabody opened the first English-speaking kindergarten program in 1860 in the United States. Through her influence, the first public-school kindergarten was opened in St. Louis, Missouri, in 1873. Six years later, St. Louis had 53 kindergarten programs in public schools. By the next decade, there were hundreds across the United States (Morrow, et al. 1998).

There has been a long-standing debate on issues concerning whole-day and half-day kindergarten programs and their impact on the development of children. There are several academic, political, and socioeconomic factors that have been considered by proponents and opponents of these programs. Currently, academic and socioeconomic concerns have heightened the debate on the merits of whole-day versus half-day kindergarten programs (Morrow, Strickland, & Woo, 1998).

Kindergarten programs were originally whole-day programs (Peskin, 1988). During the Great Depression in the United States, economic factors motivated many school systems to cut their programs to half day. An increased student population ("baby boomers") in the 1950s and teacher shortage are other reasons. Holmes and McConnell (1990) and Puleo (1988) refer to a belief held at that time, that 5-year-olds did not have adequate maturity for whole-day programs. By the 1960s and 1970s whole-day programs begin to reemerge mainly due to academic concerns. There is an increase in
whole-day kindergarten programs today. Socio-economic and academic factors are among the reasons for this. Chmelynski (1998) referred to Dianne Rothenburg of ERIC Clearinghouse on Elementary and Early Childhood Education, who gave two reasons for the popularity of whole-day kindergarten programs. One reason is to provide better-quality education. The other reason is to facilitate increased single-parent and dual-employment households.

**Research Related to Whole-day and Half-day Kindergarten Programs**

According to Morrow et al. (1998), "There is conflicting evidence of the benefits of whole-day versus half-day kindergarten programs and questions about the rigor of the research thus far" (p. 17). They cited a few studies that favored half-day programs, some that favored whole-day programs, and others in which no difference was found between the two types of programs.

Terens (1984) found that half-day kindergartens provided more quality teaching time than did whole-day programs. Children studied in whole-day programs were not able to adapt physically and psychologically to the additional time in school. By the last hour of class, children were tired, restless, hyperactive, or inattentive. (p. 14)

Fusaro (1997) cited several studies (Evans & Marken, 1983; Holmes & McConnell, 1990; Lysiak & Evans, 1976; Savitz & Drucker, 1984; and Winter & Klein, 1970) that failed to find an unequivocal difference between the achievement of half-day and whole-day kindergarten children. On the other hand, many studies conducted indicated greater achievement of students who attended whole-day kindergarten programs. Fusaro (1997) conducted a meta-analysis of 23 studies that compared the achievement of students who attended full-day kindergarten with the achievement of
students who attended half-day kindergarten. He notes that a majority of the studies meta-analyzed were not true experimental studies and that only true experimental studies permit cause-effect assertions. They were mainly ex post facto studies: that is, they began after the fact. There was no random assignment to full-day and half-day kindergartens. There was merely selection of and no control over the independent variable. Bearing these limitations in mind, children who had regular attendance at full-day kindergartens achieved at a higher level than children who attended a half-day kindergarten.

Morrow, et al. (1998) cited Puleo (1988) who reviewed 19 studies that investigated the effects of length of kindergarten day on several basic skills that included knowledge of letters, sounds, motivation, and self-esteem. None of the studies favored half-day kindergarten programs. On all the variables studied, the differences found were in favor of whole- or extended-day kindergarten programs.

Chmelynski (1998) refers to a 1997 study by Southwest Missouri State University that showed that children in whole-day programs in the Springfield, Missouri, school district had higher achievement on standardized tests than their counterparts in half-day programs. The district's parents and teachers (98%) also favored it. Another example of support for whole-day programs is the West Hartford, Connecticut, school board that recently voted for whole-day kindergarten for all its elementary schools by fall 1999.

Morrow et al. (1998) conducted a study to determine the effect of whole-day and half-day kindergarten on literacy achievement. The results of the investigation favored whole-day kindergarten. The literacy achievement data revealed that whole-day kindergarten children scored significantly higher on all the measures administered than did the children in the half-day programs. These measures included print concepts.
writing, and story retelling. The observational data and teacher interview data supported these results. An important implication of this study strongly emphasized, was that children would benefit from a longer school day provided that it caters for developmentally appropriate practice and if the extra time is used wisely.

A statewide longitudinal study in Ohio conducted by Cryan, Scheehan, Wiechel, and Bandy-Hedden (1992) investigated the effects of whole-day, half-day, and alternate whole-day kindergarten on achievement and other factors. The results of the first-graders were in favor of those who attended whole-day kindergarten programs. Another longitudinal study in New Jersey conducted by Harrison-McEachern (1989) compared the reading achievement of first-graders who attended whole-day and half-day kindergarten. Based on the Comprehensive Tests of Basic Skills, significantly higher scores were obtained in reading achievement by whole-day kindergartners.

Emergent Literacy—a New Perspective on Early Literacy

The concept of reading readiness, a term widely used for many decades, has given way to the concept of emergent literacy. As Searfoss (1997) stated:

The concept of readiness for reading as both a predictor and a determinant of later success in learning to read was dominant, and beginning reading practices adhered firmly to it in the 1960s. Formal and informal tests of readiness assessed a variety of factors deemed necessary for success in beginning reading. These tests served as a gate through which children had to pass before formal reading instruction. In fact, as some readers may recall, a score on a readiness test was often used for grouping children for instruction and for retaining some children in kindergarten. These readiness notions of the 1960s have given way to a focus on understanding the roots of children’s literacy or their emerging literacy. (p. 436)

Burns, Roe, and Ross (1966) stated that reading readiness referred to the “mastery of a set of discrete skills, such as visual and auditory discrimination, necessary for learning to
read and write" (p. 39). The readiness perspective corresponds with a maturationist view of development which assumes that there is a certain stage of maturity that children must reach if they are to benefit from exposure to reading and writing.

Contrary to this view, experiences from birth and throughout early childhood affect literacy development (International Reading Association & the National Association for the Education of Young Children, 1998). The readiness concept has largely been replaced by the concept of emergent literacy, a notion coined by Clay (1966). Clay supports abandoning the readiness concept in its old form. She views all children as being ready to learn. Braunger and Lewis (1998) stated that "emergent literacy describes those behaviors shown by very young children as they begin to respond to and approximate reading and writing acts" (p. 16).

This current view of reading assumes that "language learning occurs naturally in the home and community as children see print and understand its function in their environment. They learn about literacy from adult models, particularly family members, and their knowledge of reading and writing develops concurrently" (Burns et al., 1996, pp. 39-40). The International Reading Association and the National Association for the Education of Young Children (1998) go a step further and emphasize that the ability to read and write does not develop naturally without careful planning and instruction. In their view, regular and active interactions with print are necessary to facilitate literacy development. They conceptualize reading and writing acquisition as a developmental continuum rather than as an all-or-nothing phenomenon.

A survey of the literature in early literacy acquisition reveals there is a strong emphasis on emergent literacy. Sippola (1994) states:
No longer do early literacy theorists associate the onset of literacy learning with an age or stage (Raines and Canady, 1990). Literacy acquisition is a lifelong endeavor, emerging as early as when a child first comes into contact with printed forms (Teale and Sulzby, 1989). (p. 53)

**Theoretical Framework of the Study**

According to Cocchiarella (1992), changes in reading theory have brought about change in the classroom at an increasing pace. Nevertheless, with all the changes, the teaching of reading is still evolving. She is optimistic that someday we will get it right. Sulzby (1994) referred to the lack of a total theory of early literacy development. She admits that recent research (Adams, 1990; Edwards, 1989; Pappas & Brown, 1998) has enhanced our knowledge of the nature of children’s early reading and writing. Burns et al. (1996) also attested to the fact that current theories do not account for all aspects of the reading process. Several theoretical models of reading contribute to the theoretical framework that guided this study.

The current literature on literacy views literacy learning as an interactive process. An interactive theoretical model of literacy learning contributes significantly to the theoretical framework for this study. This model views reading as a combination of *top-down* and *bottom-up* processing. In the top-down experience, the reader begins by formulating predictions about the text, and uses visual cues to verify or refute predictions. Gove (1983) describes bottom-up models as a reader beginning to read by focusing on the print, (i.e., letters or words), then progressively to larger linguistic units (phrases, sentences, etc.), and finally arriving at meaning. He explains that the interactive theoretical model assumes parallel processing of textual information and prior knowledge.
Ruddell and Unrau (1994) include the social context as influencing the reading process. They posit that “meaning results from the reader’s meaning-construction process. That meaning is not entirely in either the text or the reader but is created as a result of the interactions among reader, text, teacher, and classroom community” (p. 1032). The International Reading Association and the National Association for the Education of Young Children (1998) emphasized that social and cultural contexts influence learning.

Sulzby (1994) refers to the relevance of the theories of both Piaget and Vygotsky. In Piaget’s theory of cognitive development the principles of active involvement and learner’s interaction in learning are fundamental to cognitive development. Vygotsky’s theory of intellectual development postulates that the social context is crucial to the acquisition of mental operations. As Fogarty (1999) stated, “Vygotsky’s theory suggests that we learn first through person-to-person interactions and then individually through an internalization process that leads to deep understanding. This belief in the social process of idea making permeates the interactive classroom” (p. 77). The enjoyment and satisfaction that motivate children to participate in literacy activities are among the reasons Teale (1982) supports interactive literacy events.

This sociocognitive reading model emphasizes the critical role of the teacher and the classroom environment. The theoretical view, based on the model, holds that meaning is socially constructed as teacher and students interact with each other and with the text. This theory, supported by previous research (Ruddell, Draheim, & Barnes, 1990; Ruddell & Harris, 1989), strongly indicates that influential teachers use their prior beliefs and knowledge to plan and implement instruction that would activate students’ prior
beliefs and knowledge and stimulate higher levels of thinking as they engage in the meaning-construction process (Ruddell, 1994).

Rosenblatt (1994) postulates a transactive theory that views meaning as residing in a dynamic transaction between reader and text. This view is incorporated in Ruddell and Unrau's (1994) work. It requires consideration for the reader's choice of stance which may be efferent—focusing on obtaining textual information, or aesthetic—focusing on the experience lived during the reading of the text as well as the feelings and images evoked and memories aroused. Poems, stories, or plays are included among the literary work in which attention is centered predominantly on the aesthetic transaction.

Rosenblatt (1994) explains:

A stance reflects the reader's purpose. The situation, the purpose, the linguistic-experiential equipment of the reader, as well as the signs on the page enter into the transaction and affect the extent to which public and private meanings and associations will be attended to. . . . The term efferent (from the Latin efferre, to carry away) designates the kind of reading in which attention is centered predominantly on what is to be extracted and retained after the reading event. . . . The term aesthetic was chosen because its Greek source suggested perception through the senses, feelings, and intuitions. . . .

The aesthetic reader pays attention to, savors, the qualities of the feelings, ideas, situations, scenes, personalities, and emotions that are called forth, and participates in the tensions, conflicts, and resolutions of the images, ideas, and scenes as they unfold. . . . This meaning, shaped and experienced during the aesthetic transaction, constitutes "the literary work," the poem, story, or play. This "evocation," and not the text, is the object of the reader's "response" and "interpretation," both during and after the reading event. . . . "Efferent" and "aesthetic" reflect the two main ways of looking at the world, often summed up as "scientific" and "artistic." My redundant usage of "predominantly" aesthetic or efferent underlines rejection of the traditional, binary, either-or tendency to see them as in opposition. The efferent stance pays more attention to the sensuous, the affective, the emotive, the qualitative . . . Both of these aspects of meaning are attended to in different proportions in any linguistic event.

(p. 1068)
Rosenblatt’s view of an efferent-aesthetic continuum reminds teachers and parents of the cognitive and affective aspects of all reading activities (Burns et al., 1996). Rosenblatt provides support for eliciting both efferent and aesthetic responses to literature. Aesthetic responses to literature can be elicited through several ways that include writing another scene of story ending, through drama and art. Through questioning and opportunity for discussion, students may identify with story characters, ideas, events, and images that are evoked in the story. This can result in a higher level of motivation and involvement (Rosenblatt, 1988) that may further enhance comprehension (Ruddell & Unrau, 1994).

Transactive theory emphasizes child-centered learning. It guides educators to engage students in authentic (real-life) reading, writing, listening, and speaking activities in which they can see the interconnectedness of these components of language. They see these components as designed to communicate and not just contrived to teach particular skills. It advocates the reading and writing of whole pieces of literature (Burns et al., 1996).

Bredecamp and Copple (1997) state that the principle of learning is that “children are active learners, drawing on direct social and physical experience as well as culturally transmitted knowledge to construct their own understandings of the world around them” (p.13). Supportive adults facilitate this active construction of learning (Mason & Sinha, 1993).

The following theoretical principles, based on an emergent literacy perspective, that helped to guide this study, are provided by Strickland and Morrow (1990):
1. Children's knowledge of the world and of their language largely determines the nature and quality of the meanings they construct when they read and write.

2. To a large extent, beginning reading and writing start naturally through exposure to print in the environment.

3. Children as well as adults have need for reading and writing in their lives. Literacy is learned best when it is viewed as functional and useful.

4. Exposure to a variety of literature builds a sense of the structures of written text. (p. 690)

**Reading and Writing Assessment Standards**

In response to the revolutionary changes that research has produced in the past thirty years, the International Reading Association (IRA) and the National Council of Teachers of English (NCTE) Joint Task Force on Assessment (1994) produced a set of standards to guide decisions about assessing the teaching and learning of reading and writing. The Joint Task Force on Assessment (1994) emphasizes that there has been a change in the role of assessment due to a shift from the transmission view of knowledge to knowledge built on the premise that inquiry is the basis of teaching and learning. The International Reading Association and the National Council of Teachers of English Joint Task Force on Assessment (1994) states:

> Within an inquiry framework, assessment is the exploration of how the educational environment and the participants in the educational community support education as a process of learning to become independent thinkers and problem solvers. This exploration includes an examination of the environment for teaching and learning, the processes and products of learning, and the degree to which all participants (students, teachers, administrators, parents, and board members) meet their obligation to support inquiry. (p. 6)

The standards produced by the International Reading Association and National Council of Teachers of English Joint Task Force on Assessment (1994) also guided this study. These include the following:
1. The interests of the student are paramount in assessment.

2. The primary purpose of assessment is to improve teaching and learning.

3. Assessment must reflect and allow for critical inquiry into curriculum and instruction.

4. Assessment must recognize and reflect the intellectually and socially complex nature of reading and writing and the important roles of school, home, and society in literacy development.

5. Assessment must be fair and equitable.

6. The consequences of an assessment procedure are the first, and most important, consideration in establishing the validity of the assessment.

7. The teacher is the most important agent of assessment.

8. The assessment process should involve multiple perspectives and sources of data.

9. Assessment must be based in the school community.

10. All members of the educational community—students, parents, teachers, administrators, policy makers, and the public—must have a voice in the development, interpretation, and reporting of assessment.

11. Parents must be involved as active, essential participants in the assessment process. (pp. i3-38)

The International Reading Association and the National Association for the Education of Young Children (1998) also support appropriate assessment strategies that include observation of oral language and evaluation of performance at authentic reading
and writing tasks. Individual, informal assessment is emphasized as opposed to group-administered, standardized testing during the early years of literacy development. The International Reading Association and the National Association for the Education of Young Children (1998) state:

Teachers need to regularly and systematically use multiple indicators—observation of children’s oral language, evaluation of children’s work, and performance at authentic reading and writing tasks—to assess and monitor children’s progress in reading and writing development, plan and adapt instruction, and communicate with parents (Shepard, Kagan, & Wurtz, 1998). Group-administered, multiple-choice standardized achievement tests in reading and writing skills should not be used before third grade or preferably even before fourth grade. The younger the child, the more difficult it is to obtain valid and reliable indices of his or her development and learning using one-time test administrations. Standardized testing has a legitimate function, but on its own it tends to lead to standardized teaching—one approach fits all—the opposite of the kind of individualized diagnosis and teaching that is needed to help young children continue to progress in reading and writing. (p. 210)


Goodman (1994) compared the revolution launched by Copernicus in the 16th century with the revolution that is currently taking place in our understanding of reading and writing. Copernicus disproved the theories that placed the earth at the center of the universe, changed the view of the universe, and contributed to different ways of understanding many phenomena. According to Goodman (1994). “What an exciting time
it is for researchers who are willing to toss aside the old paradigms, leave the laboratories, come into the classrooms, and join the Copernican revolution in literacy" (p. 1129).

**The Importance of the Literacy Environment**

There is much research support for the importance of home and classroom environments on children's reading and writing performance (Bus & van Ijzendoorn, 1995; Cohen, 1968; Cullinan, Jaggar, & Strickland, 1974; Dickinson & Smith, 1994; Purcell-Gates, 1996; Turner, 1995) The International Reading Association and the National Association for the Education of Young Children (1998) believe "that teachers of young children . . . have a unique responsibility to promote children's literacy development, based on the most current professional knowledge and research" (p. 206).

Based on their comparative research on home and societal aspects of environments in developing and developed countries, a description of a literate home environment is provided by Kaikai and Kaikai (1992):

A literate home environment is a place where books, magazines, newspapers, encyclopedias, and other reading materials are readily available. Specially selected children's books are read to children in the home regularly. Additionally, the parents, older siblings, and other adults living in the home engage in recreational reading themselves. Further, positive attitudes toward reading are expressed by family members, and children are guided in developing wholesome attitudes toward reading and books (Botel and Seaver, 1977; Seaver and Botel, 1989). (p. 109)

Moss (1998) suggested that parents make television and videos partners in helping their children grow and learn. She referred to studies that have shown an increase in reading of books and articles related to television shows. She advocates that parents should have a plan and limit television viewing to 2 hours a day. Parents should get involved while their children watch television and discuss the programs before, during,
and after they watch them. They should relate their viewing to reading and other activities. The children may be guided to read related books before watching the video or television show and then make comparisons between the book and the show. Parents may also encourage their children to explore topics related to shows by trying to locate places and other types of information in reference books, magazines, and newspapers.

Studies reveal that the classroom environment can motivate students to read (Morrow & Weinstein, 1986; Neuman & Roskos, 1997; Ruddell, 1994). Many elements of motivation theory support a classroom rich in accessible and relevant materials, so that children will be motivated to engage in literacy activities. Early childhood development philosophers such as Froebel and Montessori also stressed the importance of relevant manipulative materials to learning. A classroom library with attractive stories and informational books is an invaluable asset. This is strongly supported by the International Reading Association and the National Association for the Education of Young Children (1998). They state:

In comfortable library settings children often will pretend to read, using visual cues to remember the words of their favorite stories. Although studies have shown that these pretend readings are just that (Ehri & Sweet, 1991), such visual readings may demonstrate substantial knowledge about the global features of reading and its purposes.

Children learn a lot about reading from the labels, signs, and other kinds of print they see around them (McGee, Lomax, & Head, 1988; Neuman & Roskos, 1993). Highly visible print labels on objects, signs, and bulletin boards in classrooms demonstrate the practical uses of written language. In environments rich with print, children incorporate literacy into their dramatic play (Morrow, 1990; Neuman & Roskos, 1997; Vukelich, 1994), using these communication tools to enhance the drama and realism of the pretend situation. These everyday play experiences by themselves do not make most children readers. Rather, they expose children to a variety of print experiences and the processes of reading for real purposes. (p. 199)

There is much research support for wide exposure to print during the early years
and for literacy-rich classrooms that contribute to a joyous learning experience.

Cocchiarella (1992) holds the view that if we make learning to read fun children will be more confident as they make the transition to reading for information. The International Reading Association and the National Association for the Education of Young Children (1998) emphasize:

Classrooms filled with print, language and literacy play, storybook reading, and writing allow children to experience the joy and power associated with reading and writing while mastering basic concepts about print that research has shown are strong predictors of achievement. (p. 302)

Environmental print should be functional. For example, labels should be used to help children locate materials. Signs should be used to communicate information. Teachers and students could write messages for one another and attach them to the notice board. New words generated from content areas should be displayed strategically and children encouraged to read them and use them in their writing. Observation of literacy behaviors, collaboration, practice, and performance (sharing with and seeking approval from supportive adults) are four processes that facilitate literacy acquisition (Holdaway, 1979).

Arranging the Classroom Environment

The physical design of the classroom is important to literacy development. Morrow (1992) found that enhancing the physical design of literacy centers contributed to an increase in children's use of literacy materials and ultimately their literacy achievement. As shown in Figure I. Morrow, et al. (1998) have designed a Checklist for Evaluating the Literacy Environment, which teachers can use to ensure whether or not they are adequately equipped. The checklist includes a literacy center with a library.
corner, a writing center, and content-area learning centers such as math, social studies, art, music, and drama. All centers should contain literacy materials, general materials, and also materials related to the current theme that are integrated throughout the curriculum. Centers and materials should be easily accessible to students. Teachers should introduce the location, purpose, and use of the materials (Montessori, 1965).

The Literacy Center

A literacy center facilitates more reading and writing (Morrow, 1992). Children should be allowed to assist in designing, managing, and maintaining the center (Morrow, 1997). The library corner should be a well-defined, private, comfortable area with easily accessible books. This corner should resemble a library with books coded and arranged on shelves with only their spines showing. Special books may be advertised on an open-faced bookshelf.

Books with story props should represent various genres, for example, fairytales, fables, informational books, poetry, and novels. They should be at four different levels with five to eight per child. There should be headsets for listening to taped stories. Children should be allowed to check out books to take home. New books or books used previously should replace approximately 20 books bi-weekly (Morrow et al., 1998).

The Writing Center

The writing center should be equipped with writing utensils and materials to encourage writing and making books. Children's work may be placed in writing portfolios. Selected pieces may be displayed in the bulletin boards. Teachers and students may post messages to each other on the message board. Children should be
The Literacy Center
- Children participate in designing the center (develop rules, select a name for center, and develop materials).
- Area placed in a quiet section of the room.
- Visually and physically accessible, yet partitioned from the rest of the room.
- Rug, throw pillows, rocking chair, bean bag chair, and stuffed animals.
- Private spot in the corner such as a box to crawl into and read.
- The center uses about 10% of the classroom space and fits five to six children.

The Library Corner
- Bookshelves for storing books with spines facing outward.
- Organizational system for shelving books.
- Open-faced bookshelves for featured books.
- Five to eight books per child.
- Books represent three to four grade levels of the following types:
  - (a) picture books, (b) picture storybooks, (c) traditional literature, (d) poetry, (e) realistic literature, (f) informational books, (g) biographies, (h) chapter books, (i) easy to read books, (j) riddle and joke books, (k) participation books, (l) series books, (m) textless books, (n) television-related books, (o) brochures, (p) magazines, and (q) newspapers
- Twenty new books circulated every 2 weeks.
- Check-out check-in system for children to take out books daily.
- Head sets and taped stories.
- Felt board and story characters with related books.
- Materials for constructing felt stories.
- Other story manipulatives (roll movie or puppets with related books).
- System for recording books read (for example, 3 x 5 cards hooked onto a bulletin board).

The Writing Center (The Author's Spot)
- Tables and chairs.
- Writing posters and a bulletin board for children to display their writing themselves.
- Writing utensils (pens, pencils, crayons, felt-tipped markers, and colored pencils).
- Writing materials (many varieties of paper in all sizes, booklets, and pads).
- Typewriter or computer.
- Materials for writing stories and making them into books.
- A message board for children to post messages for the teacher and students.
- A place to store Very-own words.
- Folders for children to place samples of their writing.

Content-Area Learning Centers
- Environmental print, such as signs related to themes, directions, and rules.
- A calendar.
- A current-events board.
- Appropriate books, magazines, and newspapers in all centers.
- Writing utensils in all centers.
- Varied types of paper in all centers.
- A place for children to display literacy work.

Figure 1. Checklist for evaluating the literacy environment. Note: From Literacy Instruction in Half- and Whole-Day Kindergarten (p. 101), by Lesley M. Morrow, Dorothy S. Strickland, and Deborah G. Woo. 1998. Newark, DE: International Reading Association and the National Reading Conference. Copyright 1998 by the International Reading Association and the National Reading Conference.
encouraged to write letters and should be provided with stationery, envelopes, stamps, and mailboxes placed in the writing center (Morrow et al., 1998).

Content Area Centers

Content area learning centers should have materials and activities for integrating the language arts processes into subject-area teaching. This makes literacy activities more meaningful. Fogarty (1999) supports Dewey's (1938) concepts of curriculum and instruction that promote meaningful experience to stimulate learning.

Art centers could include books about artists, word cards, and books with directions for making crafts. Music center materials could include songbooks, sing-a-long sheets with words to be read while singing songs, and paper and pencils for coping songs written on charts. Math centers could include children's literature about numbers, books related to math, magnetic numbers, and writing materials for creating stories. Science centers could provide children's literature related to themes being studied, as well as informational books, index cards for writing Very-own words, and books for recording observations of experiments and projects. The social studies center could include articles of current events, children's literature, books related to themes studied, and writing materials for writing about projects, trips, and stories. The dramatic-play center could include books, magazines, posters, labels, and Very-own words related to topics being studied. The block-play center should contain different sizes and shapes of blocks, writing and reading materials related to themes, and other items related to themes being studied (Morrow et al., 1998).

The room design should facilitate different organizational structures—individual.
small-group, and whole-group instruction. Centers that tend to generate more noise (block and dramatic-play) should be positioned away from typically quiet ones (Morrow et al., 1998). Moore’s (1986) study showed that well-arranged rooms enhance creative productivity and engagement in language-related activities.

**Developmentally Appropriate Practices**

It cannot be overemphasized that appropriate teaching practices at home and at school are crucial for the acquisition of the broad range of knowledge and emergent literacy skills. The International Reading Association and the National Association for the Education of Young Children (1998) state:

> Teaching practices associated with outdated views of literacy development and/or learning theories are still prevalent in many classrooms. Such practices include extensive whole-group instruction and intensive drill and practice on isolated skills for groups of individuals. These practices, not particularly effective for primary-grade children, are even less suitable and effective with preschool and kindergarten children. Young children especially need to be engaged in experiences that make academic content meaningful and build on prior learning. (p. 5)

According to the International Reading Association and the National Association for the Education of Young Children (1998), practices aimed at “children’s achievement in reading and writing development should be developmentally appropriate, that is, challenging but achievable, with adult support” (p. 207).

They conceptualize the acquisition of reading and writing as a developmental continuum along which children progress, not in rigid sequence, but in their own unique pattern and timing. This allows for a wide range of individual variation in the rate and pace of development of literacy concepts. Nevertheless, the continuum of reading and writing development does provide developmentally appropriate goals or benchmarks for
children’s literacy learning that teachers need to understand. The International Reading Association and the National Association for the Education of Young Children (1998) state that it is intended that teachers use a developmental continuum “to assess individual children’s progress against realistic goals and to adapt instruction to ensure that children continue to progress” (p. 207).

The abbreviated continuum of reading and writing development covers five phases ranging from the awareness and exploration stage (preschool) to the independent and productive reading and writing stage (third grade). According to the International Reading Association and the National Association for the Education of Young Children (1998).

During the preschool years most children can be expected to function in phase 1 of the developmental continuum, Awareness and Exploration. In Kindergarten an appropriate expectation is that most children will be at phase 2, Experimental Reading and Writing. By the end of first grade, most children will function in phase 3, Early Reading and Writing. An appropriate expectation for second grade is Transitional Reading and Writing (phase 4), while the goal for third grade is Independent and Productive Reading and Writing (phase 5). Advanced Reading is the goal for fourth grade and above. (pp. 207-208)

The developmental continuum provides a list of some of the benchmarks for each phase. For phase 1 (preschool) - the awareness and exploration stage - the International Reading Association and the National Association for the Education of Young Children (1998) list the following benchmarks. Children can:

- enjoy listening to and discussing storybooks
- understand that print carries a message
- identify labels and signs in their environment
- participate in rhyming games
- identify some letters and make some letter-sound matches
- use known letters or approximations of letters to represent written language (especially known words like their name and phrases such as “I love you”). (p. 8)
The emergent readers in this study (kindergarten children) are expected to be at phase 2 of the developmental continuum, which is the phase of experimental reading and writing.

The International Reading Association and the National Association for the Education of Young Children (1998) list the following benchmarks for phase 2. Kindergartners can:

- enjoy being read to and themselves retell simple narrative stories or informational texts
- use descriptive language to explain and explore
- recognize letters and letter-sound matches
- show familiarity with rhyming and beginning sounds
- understand left-to-right and top-to-bottom orientation and familiar concepts of print
- match spoken words with written ones
- begin to write letters of the alphabet and some high-frequency words. (p. 8)

Morrow et al. (1998) also provide a list of the major objectives that early childhood teachers feel are important for preparing and assessing early literacy instruction. They include the following:

CONCEPTS ABOUT BOOKS

- Knows the difference between the print that is to be read in a book and the pictures.
- Knows that the pictures on the page are related to what the print says.
- Can show where you begin reading on page.

COMPREHENSION OF TEXT

- Retells familiar stories using the pictures in the book to help recall the details.
- Can retell a story without the help of the book and demonstrates knowledge of details.
- Includes elements of story structure in story retelling: setting (beginning, time, place, characters), theme (problem or goal of the main character), plot episodes (events leading toward the main character solving his or her problem or attaining the goal), resolution (problem solved, goal achieved, ending).
- Responds to story readings with literal, inferential, and critical questions and comments.
- Story retelling demonstrates inferential and critical insights.
• Can respond to questions about stories read on literal, interpretive, and critical levels.
• Fills in words while being read to based on knowledge of syntax and context.

CONCEPTS ABOUT PRINT

• Knows that print is read from left to right.
• Knows what a letter is and can point to one on a printed page.
• Knows what a word is and can point to one on a printed page.
• Can read environmental print (signs, familiar store names, and logos).
• Can recognize some words by sight in the context of book print.
• Can say sounds heard in a word (for example, cat: c and at).
• Can associate sounds with letters (consonants, vowels, and digraphs).
• Knows that there are spaces between words.
• Identifies words by sight.

WRITING

• Demonstrates the level of development in writing: scribble, drawing for writing, letter-like forms, random letters/letter strings, invented spelling, and conventional spelling.
• Writes a few words conventionally.
• Writes his or her name.
• Writes narrative stories and expository information pieces.
• Writes for functional purposes. (pp. 73-74)

Clay (1993) stated, “All children are ready to learn: it is the teachers who need to know how to create appropriate instruction for where each child is” (p. 6).

Storybook Reading

Through reading to children they learn that print conveys meaning, that storybook reading familiarizes children with the linguistic procedures that are characteristic of written language (Bus, van Ijzendoorn, & Pellegrini, 1995; Sulzby, 1994). Reading aloud to children is singled out as the most important activity for building the understandings and skills essential for reading success (Wells, 1985). Michener (1988, cited in Burns et
al., 1996) suggests the following benefits of reading aloud to children that are supported by research:

1. Helps them get off to a better start in reading.
2. Improves their listening skills.
3. Increases their ability to read independently.
4. Expands their vocabularies.
5. Improves their reading comprehension.
6. Helps them to become better speakers.
7. Improves their abilities as writers.
8. Improves the quantity and quality of independent reading. (p. 395)

In order to gain maximum benefits that can be derived from storybook reading, several techniques have been advanced. During storybook reading it is important to create an atmosphere of emotional security (Bus & Van Ijzendoorn, 1995; Bus, Belsky, Van Ijzendoorn, & Crnic, 1997). As suggested by Ruddell and Unrau (1994), the teacher plays a key role in meaning negotiation of the story, and the subsequent tasks of retelling and writing of the story. Ruddell (1994) refers to research which provides strong indications that influential teachers are frequently teachers who are highly effective in directing instruction (Ruddell et al., 1990; Ruddell & Harris, 1989).

According to Clay (1991), “Good book introductions explore, test out, and draw on children’s knowledge” (p. 267). Children should be allowed to look at the title and pictures as the teacher encourages conversational exchange about the story. The teacher should help provide purposes for reading the story and activate prior knowledge and beliefs by having the children make predictions about the story.

Children should actively participate during the reading of the story (Whitehurst et al., 1994). At preselected points in the story, the teacher could pause and use one or more open-ended questions to allow the students the opportunity to make predictions about the
next part of the story (Blachowicz, 1983). These points would be ones where suspense is high or where the story line changes (Haggard, 1988). Stauffer (1969) believes that making predictions encourages thinking about the text’s message and sets purposes for reading.

Burns et al. (1996) support this step for activating prior knowledge and beliefs and setting purposes for reading.

This step provides purposes for reading: trying to confirm one or more predictions from others in the group and to confirm or reject their own. It encourages students to apply metacognitive skills as they think through their lines of reasoning. When students are unable to make predictions as requested, the teacher can model his or her thinking in making a prediction, using a think-aloud, or provide several possible predictions for the student to choose from and ask for the reason a particular one is chosen. The teacher should accept all predictions and encourage the students to reflect on their accuracy later. (p. 331)

Questioning can enhance children’s comprehension of stories and their vocabulary development (Karweit & Wasik, 1996). The International Reading Association and the National Association for the Education of Young Children (1998) suggest:

Children may talk about the pictures, retell the story, discuss their favorite actions, and request multiple rereading. It is the talk that surrounds the storybook reading that gives it power, helping children to bridge what is in the story and their own lives (Dickinson & Smith, 1994; Snow, Tabor, Nicholson, & Kurland, 1995). Snow (1991) has described these types of conversations as “decontextualized language” in which teachers may induce higher level thinking by moving experiences in stories from what the children may see in front of them to what they can imagine. (p. 7)

The teacher can use what Rosenblatt (1994) calls a predominantly aesthetic instructional stance in reading the story. Rosenblatt (1994) suggests that questioning and discussion of narrative text will enhance reader transaction with the text. Through this stance, the teacher will elicit responses that will help students identify with story characters and events both during and after the reading of the story. The teacher will also
draw the students' attention to "the qualities of the feelings, ideas, situations, scenes, personalities, and emotions that are called forth" (p. 1067) and will encourage students to participate "in the tensions, conflicts, and resolutions of the images, ideas and scenes as they unfold" (p. 1067).

In the process of reading the story the researcher should be assessing the effectiveness of the purpose, plan, and strategies used and should adjust accordingly, as suggested by Rosenblatt (1994). "This assessment may indicate all is going well based on the original purpose or that a shift in plan or strategy is required in order to achieve the original purpose" (p. 282).

**Summary**

Chapter 2 reviewed the literature on early literacy and showed that there is an increase in whole-day programs and that more studies were in favor of whole-day rather than half-day programs. The review shows that the outdated readiness view of early literacy has been replaced by a strong emphasis on the emergent literacy perspective which advocates for literacy-rich environments and developmentally appropriate practices at home and at school. Several theoretical views of the reading process provide support for the interaction of the text, the reader, and social context as meaning is constructed. Therefore, supportive parents and teachers are crucial to the acquisition of emergent literacy skills. Authentic assessment measures that match developmentally appropriate instructional strategies are currently advocated. This review of the literature provides a broad picture of the role of the home and classroom environment on emergent literacy development and thus supports the significance of this study. If parents and teachers
examine their practices in the light of the current professional literature and research, they may be able to improve their practice and the literacy performance of kindergartners.
CHAPTER III

PROCEDURES AND METHODOLOGY

Introduction

The purpose of this chapter is to describe the research design and methodology. It includes: (1) a description of the population and sample, (2) a description of the data collection instruments, (3) their pilot testing, and (4) the procedures for data collection and analysis.

Research Design and Methodology

This is a descriptive study that has some elements of a causal-comparative design that compares four groups of children (children attending a kindergarten program on mornings only, those attending on afternoons only, those who attend an alternate whole-day program, and those who attend a whole-day program five consecutive days a week). Additionally, it attempted to describe the kindergartners' print, story, and writing concepts along with their home and classroom literacy environments.

This study described the characteristics of home and classroom literacy environments and the emergent literacy development of kindergartners. Performance assessment was used to determine emergent literacy development in writing, print, and story concepts. Qualitative and quantitative techniques were combined for data collection and analysis. Qualitative approaches used were observation and semi-structured
interviews. Some of the data were categorized and patterns identified. Quantitative techniques involved quantifying some of the qualitative data and using statistical techniques that included ANOVA, ANCOVA, and Chi-square.

Support for Research Design Used

The design allows for the investigation of variables that should not be experimentally investigated. A basic advantage of this study is that the data can be collected in a relatively short period of time. The administration of the selected inventories, conducting face-to-face interviews, and the observation of the kindergarten literacy curriculum documents can generate much information quickly. Although a content-referenced interpretation of performance on the Preliteracy Inventory would have more practical significance, norm-referenced scores are available for providing a framework for interpreting performance relative to an age-appropriate reference group. It is important to remember, however, that normative data provide only relative indicators of performance and should not be used as standards of performance. Finally, both quantitative and qualitative methods were used for data collection and analysis. According to Guthrie and Hall (1984), “There have been calls for a more qualitative approach and a less narrow perspective on the process of reading and the acquisition of reading skills” (p. 91).

Population and Sample

The student population is defined as the 246 kindergarten children who attended the five elementary schools in the two selected school districts. These two districts were conveniently selected from among the several other school districts in a county where
reading and writing test scores indicated a problem of low literacy proficiency among elementary and high school students.

Of the five elementary schools that participated in the study, three were parochial schools, and two were public schools. There was only one public school with a whole-day kindergarten program. Two of the five kindergarten classes from this school were assigned to the study by the school administration. The other public school had three morning and three afternoon kindergarten programs. The school administration assigned one morning class and one afternoon class to be included in the sample. One of the parochial schools had only one kindergarten class and an alternate whole-day program. That only alternate whole-day class was assigned to the study. The other parochial school had both a morning and an afternoon program and both classes were assigned to the study. The third parochial school had only one morning class, which was included in the sample.

All children in each class mentioned above were given consent forms to take to their parents. Across the eight kindergarten classes, there was a potential pool of 140 students. Of that total, 124 (86%) obtained parental permission to participate in the study. All children whose parents consented were included in the study, except for 10 students who were excluded. Exclusions occurred because two students were previously tested during the piloting phase. Two students were absent during the testing. Five students had problems expressing themselves in English (one student was Romanian and four were Hispanic). These students were recent immigrants. Their teachers explained the difficulties they were having as they tried to learn English. The researcher ultimately decided to eliminate them from the study because they could not retell the story.
Therefore, the sample was comprised of 114 students—60 (53%) female and 54 (47%) male students. From the schools, information was obtained about ethnicity.

Thirty-four (30%) students in the study were from minority backgrounds—16 (14%) Black; 11 (9%) Hispanic; 3 (2%) Asian; and 4 (3%) mixed. The other 80 (70%) were Caucasian. The information about age and type of kindergarten program is presented in Table 1. The age range was 66-90 months with a mean age of 75.4 months.

<table>
<thead>
<tr>
<th>Kindergarten Program</th>
<th>n</th>
<th>%</th>
<th>Mean age in months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>41</td>
<td>36</td>
<td>74.9</td>
</tr>
<tr>
<td>Afternoon</td>
<td>25</td>
<td>22</td>
<td>73.1</td>
</tr>
<tr>
<td>Whole-day</td>
<td>24</td>
<td>21</td>
<td>76.3</td>
</tr>
<tr>
<td>Alternate whole-day</td>
<td>24</td>
<td>21</td>
<td>77.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>114</strong></td>
<td><strong>100</strong></td>
<td><strong>75.4</strong></td>
</tr>
</tbody>
</table>

The seven female teachers of the student sample consented to participate in the study. Their teaching experience ranged from 13 to 25 years. However, their kindergarten teaching experience ranged from 2 to 15 years—the alternate whole-day teacher had 11 years, the three teachers of the morning programs had an average of 10.3 years, the two teachers of the afternoon programs had an average of 8.5 years, and the two teachers of the whole-day program had an average of 9.5 years. All teachers had taught their respective classes for the entire school year in which the data were collected. Three
teachers each taught both a morning and an afternoon class at their respective schools. One teacher taught the alternate whole-day class. One teacher taught a morning class. Two teachers each taught a whole-day class at the same school.

Teacher participation consisted of (1) an interview, (2) distribution of parent letters, consent forms, and parent survey to students in their respective classes who would take them to their parents, and (3) collecting the returned consent forms and surveys from the students.

Parents of the student sample participated by signing the consent forms indicating their permission for their children to participate in the study, and returning them along with completed surveys to the class teacher. The surveys provided information about the home literacy environment. One hundred and twenty-four parents consented for their children to participate in the study and 110 completed and returned the parent surveys.

**The Research Instruments**

This study used two measuring instruments designed by the Metropolitan Early Childhood Assessment Program—the Preliteracy Inventory and the Home Literacy Inventory. These were number coded to facilitate matching the respondents for the Preliteracy Inventory with the respondents for the Home Literacy Inventories and to do follow up if necessary.

**The Preliteracy Inventory**

The Preliteracy Inventory is a performance component that has been added to the 1995 sixth edition of the Metropolitan Readiness Tests. It is an individually administered instrument, designed to obtain information about a child’s concept of a story, concepts of
print, and writing concepts. It is intended to assess these emergent literacy skills of children from ages 4 years, 0 months, through 6 years, 3 months (PreKindergarten, Kindergarten, and Grade 1 children).

This measure was selected because it is developmentally appropriate and can provide a relatively holistic picture of a child’s emergent literacy using a meaningful context. The Preliteracy Inventory uses storybook reading as the basis for the assessment of print, writing, and story concepts. All assessment tasks in the three sections of the Preliteracy Inventory are related to the same storybook that was read to the students three times during the week prior to administering the instrument. It incorporates reading, writing, speaking, and listening and shows the interconnectedness among them. It reflects current objectives for emergent literacy instruction as discussed in chapter 2, and also reflects authentic assessment. According to Valencia et al. (1994), “The aim of authentic assessment is to assess many different kinds of literacy abilities in contexts that closely resemble the actual situations in which those abilities are used” (p. 9). The Preliteracy Inventory represents a step forward in the literacy assessment field.

Content of the Preliteracy Inventory

The items are grouped into three sections—Print Concepts, Story Retelling, and Writing Concepts. Section 1 has three parts that assess print concepts. Parts A and B consist of nine questions which assess the child’s ability to recognize what we read—to discriminate print from pictures and objects. There are also nine questions which assess the child’s ability to recognize why we read—to explain what message is communicated in selected print in part A. In part C, the child is required to give 12 responses in which he
will demonstrate knowledge of certain print concepts and conventions necessary for reading that includes pointing out a letter, a whole word, a period, and showing the direction in which print is read.

Section 2 assesses the child’s ability to retell a story to determine if he has acquired a concept of story. The child is required to tell the story of *Homer the Goose*, which is the same story in the storybook that is to be read to the class about three times during the week prior to administering the Preliteracy Inventory. It is not necessary for the child to accurately recall the content of the story but to include the basic story elements—beginning, setting, characters, sequence, feelings, description, conversation, and ending.

Section 3 has two parts—Writing Name and Writing Story. The child is required to demonstrate his writing concepts or his ability to communicate through writing, by attempting to write his name (part A), and to write a story about Homer Goose (part B). The purpose of this section is to determine the child’s stage of development of writing.

**Administration and Scoring of the Preliteracy Inventory**

The test authors provided general directions for administering the Preliteracy Inventory. The storybook *Homer the Goose* is to be read to the class, with the pictures shown to the children, several days prior to administering the Inventory. The test is to be administered away from distracting activities and each child’s responses for each question and task are to be recorded on the Preliteracy Inventory Record Form. Specific directions for each section are given and the material to be dictated by the teacher is highlighted. This makes the administration of the Inventory very straightforward.
A correct response to each of the 30 items on Print Concepts is worth 1 point, which is indicated by a check mark on the appropriate place on the Record Form. Score keys are provided for the nine responses to "How we read" questions. There is also space available on the Record Form to record both the check mark and the actual response of the child. Several acceptable responses are provided in the manual for each of these nine questions. Thus the examiner has to evaluate each response qualitatively. Also, for the story retelling task, several acceptable responses are suggested for each story element that is expected to be mentioned. Four criteria with corresponding points are listed for scoring the "Writing Name" task, and seven criteria with corresponding points are listed for scoring the "Writing Story" task. At the end of the "Writing Story" section there is space provided for comments. Such a detailed scoring process takes considerable time but facilitates subsequent qualitative analysis and identification of specific strengths as well as deficits that need attention. It also enhances the validity of the results that can be very useful in curricular decision making.

A useful feature of the manual for interpreting the Inventory is that it provides both content-referenced and norm-referenced interpretation of the assessment. The manual also provides a sample of a completed Kindergarten child's Preliteracy Inventory Record Form and its norm-referenced interpretation. The national standardization programs took place in 1994. Age norms were derived from the national standardization sample for Print, Story, and Writing Concepts.
Reliability of the Preliteracy Inventory

Reliability estimates indicate the extent to which the assessment offers consistent results. The internal consistency of the Preliteracy Inventory scores for Print Concepts and for Story Structure was determined by the Kuder-Richardson Formula # 20 (KR-20). KR-20 reliability coefficients for Print Concepts for children 5 years, 3 months, to 6 years, 3 months, range from .77 to .88 respectively. Reliability coefficients for Story Structure for these children in the above age group range from .77 to .84. The reliability coefficients of these sub-tests are very adequate because, generally, a sub-test coefficient of .75 is considered acceptable. No reliability coefficients for Writing Concepts, assessed in section 3 of this Inventory, were provided because they represented rating scales, which are not scored dichotomously.

Validity of the Preliteracy Inventory

A detailed review of the literature related to kindergarten literacy indicates that the Preliteracy Inventory does assess skills that are related to print, story, and writing concepts, thus providing content validity. Support for content validity can be found in the relatively detailed listing of the objectives matched to the tasks on the Inventory. These objectives are congruent with those related to print, writing, and story concepts in a kindergarten curriculum. Also, an examination of the list indicates that the tasks are appropriate for measuring the stated objectives. During the development of the Inventory the behaviors and tasks were reviewed by teachers. In addition, early childhood educators, whom the researcher asked to examine the instrument, verified its validity for the kindergarten level.
The Home Literacy Environment Inventory

The Home Literacy Environment Inventory obtains information about the home literacy environment including activities that may impact on the child's emergent literacy development. This instrument consisted of a combination of close-ended and open-ended items. There are 8 items on story reading, 6 items on writing, 5 items on reading, and 10 items on home activities. Although open-ended items take more time to complete and to analyze, this measure was selected because the open-ended items have the potential to unearth a broader variety of responses about the child's world outside the classroom. Guthrie and Hall (1984) suggest that the usefulness of classroom data may be limited without an understanding of home influences. They recommend that further research include this dimension as a supplement to classroom data. We need to know how the home environment interfaces with the classroom environment and how both could fit best to enhance emergent literacy development.

Reading specialists, early childhood educators, and literacy instructors examined the Home Literacy Inventory and verified its content validity. The I also found that the questions asked could provide information that would adequately describe the home literacy environment. Because of the open-ended nature of many of the questions, the responses were categorized and coded for computer analysis.

The Inventory could be completed during conferencing with the teacher or be sent home to be completed. I choose to send the Inventory home to the parents. The instructions for completing the Inventory were straightforward. Parents were asked to respond to each question and return the Inventory to their child's teacher. Of course, the
cover letter explained the purpose and importance of the study and assured parents of confidentiality.

Interviews

I conducted semi-structured, face-to-face interviews with the classroom teacher-informants. The semi-structured format was selected because I could put the subjects at ease while eliciting data that might not be otherwise readily obtained (Guthrie & Hall, 1984). In this approach, I prepared a set of open-ended questions informed by the Classroom Literacy Inventory (Nurss, 1995), teacher-interview questions, and a Checklist for Evaluating the Literacy Environment (Morrow et al., 1998), and the Joint Position Statement on Developmentally Appropriate Practices for Reading and Writing (International Reading Association and National Association for the Education of Young Children, 1998).

The checklist (see Fig. 1) was included for respondents to indicate the materials they had in their classrooms and the activities in which they participated because it reflected elements of a literacy-rich classroom that are advocated for in the most current professional literature and research, as described in chapter 2. It was also included because the list could assist the memories of the respondents by listing materials and activities they may have omitted.

To ensure internal validity of the interviews and observations, I employed the strategy of member checks. In member checks, the transcribed data were taken back to the teacher informants to have them verify their accuracy. Some respondents made substitutions, additions, or deletions. I catered for external validity by providing a rich,
thick description "so that anyone else interested in transferability has a base of information appropriate to the judgment" (Lincoln & Guba, 1985, pp. 124-125, cited in Merriam, 1998). Also, external validity was established, as Goetz and LeCompte (1984) (cited in Merriam, 1998, p. 177) suggest, by establishing the typicality or modal category of the case—that is, describing how typical the program, event, or individual is compared with others in the same class, so that users can make comparisons with their own situations (p. 177).

Reliability was ensured through audit trail. To facilitate an audit trail I provided detailed methods of data collection, how categories were derived, and how decisions were made throughout the inquiry (Merriam, 1998).

**Procedure**

I discussed the intention to conduct the study with the five principals of the elementary schools in the two selected school districts. I presented the current literacy challenges of learners and the significance of the study in terms of parents and teachers reflecting on and improving their practice. Copies of the research proposal, the assessment materials, the consent forms, and the cover letters were given to the principals who subsequently conferred with their kindergarten teachers.

Upon receiving approval to conduct the study, I informed the principals of the specific ways in which their cooperation would be needed. For example, in the case of schools which had more than one morning, afternoon, and whole-day kindergarten class, the principals were informed that random selection and assignment would be preferred in
order to cater for representativeness of the population. However, the sample selected and assigned was a matter of convenience.

Pilot Testing

During the month of February 1999, pilot testing of the Home Literacy Inventory was done on parents of kindergarten children. Carefully examined responses indicated that the Inventory was at an appropriate level of difficulty for the target population. During the month of March 1999, the Preliteracy Inventory was pilot tested. The story reading was done with a class of about 10 students at their school. While the entire class listened to the story-reading sessions, only 3 students were individually tested on the print, writing, and story concepts. In addition, 4 children individually participated in the story-reading sessions at their homes, followed by individual testing on print, writing, and story concepts. This provided needed practice in following the specific instructions for administering the instrument.

The pilot testing was extremely useful in enhancing competence in administering the Preliteracy Inventory. I had the opportunity to reflect on the type of setting that would be most suitable. Also, I had the opportunity to observe the different responses to the open-ended questions in the "Why We Read" section of Print Concepts. These responses were compared to the responses suggested in the manual, providing practice in identifying acceptable and non-acceptable responses. Additionally, I was able to determine the most suitable questions to be asked before, during, and after each of the three sessions of story reading. I was also able to select the appropriate stopping points at which it would be best to ask the questions. Three storybooks with the same story were
used to mark the different stopping points selected and different questions asked for each story-reading session. Furthermore, the pilot testing sessions were tape recorded which allowed an accurate estimate of the testing time and permitted me to critically examine my procedure.

For example, the instruction for one of the Print Concept tasks was not immediately understood by a subject. When the instruction “Turn the book so you can read it” was replaced by “Hold the book so you can read it” the appropriate response was immediately made by the student. This was informative for the data-gathering phase of the study. Another example was when the students were asked to point to a letter, or a period. I discovered that is was better for the student to use a pencil to perform this task. Also, the student’s response was unmistakable when two fingers were used to show the boundaries of a word.

The interview was also pilot tested with two teachers. I critically reflected on the sessions in order to improve performance in this regard. One question was deliberately asked for essentially the same information as a previous question, but using different wording, as suggested by Wiersma (1991). The respondents reacted as though repetition was a waste of time. Although the purpose was to check for consistency of responses, I omitted it because it was considered to be redundant.

**Administration of Data Collection Instrument**

The principals and kindergarten teachers were very cooperative. Data collection began during the week of April 12 and continued until June 11, 1999. Data-collection time lasted 2 months.
All seven participating teachers were given cover letters explaining the nature and purpose of the study and requesting their participation in an interview at a time mutually agreed upon by teacher and researcher. All teachers consented to be interviewed at a convenient location in or near to their classrooms. The setting of each interview was quite private, convenient, and comfortable at the time of interviewing, for both the respondent and me. I established a good rapport with the respondents and conducted the semi-structured interview in an informal manner, which seemed more like a friendly discourse. The respondents were informed about the importance of their contributions and were reassured of the confidentiality of information given. All respondents gave permission to tape record the sessions for accuracy in transcribing. Subsequent to transcribing the recorded interviews, they were taken back to the respondents to check for accuracy and to determine whether additions, substitutions, and deletions were necessary.

I prepared a package for each parent that contained a cover letter explaining the nature and purpose of the study, a consent form, and a Home Literacy Inventory. Inventories and consent forms were color-coded for easy identification of school. They were number coded to facilitate matching of consent form with Home Literacy Inventory. This also made it easy to trace non-respondents in order to do follow-up. Parents were invited to participate in the study by signing the consent form and completing the Inventory. They were assured that their individual surveys would be kept confidential.

The principals prepared and attached their own cover letters to the package I prepared for each parent. This was a great idea which indicated the principals’ consent and willingness to participate in the study, and I strongly believe that the tone of the letters elicited the cooperation of the parents. The teachers of the participating classes...
gave the packages to all the children from the classes selected to participate in the study. Parents who consented for their children to participate in the study returned the signed consent forms along with, in most cases, the completed Inventories to the teachers via their children. Follow-ups were provided for non-respondents. All children of consenting parents were eligible to be included in the sample.

The Preliteracy Inventory was administered according to the instructions provided in the manual. I built rapport with the students and created emotional security by calling each child's name while sticking name tags on them prior to the story-reading sessions. The story was read in group format three times during the week prior to the individual testing of the students. Each session was tape recorded. During each reading of the story the technique called Reading Aloud and Responding was used. Morrow et al. (1998) explained that this technique is very suitable for a whole-class setting. It consists of before-, during-, and after-reading strategies that help develop comprehension and print concepts.

One of the before-reading strategies used, was to activate prior knowledge about a fair by allowing a few children to talk about the fair grounds in the area and about animals they have seen at the fair. I then introduced the book by giving the title—Homer the Goose—showing the picture on the cover and in the book, and inviting the children to give predictions about the story. According to Clay (1991), "Good book introductions explore, test out, and draw on children’s knowledge" (p. 267).

Everyone could see the pictures as the story was read. During the reading of the story, I paused at preselected predictable points for a brief discussion and asked the children to give predictions about the story, or to complete sentences at strategic points.
or to fill in predictable words. The children chanted along certain conversational parts as I paused, indicating that they respond. I offered positive reinforcement for children’s comments.

During each reading of the story, one child was selected to dress like the main character, Homer the Goose who was going to the fair. I incorporated this because including dramatic play improves interpretation, comprehension, recall, and sequence of stories (Mandler & Johnson, 1977). Students were asked to describe how they would feel if they were laughed at in a similar manner as Homer was laughed at when the other animals saw him. After reading the story, I drew the children’s attention to the emotions expressed by Homer when he won the first prize. They were asked to describe how they would feel if their friend won a prize. As suggested by Rosenblatt (1994), I used an aesthetic instructional stance in story reading in which students were encouraged to identify with a character, a scene, or emotion related to the story.

On the days allocated for the administration of the Preliteracy Inventory, I sat with each child individually, in a location relatively free from distractions, and administered section 1 (Print Concepts) of the Inventory. Following the completion of section 1, I proceeded to section 2 (Story Retelling). If a child hesitated to retell the story, I asked the child to make up a story about Homer the Goose. I was expected to use my judgment to determine whether or not the answer represented the story element sought. For section 3 (Writing Concepts), I gave the child a piece of paper and a pencil and asked the child to write his or her name. I then asked the child to write a story about Homer Goose. The child was asked to pretend to write if he exhibited reluctance to write. This procedure was followed for the testing of all children. Scoring each item was done simultaneously...
with listening to responses. Scoring was reviewed and total scores computed subsequently.

**Data Analysis**

**Preliteracy Inventory**

Using the SPSS 7.5 for windows, a data file was constructed that comprised of each student's name, identification number, variables of interest that included each task measured by the Preliteracy Inventory, and performance ratings for each concept measured. As shown in Table 2, performance ratings for each concept were provided in the manual in order to provide an overall rating of the performance of each child on each concept.

**Table 2**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Score Band</th>
<th>Performance Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print</td>
<td>29 - 39</td>
<td>Mastered</td>
</tr>
<tr>
<td></td>
<td>25 - 29</td>
<td>Developing</td>
</tr>
<tr>
<td></td>
<td>0 - 24</td>
<td>Need help</td>
</tr>
<tr>
<td>Story Retelling</td>
<td>8</td>
<td>Mastered</td>
</tr>
<tr>
<td></td>
<td>5 - 7</td>
<td>Developing</td>
</tr>
<tr>
<td></td>
<td>0 - 4</td>
<td>Need help</td>
</tr>
<tr>
<td>Writing Name</td>
<td>3</td>
<td>Developing</td>
</tr>
<tr>
<td></td>
<td>0 - 2</td>
<td>Need help</td>
</tr>
<tr>
<td>Writing Story</td>
<td>5 - 6</td>
<td>Mastered</td>
</tr>
<tr>
<td></td>
<td>3 - 4</td>
<td>Developing</td>
</tr>
<tr>
<td></td>
<td>0 - 2</td>
<td>Need help</td>
</tr>
</tbody>
</table>
For example, for the kindergarten level, a score of 29-30 indicates that the child has mastered enough of the print concepts. A score of 25-28 indicates that the child is in the process of developing print concepts. A score of 24 or below indicates that the child needs help in developing the concept. Having constructed the data file using the SPSS program, the database was checked for possible errors and the analysis was run to provide descriptive statistics, frequency distributions, and histograms to answer question 1: Is there a relationship between the type of kindergarten program attended and the performance levels of kindergartners on print concepts, writing concepts, and a concept of story?

Non-parametric analysis of variance using the Kruskal-Wallis test was performed to test the null hypotheses with regard to any significant differences in performance among the students in the different kindergarten programs on print, writing, and story concepts? This test was selected because the distributions of the various variables were severely skewed and this is a distribution-free test. Testing for homogeneity of variance for the groups was done in order to determine whether or not this assumption for parametric ANOVA usage was satisfied. Although this and other assumptions were not completely satisfied, parametric ANOVA was still performed because it is pretty robust with respect to violations of certain assumptions.

It is interesting to note that both parametric and non-parametric ANOVA yielded similar results for the three null hypotheses tested that were as follows:

1. There is no significant difference in performance among the kindergarten programs on print concepts.
2. There is no significant difference in performance among kindergarten programs on writing concepts.

3. There is no significant difference in performance among kindergarten programs on story concepts.

Post hoc analysis using the Newman-Keuls test was performed to indicate which means were significantly different from each other with regard to the two hypotheses that were rejected. ANOVA was performed on age, which was examined and suspected to be a confounding variable. Since a statistically significant difference in age was revealed, analysis of covariance (ANCOVA) was performed with age as the covariate to further test the two hypotheses (1 and 2) that were rejected.

Home Literacy Inventory

A total of 110 parents, representing a response rate of 96% of the student sample, completed and returned the Home Literacy Inventory. The data from this Inventory were collected in four broad categories—story reading, writing, reading, and home activities. Because of the large number of respondents and the open-ended nature of several items, responses were categorized and assigned numerical codes.

Several responses were categorized as either yes or no. Others were appropriately categorized. With regard to the story-reading section of the Inventory, the researcher categorized responses to the question, “Who reads to your child?” as either family or other. Responses to the question, “How frequently is your child read to?” were categorized as daily, frequently (4-6), or seldom (1-3). Responses to frequency of visits to the public library were categorized as frequently, seldom, or never. To analyze the
question about children’s favorite book or author. I counted the number of parents across the kindergarten programs who responded to the items and calculated the percentage of parents out of the total 110 parents who were surveyed. Some respondents listed more than one book or author. Each different book and author were listed and tallied. The same procedure was followed for the item which asked, “What magazines does your child receive at home?”

With regard to the writing and reading sections of the Home Literacy Inventory, only the responses to two questions were not categorized as yes or no. Responses to “What does your child attempt to write?” were listed under the emerging categories and the frequency and percentage of each category computed. Responses to “To whom does your child write?” were categorized as family or other.

With regard to the section on home activities the responses to “What is your child’s favorite activity at home?” were also listed under emerging categories and the frequency and percentage of each category were computed. The responses to how many hours were spent a week in watching video and TV were categorizes as seldom (< 4), frequently (5-9), and very frequently (>10).

After categorizing the data, the portion for the quantitative analysis was coded, entered into the SPSS program and the analysis run to answer question 2: “What are some essential characteristics of the home literacy environment?” The Chi-square test was performed to provide the observed frequencies for several responses and to examine relationships among variables for the acceptance or rejection of the following six null hypotheses:

1. There is no significant relationship between how often a child is read to in the
home and the child’s ability to retell stories using pictures in storybooks.

2. There is no significant relationship between how often a child goes to the library and how many books a child has at home.

3. There is no significant relationship between emphasis placed on reading (reflected by the number of children’s books in the home) and children’s pattern of viewing television.

4. There is no significant relationship between emphasis placed on reading in the home (reflected by the number of children’s books in the home) and the children’s pattern of video viewing.

5. There is no significant relationship between emphasis placed on reading in the home (reflected by the number of children’s books in the home) and the children’s pattern of viewing educational television programs.

6. There is no significant relationship between how often a child is read to and whether the child is able to read words and phrases in books.

Interviews

The interview data were analyzed using an inductive and deductive approach. It was inductive because the semi-structured interview provided the teachers with a list of materials and activities based on previous knowledge of a literacy environment. Morrow et al. (1998) Checklist for Evaluating the Literacy Environment (see Fig. 1 in chapter 2) was given to the respondents. They were to indicate the materials they used in their respective classrooms. They were also given a list of literacy activities adapted from Morrow et al. (1998) in order to indicate the literacy activities in which they engaged the
students in their respective classrooms. I computed the frequencies and percentages of these responses of the interviewees.

The analysis was also deductive because I was eager to discover what had not been anticipated, but emerged as the respondents answered the open-ended questions. In some instances, questions were listed and verbatim responses were reported. For some other questions the data were categorized and a verbal summary of the responses given. In-depth interpretation was made and thick description used to answer question 3: "What are the characteristics of the classroom literacy environment?" The main environmental factors examined were: (1) Time spent on teacher- and student-initiated literacy activities; (2) Teachers' kindergarten teaching experience and attitude to whole- and half-day kindergarten; (3) Availability of materials and type of literacy activities engaged in; and (4) The literacy curriculum.

Summary

The research design employed observation, face-to-face interview, and survey methods. Two inventories were used in the study. The sample consisted of 114 kindergarten students, 110 parents, and seven kindergarten teachers. Permission to conduct the study was obtained from the school principals. Parents and teachers indicated their approval by signing consent forms.

The Preliteracy Inventory was administered to students and the interviews were conducted with teachers at their respective schools. Parents received and returned their Inventories via their children. A response rate of 96% was obtained. Preliteracy data were analyzed during and after data collection. All items were coded and transmitted into
the computer. The Home Literacy Inventory data were categorized, some were presented in a narrative summary, while some were coded and added to the quantitative database in the computer. Interview data were recorded during data collection and transcribed and analyzed subsequently. Member checks were done to ensure accuracy. Some of the data were reported verbatim, while some were categorized and a verbal summary given.

Computer analysis provided descriptive statistics for the Preliteracy and Home Literacy Inventories. ANOVA and ANCOVA were performed in order to determine whether or not there were significant differences among the performance of the children from the different kindergarten programs. The Chi-square test of Independence was applied for acceptance or rejection of the null hypotheses tested with regard to the Home Literacy data. The level of significance was set at 0.05. The results were interpreted and reported in chapter 4.
CHAPTER IV

RESULTS

Introduction

This chapter reports the findings of this study which described the characteristics of the home and classroom literacy environments and the emergent literacy development of kindergartners. The findings are presented in three sections organized by research questions. The first section deals with the results of the performance of the kindergartners on tasks measured by the Preliteracy Inventory. The second section deals with the results from the parent survey on the home literacy environment. The third section deals with the results from the teacher interviews on the classroom literacy environments. A summary of the results follows.

Results of Student Performance on Preliteracy Inventory Tasks

Question 1 asked. "Is there a relationship between the type of kindergarten program and the performance levels of the kindergartners on print concepts, writing concepts, and a concept of story?" The descriptive statistics for all the analyzed variables obtained on the total sample of 114 are presented in Table 3. The findings for the three components of print concepts measured—what, why, and how we read—are reported separately. The findings for overall performance on print concepts are also presented.
Table 3


<table>
<thead>
<tr>
<th>Concept</th>
<th>N</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print - &quot;What&quot;</td>
<td>114</td>
<td>8.88</td>
<td>9.00</td>
<td>9</td>
<td>0.44</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Print - &quot;Why&quot;</td>
<td>114</td>
<td>7.25</td>
<td>8.00</td>
<td>9</td>
<td>2.04</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Print - &quot;How&quot;</td>
<td>114</td>
<td>10.10</td>
<td>10.00</td>
<td>11</td>
<td>1.57</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Print - total</td>
<td>114</td>
<td>26.23</td>
<td>27.00</td>
<td>28</td>
<td>3.24</td>
<td>14</td>
<td>30</td>
</tr>
<tr>
<td>Writing name</td>
<td>114</td>
<td>2.90</td>
<td>3.00</td>
<td>3</td>
<td>0.30</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Writing story</td>
<td>114</td>
<td>1.70</td>
<td>4.00</td>
<td>4</td>
<td>1.35</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Story retelling</td>
<td>114</td>
<td>5.91</td>
<td>7.00</td>
<td>7</td>
<td>1.71</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

As indicated in Table 4, for the "What" component of print concepts, 111 (97.3%) children obtained a score of 8 and 9. Only 3 (2.7%) children scored 6 and 7. No one scored less than 6. It can be seen that the frequency distribution of this variable is severely skewed (see Fig. 2).

As indicated in Table 5, all students identified five items of print. Only a few students were not able to identify four items. One hundred thirteen (99%) students identified the note on the bull’s fence and the truck door label; 105 (92%) students identified the price label of the glasses; and 111 (97%) students identified the T-shirt label.
Table 4

Frequency Distribution for the "What" Measure of Print Concepts

<table>
<thead>
<tr>
<th>Score Obtained</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>6.1</td>
</tr>
<tr>
<td>9</td>
<td>104</td>
<td>91.2</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Figure 2. Histogram of the "What" measure of print concepts.
Table 5

**Frequency Distribution for the Correct Responses to the "What" Items of Print Concepts**

<table>
<thead>
<tr>
<th>Print to Be Identified</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note on the fence (bull)</td>
<td>113</td>
<td>99</td>
</tr>
<tr>
<td>Note on the fence (pig)</td>
<td>114</td>
<td>100</td>
</tr>
<tr>
<td>Price label (glasses)</td>
<td>105</td>
<td>92</td>
</tr>
<tr>
<td>Road sign (to the fair)</td>
<td>114</td>
<td>100</td>
</tr>
<tr>
<td>Price label (pop corn)</td>
<td>114</td>
<td>100</td>
</tr>
<tr>
<td>T-shirt label</td>
<td>111</td>
<td>97</td>
</tr>
<tr>
<td>Exit label</td>
<td>114</td>
<td>100</td>
</tr>
<tr>
<td>Truck door label</td>
<td>113</td>
<td>99</td>
</tr>
<tr>
<td>Medal label (1st prize)</td>
<td>114</td>
<td>100</td>
</tr>
</tbody>
</table>

As indicated in Table 6, for the "Why" component of print concepts, 85 (74.5%) children obtained a score between 7 and 9. The most frequently occurring score was 9 (see Fig. 3). Twenty-one (18.4%) children scored between 4 and 6. Only 8 (7.0%) children scored 3 and below. The mean score was 7.3.
Table 6

Frequency Distribution for the "Why" Measure of Print Concepts

<table>
<thead>
<tr>
<th>Score Obtained</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>7.9</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>7.0</td>
</tr>
<tr>
<td>7</td>
<td>20</td>
<td>17.5</td>
</tr>
<tr>
<td>8</td>
<td>23</td>
<td>20.2</td>
</tr>
<tr>
<td>9</td>
<td>42</td>
<td>36.8</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Figure 3. Histogram of the "Why" measure of print concepts.

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As indicated in Table 7, none of the items had 100% correct responses. There were 108 (95%) students who correctly explained why someone would read the price label for the popcorn. Between 93 to 101 (82% to 89%) students correctly explained why someone would read the road sign, the exit sign, the medal label, and the notes on the bull’s and the pig’s fence. Just 89 (78%) students correctly explained why someone would read the price label for the sunglasses. Only 82 (72%) correctly explained why someone would read the truck door label. The most difficult item to explain was the print on the T-shirt. Only 59 (52%) students correctly explained why someone would read it.

Table 7

Frequency Distribution for the Correct Responses to the “Why” Items of Print Concepts

<table>
<thead>
<tr>
<th>Print to be Explained</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note on the fence (bull)</td>
<td>97</td>
<td>35</td>
</tr>
<tr>
<td>Note on the fence (pig)</td>
<td>93</td>
<td>82</td>
</tr>
<tr>
<td>Price label (glasses)</td>
<td>99</td>
<td>73</td>
</tr>
<tr>
<td>Road sign (to the fair)</td>
<td>101</td>
<td>89</td>
</tr>
<tr>
<td>Price label (pop corn)</td>
<td>108</td>
<td>95</td>
</tr>
<tr>
<td>T-shirt label</td>
<td>59</td>
<td>52</td>
</tr>
<tr>
<td>Exit label</td>
<td>100</td>
<td>88</td>
</tr>
<tr>
<td>Truck door label</td>
<td>82</td>
<td>72</td>
</tr>
<tr>
<td>Medal label (1st prize)</td>
<td>97</td>
<td>85</td>
</tr>
</tbody>
</table>

As indicated in Table 8, for the “How” component of print concepts, 85 (74.6%) children obtained a score between 10 and 12; 20 (17.5%) children scored 8 and 9; and only 9 (8%) children scored between 5 and 7. The mean was 10.1 (see Fig. 4).
Figure 4. Histogram of the "How" measure of print concepts.

<table>
<thead>
<tr>
<th>Score Obtained</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>4.4</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>7.0</td>
</tr>
<tr>
<td>9</td>
<td>12</td>
<td>10.5</td>
</tr>
<tr>
<td>10</td>
<td>32</td>
<td>28.1</td>
</tr>
<tr>
<td>11</td>
<td>34</td>
<td>29.8</td>
</tr>
<tr>
<td>12</td>
<td>19</td>
<td>16.7</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 8

Frequency Distribution of the "How" Measure of Print Concepts
As indicated in Table 9, only one item, "turn the book so you can read it," had 100% correct responses. More than 103 (90%) students correctly performed the following tasks: show the story name, the part(s) you can read, where you would begin to read, the direction you would read, a letter, and a whole word. There were 97 (87%) students who showed where you would finish reading, and 93 (82%) students who showed the word "cat." Just 88 (77%) students showed a capital letter and just 48 (42%) and 44 (39%) students showed the word "the" and a period respectively.

As indicated in Table 10, 50 (44%) children obtained a score of 28 and above out of a total of 30; 32 (28%) children scored below 26. The mean score was 26.2 (see Fig.5).

Table 9

| Frequency Distribution for the Correct Responses to the "How" Items of Print Concepts |
|----------------------------------------|--------|--------|
| Task                                    | Frequency | 100 |
| Turn the book so you can read it         | 114     | 100   |
| Show me the story name                  | 113     | 99    |
| Show the part(s) that you can read      | 111     | 97    |
| Show me a letter                        | 113     | 99    |
| Show me a whole word                    | 109     | 96    |
| Show where to begin to read             | 106     | 93    |
| Show the direction you would read       | 112     | 98    |
| Show where you would finish reading     | 97      | 97    |
| Show me a capital letter                | 88      | 77    |
| Show me a period                        | 44      | 39    |
| Show me the word "cat"                  | 93      | 82    |
| Show me the word "the"                  | 45      | 42    |
There were two indicators of writing concepts—Writing Name and Writing Story. As indicated in Table 11, 103 (90.4%) children were able to write their names with correct letter formation and spelling. Only 11 (9.6%) children used letters formed backwards, incorrectly, or upside down. No one wrote using scribbles—continuous heavy lines or small circles. No letters (see Fig. 6).
Table 10

Frequency Distribution of the Print Concepts Total Score

<table>
<thead>
<tr>
<th>Score Obtained</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>16</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>19</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>20</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>22</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>23</td>
<td>6</td>
<td>5.3</td>
</tr>
<tr>
<td>24</td>
<td>5</td>
<td>4.4</td>
</tr>
<tr>
<td>25</td>
<td>7</td>
<td>6.1</td>
</tr>
<tr>
<td>26</td>
<td>16</td>
<td>14.0</td>
</tr>
<tr>
<td>27</td>
<td>16</td>
<td>14.0</td>
</tr>
<tr>
<td>28</td>
<td>23</td>
<td>20.2</td>
</tr>
<tr>
<td>29</td>
<td>17</td>
<td>14.9</td>
</tr>
<tr>
<td>30</td>
<td>10</td>
<td>8.8</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 11

Frequency Distribution for the "Writing Name" Task of Writing Concepts

<table>
<thead>
<tr>
<th>Score Obtained</th>
<th>Writing Criterion</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Incorrect letters</td>
<td>11</td>
<td>9.6</td>
</tr>
<tr>
<td>3</td>
<td>Correct letters</td>
<td>103</td>
<td>90.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>114</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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Many children's initial response to the "Writing Story" task was, "I can't write" or "I can't spell." However, when I encouraged them to try, they went right on with their emergent writing. As indicated in Table 12, for the "Writing Story" task only 3 (2.6%) wrote with correct spelling; 20 (17.5%) wrote using invented spelling—legible, readable text such as "Homa, the gose went to the fare." Seventy-one (62.3%) children wrote using recognizable letters. No children wrote using letter-like characters—separate recognizable letters and words. As many as 16 (14%) preferred to draw pictures without writing or scribbling. The mean score was 3.7 (see Fig. 7).
Table 12

Frequency Distribution for the "Writing Story" Task of Writing Concepts

<table>
<thead>
<tr>
<th>Score Obtained</th>
<th>Writing Criterion</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No attempt</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>1</td>
<td>Pictures</td>
<td>16</td>
<td>14.0</td>
</tr>
<tr>
<td>2</td>
<td>Scribbling</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>3</td>
<td>Letter-like characters</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>4</td>
<td>Recognizable letters</td>
<td>71</td>
<td>62.3</td>
</tr>
<tr>
<td>5</td>
<td>Invented spellings</td>
<td>20</td>
<td>17.5</td>
</tr>
<tr>
<td>6</td>
<td>Correct spelling</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>114</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

**Figure 7.** Histogram of the “Writing story” task of writing concepts.

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The results of the "Story retelling" task are indicated in Table 13. Eighty-two (71.9%) children scored 6 and above: 23 (20.2%) children scored between 3 and 5. Only 9 (7.9%) children scored 2 and below. The mean score was 5.9 (see Fig. 8).

Table 13

<table>
<thead>
<tr>
<th>Score Obtained</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>3.9</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>3.9</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>6.1</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2.6</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>8.8</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>8.8</td>
</tr>
<tr>
<td>6</td>
<td>21</td>
<td>18.4</td>
</tr>
<tr>
<td>7</td>
<td>54</td>
<td>47.4</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>6.1</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As indicated in Table 14, only 13 (11%) students began the story as expected. Between 82-84 (72%-74%) students used descriptive words at least twice and gave at least one example of a character speaking. Between 93-111 (82%-97%) included in their retelling the other story elements—setting, at least three events in logical sequence, at least one feeling of a character, at least one example of a character speaking, and the story ending.
Table 14

Frequency Distribution for the Story Elements Included in Story Retelling

<table>
<thead>
<tr>
<th>Story Element</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Setting</td>
<td>111</td>
<td>97</td>
</tr>
<tr>
<td>Characters</td>
<td>93</td>
<td>82</td>
</tr>
<tr>
<td>Sequence</td>
<td>97</td>
<td>85</td>
</tr>
<tr>
<td>Feelings</td>
<td>101</td>
<td>89</td>
</tr>
<tr>
<td>Descriptions</td>
<td>84</td>
<td>74</td>
</tr>
<tr>
<td>Conversation</td>
<td>82</td>
<td>72</td>
</tr>
<tr>
<td>Ending</td>
<td>93</td>
<td>82</td>
</tr>
</tbody>
</table>

Figure 9. Histogram of the “Story retelling” task of story concepts.
Overall rating for print concepts indicate that 25 (22%) students needed help in developing the skills measured: 62 (54%) students were in the process of developing those skills measured; and 27 (24%) had mastered enough of those skills measured.

Overall rating for story retelling indicates that 22 (19%) students needed help in developing the skills measured: 85 (75%) students were in the process of developing the skills measured; and 7 (6%) students had mastered enough of those skills measured.

Overall rating for writing name indicates that 103 (90%) students were in the process of developing the skill of writing their names, while only 11 (10%) students needed help in developing this skill. Overall rating for writing story indicates 20 (18%) students needed help in developing this skill—they mainly drew pictures: 71 (62%) students were in the process of developing this skill—they wrote recognizable letters: and 23 (20%) students had adequate mastery of the skill of writing a story—they wrote using invented and conventional spelling.

With regard to the performance of the students on the tasks measured by the Preliteracy Inventory, the following three null hypotheses were tested: (1) There is no significant difference in performance on print concepts among the students in the different kindergarten programs; (2) There is no significant difference in performance on writing concepts among the students in the different kindergarten programs; and (3) There is no significant difference in performance on story concepts among the children in the different kindergarten programs.

Non-parametric Analysis of Variance (ANOVA) using Kruskal-Wallis test was performed. Results are presented in Table 16 with the mean ranks for each group presented in Table 15. It was found that there was a significant difference among groups
on only two variables: the "How" component of print concepts and "Writing Story" ($p < .05$). It is clear that the null hypothesis tested, "There is no significant difference in performance on story concepts among children from the various kindergarten programs." was retained, meaning that the groups did not differ significantly in performance on this variable.

Table 15

Results of the Kruskal-Wallis Test

<table>
<thead>
<tr>
<th></th>
<th>Print &quot;What&quot;</th>
<th>Print &quot;Why&quot;</th>
<th>Print &quot;How&quot;</th>
<th>Print Total</th>
<th>Writing Name</th>
<th>Writing Story</th>
<th>Story Retelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>0.107</td>
<td>7.161</td>
<td>9.942</td>
<td>7.152</td>
<td>5.634</td>
<td>16.077</td>
<td>1.022</td>
</tr>
<tr>
<td>df</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>$p$</td>
<td>0.991</td>
<td>0.067</td>
<td>0.019</td>
<td>0.067</td>
<td>0.131</td>
<td>0.001&quot;</td>
<td>0.388</td>
</tr>
</tbody>
</table>

$p < .05$, "$p < .001$.

In order to do post hoc analysis to determine which means were different from each other, parametric ANOVA was also performed. If parametric ANOVA is to be appropriately used it is important that certain assumptions relevant to ANOVA be met. According to Hinkle, Wiersma, and Jurs (1994), these include the following: (1) Random and independent samples that are representative of the populations; (2) Normality of the distributions of the dependent variables; and (3) Homogeneity of variance. However, these assumptions underlying ANOVA were not completely satisfied in this study.
Table 16

Results of the Non-Parametric Analysis of Variance (Kruskal-Wallis Test) - Mean Rank of Each Kindergarten Program

<table>
<thead>
<tr>
<th>Concept</th>
<th>Kindergarten Program</th>
<th>n</th>
<th>Mean Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print - &quot;What&quot;</td>
<td>AM</td>
<td>41</td>
<td>56.37</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>25</td>
<td>58.06</td>
</tr>
<tr>
<td></td>
<td>Whole-day</td>
<td>24</td>
<td>57.88</td>
</tr>
<tr>
<td></td>
<td>Alternate day</td>
<td>24</td>
<td>57.63</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print - &quot;Why&quot;</td>
<td>AM</td>
<td>41</td>
<td>54.83</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>25</td>
<td>49.26</td>
</tr>
<tr>
<td></td>
<td>Whole-day</td>
<td>24</td>
<td>72.11</td>
</tr>
<tr>
<td></td>
<td>Alternate day</td>
<td>24</td>
<td>55.75</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print - &quot;How&quot;</td>
<td>AM</td>
<td>41</td>
<td>52.72</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>25</td>
<td>45.36</td>
</tr>
<tr>
<td></td>
<td>Whole-day</td>
<td>24</td>
<td>64.85</td>
</tr>
<tr>
<td></td>
<td>Alternate day</td>
<td>24</td>
<td>70.96</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print - Total</td>
<td>AM</td>
<td>41</td>
<td>54.33</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>25</td>
<td>46.02</td>
</tr>
<tr>
<td></td>
<td>Whole-day</td>
<td>24</td>
<td>68.85</td>
</tr>
<tr>
<td></td>
<td>Alternate day</td>
<td>24</td>
<td>63.52</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing name</td>
<td>AM</td>
<td>41</td>
<td>57.44</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>25</td>
<td>51.60</td>
</tr>
<tr>
<td></td>
<td>Whole-day</td>
<td>24</td>
<td>63.00</td>
</tr>
<tr>
<td></td>
<td>Alternate day</td>
<td>24</td>
<td>58.25</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing story</td>
<td>AM</td>
<td>41</td>
<td>60.72</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>25</td>
<td>42.26</td>
</tr>
<tr>
<td></td>
<td>Whole-day</td>
<td>24</td>
<td>51.83</td>
</tr>
<tr>
<td></td>
<td>Alternate day</td>
<td>24</td>
<td>73.54</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Story retelling</td>
<td>AM</td>
<td>41</td>
<td>62.95</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>25</td>
<td>59.62</td>
</tr>
<tr>
<td></td>
<td>Whole-day</td>
<td>24</td>
<td>51.60</td>
</tr>
<tr>
<td></td>
<td>Alternate day</td>
<td>24</td>
<td>51.88</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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As shown in Table 17, test of homogeneity of variance showed that only two variables—the “What” component of print concepts and the “Why” component of print concepts—satisfied the assumption of homogeneity. Also, it can be seen from Figs. 1-7 that all the distributions are more or less skewed.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Levene Statistic</th>
<th>df 1</th>
<th>df 2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print - &quot;What&quot;</td>
<td>1.139</td>
<td>3</td>
<td>110</td>
<td>.337</td>
</tr>
<tr>
<td>Print - &quot;Why&quot;</td>
<td>1.283</td>
<td>3</td>
<td>110</td>
<td>.284</td>
</tr>
<tr>
<td>Print - &quot;How&quot;</td>
<td>2.694</td>
<td>3</td>
<td>110</td>
<td>.050</td>
</tr>
<tr>
<td>Print - Total</td>
<td>2.889</td>
<td>3</td>
<td>110</td>
<td>.039</td>
</tr>
<tr>
<td>Writing name</td>
<td>9.164</td>
<td>3</td>
<td>110</td>
<td>.000</td>
</tr>
<tr>
<td>Writing story</td>
<td>10.790</td>
<td>3</td>
<td>110</td>
<td>.000</td>
</tr>
<tr>
<td>Story retelling</td>
<td>4.029</td>
<td>3</td>
<td>110</td>
<td>.009</td>
</tr>
</tbody>
</table>

\( p < .05. \)

However, ANOVA is reasonably robust with respect to the violations of these assumptions (Hinkle et al., 1994). For this reason, parametric ANOVA was performed. Results can be seen in Tables 18 and 19. It was shown that there was a significant difference among groups on the same two variables as shown by the Kruskal-Wallis test: the “How” component of print concepts, \( F (3,110) = 3.766. \ p < .05. \) and “Writing Story” component of writing concepts, \( F (3,110) = 6.779. \ p < .001. \)
Table 18

Results of ANOVA for the Groups Defined by the Type of Kindergarten Program

<table>
<thead>
<tr>
<th>Concept</th>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square Ratio</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print - &quot;What&quot;</td>
<td>Between Groups</td>
<td>0.15</td>
<td>3</td>
<td>5.069</td>
<td>0.252</td>
<td>0.860</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>22.13</td>
<td>110</td>
<td>0.201</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>22.28</td>
<td>113</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print - &quot;Why&quot;</td>
<td>Between Groups</td>
<td>21.64</td>
<td>3</td>
<td>7.214</td>
<td>1.763</td>
<td>0.156</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>449.98</td>
<td>110</td>
<td>4.091</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>471.62</td>
<td>113</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print - &quot;How&quot;</td>
<td>Between Groups</td>
<td>26.06</td>
<td>3</td>
<td>8.692</td>
<td>3.766</td>
<td>0.013</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>253.86</td>
<td>110</td>
<td>2.308</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>279.94</td>
<td>113</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Print - Total</td>
<td>Between Groups</td>
<td>76.38</td>
<td>3</td>
<td>25.360</td>
<td>2.518</td>
<td>0.062</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>1107.99</td>
<td>110</td>
<td>10.073</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1184.07</td>
<td>113</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing name</td>
<td>Between Groups</td>
<td>0.50</td>
<td>3</td>
<td>0.165</td>
<td>1.924</td>
<td>0.132</td>
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<tr>
<td></td>
<td>Within Groups</td>
<td>9.44</td>
<td>110</td>
<td>0.086</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>9.94</td>
<td>113</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing story</td>
<td>Between Groups</td>
<td>12.12</td>
<td>3</td>
<td>10.707</td>
<td>6.779</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>173.74</td>
<td>110</td>
<td>1.579</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>205.86</td>
<td>113</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Story retelling</td>
<td>Between Groups</td>
<td>15.62</td>
<td>3</td>
<td>5.206</td>
<td>1.815</td>
<td>0.149</td>
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<tr>
<td></td>
<td>Within Groups</td>
<td>315.51</td>
<td>110</td>
<td>2.868</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>331.12</td>
<td>113</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05,* * p < .001.
### Table 19

**Descriptive Statistics for All the Variables Broken Down by the Type of Kindergarten Program**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Kindergarten Program</th>
<th>Statistics</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
<td>Minimum</td>
</tr>
<tr>
<td>Print - &quot;What&quot; AM</td>
<td>41</td>
<td>8.8537</td>
<td>3.4775</td>
<td>7.00</td>
<td>9.00</td>
</tr>
<tr>
<td>PM</td>
<td>25</td>
<td>8.9200</td>
<td>0.2769</td>
<td>8.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Whole-day</td>
<td>24</td>
<td>8.9167</td>
<td>0.2823</td>
<td>9.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Alternate day</td>
<td>24</td>
<td>8.8333</td>
<td>0.6170</td>
<td>6.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>8.8772</td>
<td>0.4440</td>
<td>6.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Print - &quot;Why&quot; AM</td>
<td>41</td>
<td>7.0244</td>
<td>2.2078</td>
<td>1.00</td>
<td>9.00</td>
</tr>
<tr>
<td>PM</td>
<td>25</td>
<td>6.9200</td>
<td>1.9562</td>
<td>2.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Whole-day</td>
<td>24</td>
<td>8.8083</td>
<td>1.4421</td>
<td>4.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Alternate day</td>
<td>24</td>
<td>7.1667</td>
<td>2.2393</td>
<td>3.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>7.2544</td>
<td>1.5740</td>
<td>5.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Print - &quot;How&quot; AM</td>
<td>41</td>
<td>9.8537</td>
<td>1.6817</td>
<td>5.00</td>
<td>12.00</td>
</tr>
<tr>
<td>PM</td>
<td>25</td>
<td>9.4800</td>
<td>1.8511</td>
<td>5.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Whole-day</td>
<td>24</td>
<td>10.5000</td>
<td>1.1795</td>
<td>7.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Alternate day</td>
<td>24</td>
<td>10.7500</td>
<td>1.0734</td>
<td>8.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>10.0965</td>
<td>1.5740</td>
<td>5.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Print - Total AM</td>
<td>41</td>
<td>25.7317</td>
<td>3.6812</td>
<td>14.00</td>
<td>30.00</td>
</tr>
<tr>
<td>PM</td>
<td>25</td>
<td>25.3200</td>
<td>3.3257</td>
<td>16.00</td>
<td>30.00</td>
</tr>
<tr>
<td>Whole-day</td>
<td>24</td>
<td>27.7500</td>
<td>1.8178</td>
<td>24.00</td>
<td>30.00</td>
</tr>
<tr>
<td>Alternate day</td>
<td>24</td>
<td>26.7500</td>
<td>3.1242</td>
<td>16.00</td>
<td>30.00</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>26.2281</td>
<td>3.0371</td>
<td>14.00</td>
<td>30.00</td>
</tr>
<tr>
<td>Writing name AM</td>
<td>41</td>
<td>2.9000</td>
<td>3.3500</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>PM</td>
<td>25</td>
<td>2.9000</td>
<td>3.4200</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Whole-day</td>
<td>24</td>
<td>3.0000</td>
<td>0.0000</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Alternate day</td>
<td>24</td>
<td>2.9200</td>
<td>0.2800</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>2.9000</td>
<td>0.3000</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Writing story AM</td>
<td>41</td>
<td>3.9300</td>
<td>3.0300</td>
<td>1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>PM</td>
<td>25</td>
<td>2.8000</td>
<td>1.7800</td>
<td>0.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Whole-day</td>
<td>24</td>
<td>3.6300</td>
<td>1.1700</td>
<td>0.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Alternate day</td>
<td>24</td>
<td>4.3300</td>
<td>0.9200</td>
<td>1.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>3.7000</td>
<td>1.3500</td>
<td>0.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Story retelling AM</td>
<td>41</td>
<td>6.3171</td>
<td>1.2930</td>
<td>2.00</td>
<td>8.00</td>
</tr>
<tr>
<td>PM</td>
<td>25</td>
<td>6.0400</td>
<td>1.5937</td>
<td>2.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Whole-day</td>
<td>24</td>
<td>5.4167</td>
<td>2.0834</td>
<td>0.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Alternate day</td>
<td>24</td>
<td>5.5933</td>
<td>1.9542</td>
<td>1.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>5.9123</td>
<td>1.7118</td>
<td>0.00</td>
<td>8.00</td>
</tr>
</tbody>
</table>
Post hoc analysis was performed using the Newman-Keuls test to determine between which means significant differences existed following the significant $F$ ratio in the ANOVA. An alpha level of .05 was used. It was found that, for both variables, the PM group demonstrated an inferior performance to most of the other groups as depicted in Figs. 9 and 10.

For the “How” component of print concepts, there was no significant difference between the PM and the AM means but the PM group scored significantly lower than the alternate-day and the whole-day groups. There was no significant difference among the AM, whole-day, and alternate-day groups ($p < .05$). The group means for this variable are depicted in Fig. 9.

![Figure 10. The means in “How” task of print concepts broken down by type of the kindergarten program.](image-url)
For the "Writing Story" component of writing concepts, it was found that there was no significant difference among the AM, whole-day, and alternate-day groups. The only significant difference was between the PM group and the three other groups. The PM group performed significantly lower than the other groups as depicted in Fig. 10.

![Graph showing means in "Writing story" task broken down by the type of the kindergarten program.]

*Figure 11.* The means in "Writing story" task broken down by the type of the kindergarten program.

In searching for an explanation for the inferior performance of the PM group on the two variables, age differences were examined. It was found that the mean age of the children in the PM group (73 months) was much lower than the mean ages of the other groups as depicted in Table 20 and Fig. 11.
Table 20

The Mean Age (in Months) of Children in Different Kindergarten Programs

<table>
<thead>
<tr>
<th>Kindergarten Program</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>41</td>
<td>74.9024</td>
<td>5.2953</td>
<td>66.00</td>
<td>90.00</td>
</tr>
<tr>
<td>PM</td>
<td>25</td>
<td>73.1200</td>
<td>4.5122</td>
<td>68.00</td>
<td>85.00</td>
</tr>
<tr>
<td>Whole-day</td>
<td>24</td>
<td>77.5417</td>
<td>4.9605</td>
<td>68.00</td>
<td>88.00</td>
</tr>
<tr>
<td>Alternate day</td>
<td>24</td>
<td>76.3333</td>
<td>4.5269</td>
<td>69.00</td>
<td>84.00</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>75.3684</td>
<td>5.0821</td>
<td>66.00</td>
<td>90.00</td>
</tr>
</tbody>
</table>

Figure 12. The mean age of children in different kindergarten programs.
Simple ANOVA for the differences in age among the groups was computed. It was found that the $F$ value was significant. $F(3, 110) = 3.753, p < .05$, as shown in Table 21. This indicates that there was a significant difference in age among the groups.

Since age is correlated with print and writing concepts, and based on the age differences for the groups, an analysis of covariance (ANCOVA), with age as the covariate, was computed for the means of the variables on which there were found significant differences. As shown in Table 22, ANCOVA results, $F(3, 109) = 2.490, p > .05$, did not substantiate the significant difference found among groups as a result of performing the parametric and the non-parametric ANOVA on the “How” component of print concepts.

Table 21

The Results of ANOVA for Differences in Age Among Kindergarten Programs

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>270,985</td>
<td>3</td>
<td>90,328</td>
<td>3.753</td>
<td>.113</td>
</tr>
<tr>
<td>Within Groups</td>
<td>2647.541</td>
<td>110</td>
<td>24.069</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2918.526</td>
<td>113</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$p < .05$.

This means that the ANCOVA $F$ ratio showed no significant difference in performance among groups on the “How” component of print concepts, thus retaining the null hypothesis that there is no significant difference in performance among groups on print concepts.
Table 22
The Results of ANCOVA for "How" Task of Print Concepts and "Writing Story" Task of Writing Concepts

<table>
<thead>
<tr>
<th>Concept</th>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F Ratio</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print - &quot;How&quot;</td>
<td>Covariate (Age)</td>
<td>19.075</td>
<td>1</td>
<td>19.075</td>
<td>6.517</td>
<td>0.010</td>
</tr>
<tr>
<td></td>
<td>Main Effects</td>
<td>16.728</td>
<td>3</td>
<td>5.576</td>
<td>2.490</td>
<td>0.064</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>244.135</td>
<td>109</td>
<td>2.240</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>279.939</td>
<td>113</td>
<td>2.477</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing story</td>
<td>Covariate (Age)</td>
<td>10.557</td>
<td>1</td>
<td>10.557</td>
<td>6.392</td>
<td>0.010</td>
</tr>
<tr>
<td></td>
<td>Main Effects</td>
<td>26.870</td>
<td>3</td>
<td>8.957</td>
<td>5.796</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>168.434</td>
<td>109</td>
<td>1.545</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>205.860</td>
<td>113</td>
<td>1.822</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .01.

However, for the "Writing Story" component of writing concepts, with age as a covariate, it was found that the F value was significant—F (3, 109) = 5.796, p < .01. This indicates that group differences were still evident for "Writing Story" when the means were statistically adjusted for age differences, thus rejecting the null hypothesis that there is no significant difference in performance among groups on writing concepts. The data in Table 23 show that the adjusted mean of the PM group (2.90) was the lowest for the "Writing Story" component of writing concepts. The students in the PM program did not perform as well as did their counterparts in the other kindergarten programs. According to the performance ratings for the "Writing Story" component of writing concepts, 20 (18%) children in the PM group needed help in developing this skill. As shown in Fig. 12, 60% of these children were from the PM group.
Therefore, the null hypotheses tested that there is no significant difference in performance among groups on print concepts and on story concepts were retained while the null hypothesis tested that there is no significant difference in performance on writing concepts was rejected. These results of student performance on tasks measured by the Preliteracy Inventory provide some empirically based evidence for group differences on writing concepts only.

Table 23

The Unadjusted and Adjusted Cell Means in ANCOVA for "How" Task of Print Concepts and "Writing Story" Task of Writing Concepts

<table>
<thead>
<tr>
<th>Concept</th>
<th>Kindergarten Program</th>
<th>n</th>
<th>Cell Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print - &quot;How&quot;</td>
<td>AM</td>
<td>41</td>
<td>9.85</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>25</td>
<td>9.48</td>
</tr>
<tr>
<td></td>
<td>Whole-day</td>
<td>24</td>
<td>10.50</td>
</tr>
<tr>
<td></td>
<td>Alternate day</td>
<td>24</td>
<td>10.75</td>
</tr>
<tr>
<td>Writing story</td>
<td>AM</td>
<td>41</td>
<td>3.93</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>25</td>
<td>3.80</td>
</tr>
<tr>
<td></td>
<td>Whole-day</td>
<td>24</td>
<td>3.63</td>
</tr>
<tr>
<td></td>
<td>Alternate day</td>
<td>24</td>
<td>4.33</td>
</tr>
</tbody>
</table>

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Figure 13. Comparison of performance by kindergarten type on “Writing Story” concepts.
Results of Parent Survey on the Home Literacy Inventory

Question 2 asked, "What are some essential characteristics of the home literacy environment of the kindergartners in the study?" One hundred ten parents completed and returned the Home Literacy Inventory, an extremely high response rate of 96%. To answer question 2, I reviewed the survey data and computed frequencies and percentages for the responses to the salient items. Six null hypotheses investigated the relationship between frequency of reading to children, retelling stories, frequency of visiting the library, number of children's books in the home, pattern of viewing television, pattern of video viewing, and pattern of viewing educational television programs. The Chi-square test of independence was performed to test the six null hypotheses to determine whether there were significant relationships among the selected variables.

Reading

Of the 110 responses to the question, "Does your child ask to be read to?" 105 (95%) parents said yes. Sixty-nine (64%) parents read to their children daily; 25 (23%) parents read to their children 4-6 times a week; and 14 (13%) parents read to their children 1-3 times a week.

Of the 108 responses to the question, "How many books does your child have at home?" 34 (32%) parents said their children had 75 or less; 48 (44%) parents said their children had between 76-150; and 26 (24%) parents said that their children had 151 or more books at home. Of the 109 responses to the question, "Does your child read words and phrases in books?" only 77 (71%) parents said yes and 32 (29%) parents said no. Of the 108 responses to the question, "Does your child read words in the environment?" a
total of 91 (84%) parents said yes and 17 (16%) said no. This was supported by the story retelling data collected on the Preliteracy Inventory.

Of the 102 (93%) parents who answered the question “What is the name of your child’s favorite book or author?” 8 parents gave no response and 3 said that their children had no favorite book or author. Five parents indicated that their children had several favorite books and authors. More books than authors were listed. A total of 67 different books and 19 different authors were listed. Some respondents listed more than one book and author. A few listed both book and author.

The most popular title was Arthur Books, named by 17 (17%) respondents. The author of these books, Mare Brown, was the most frequently named author, mentioned by 6 (6%) respondents. A distant second title was Bible Stories, named by 6 (6%) respondents. A distant second author was Dr. Seuss, named by 4 (4%) respondents.

There were 109 responses to the question “Does your child retell stories using pictures in storybooks?” A total of 98 (90%) parents said yes. Just 11 (10%) parents said no.

There were 102 (93%) parents who answered the question “What magazine does your child receive at home?” There were 2 parents who gave no response and 47 who said that they did not receive any magazines. A total of 36 different magazines were listed. Some parents listed more than one magazine. Following are the magazines that were named four or more times. Highlights was named by 16 (16%) respondents, with Your Big Backyard a close second at 14 (14%). Only 1 magazine, Crayola Kids, was named 5 times. The four magazines that were each named four times were: Nickelodeon, Disney Adventures, Sesame Street, and Kids City.
Writing

All respondents said that their children had access to writing materials (pencils, markers, crayons, and paper) and their children attempted to write. Of the 108 responses to the question “Does your child frequently observe his or her parents writing?” 94 (87%) parents said yes. There were 110 parents who answered the question “What does your child attempt to write?” The categories that emerged were letters of the alphabet, stories, words, sentences, notes, cards, numbers, and names. Table 24 shows the frequency and percentage for each category.

Table 24

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letters</td>
<td>43</td>
<td>38</td>
</tr>
<tr>
<td>Stories</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Words</td>
<td>40</td>
<td>36</td>
</tr>
<tr>
<td>Sentences</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>Notes</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Cards</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Numbers</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Names</td>
<td>60</td>
<td>55</td>
</tr>
</tbody>
</table>

Home Activities

There were 104 (95%) parents who responded to the question “What is your child’s favorite activity at home?” Five parents gave no response and only 1 parent said that the child had no favorite activity. Several categories emerged from this open-ended
question. Table 25 shows each category with its frequency and percentage. The category that ranked the highest was playing. There were 75 (72%) who named some type of play. A distant second was the category of coloring, painting, or drawing. Only 7 (7%) and 8 (8%) respondents named the reading and writing categories respectively.

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coloring, Painting, or Drawing</td>
<td>46</td>
<td>44</td>
</tr>
<tr>
<td>Writing</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Reading</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Computers</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Playing (sports, toys, pets, etc.)</td>
<td>75</td>
<td>72</td>
</tr>
<tr>
<td>Chores</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>TV and Video Viewing</td>
<td>23</td>
<td>12</td>
</tr>
</tbody>
</table>

Of the 108 responses to the question “How many hours per week does your child watch television?” 36 (33%) parents said 1-4 hours, 31 (29%) parents said 5-9 hours, and 41 (38%) parents said more than 10 hours. Of the 108 responses to the question “How many hours per week does your child watch videos?” 78 (72%) parents said 1-4 hours, 21 (19%) parents said 5-9 hours, and only 8 (7%) parents said more than 9 hours. Of the 108 responses to the question “Does your child watch educational television programs?” 102 (94%) parents said yes.
Relationship Between Variables

Six null hypotheses investigated the relationship between selected variables. Only one hypothesis was rejected and five retained. The null hypothesis rejected was, “There is no significant relationship between how often a child is read to and whether the child is able to read words and phrases in books.” The resulting Chi-square was significant ($\chi^2 = 10.37, p < .01$). Clearly, children’s ability to read words and phrases was not independent of the frequency with which they were read to. The rejection of the null hypothesis means that an association or significant relationship was found to exist between the two variables. More children who were read to daily were reported to read words and phrases in books than the children who were read to less frequently. The observed frequencies for the two variables are shown in Table 26.

<table>
<thead>
<tr>
<th>Frequency of Reading to Children</th>
<th>Children's Ability to Read Words and Phrases</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td></td>
<td>56</td>
<td>13</td>
<td>69</td>
</tr>
<tr>
<td>Frequently (4-6 times weekly)</td>
<td></td>
<td>15</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>Seldom (1-3 times weekly)</td>
<td></td>
<td>6</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>77</td>
<td>31</td>
<td>108</td>
</tr>
</tbody>
</table>

The null hypothesis tested, “There is no significant relationship between how often a child is read to in the home and the child’s ability to retell stories using pictures in storybooks,” was retained. The analysis of the frequency data resulted in a Chi-square
that was not significant \( (\chi^2 = .515, p > .05) \). Another null hypothesis tested. "There is no significant relationship between how often a child goes to the library and how many books a child has at home." was retained \( (\chi^2 = 7.226, p > .05) \). The null hypothesis tested. "There is no significant relationship between emphasis placed on reading (reflected by the number of children's books in the home) and the children's pattern of television viewing." was retained \( (\chi^2 = 2.155, p > .05) \). The null hypothesis tested. "There is no significant relationship between emphasis placed on reading (reflected by the number of children's books in the home) and the children's pattern of video viewing," was retained \( (\chi^2 = 2.219, p > .05) \). Finally, the null hypothesis tested. "There is no significant relationship between emphasis placed on reading (reflected by the number of children's book in the home) and the children's pattern of viewing educational television programs." was also retained \( (\chi^2 = .196, p > .05) \). Retaining the above five null hypotheses means that no significant relationship between the variables were found, resulting in failure to reject them.

### Results of Teacher Interviews on the Classroom

**Literacy Environment**

Question 3 asked. "What are the characteristics of the classroom literacy environment of the kindergartners in the study?" To answer this question, I reviewed the interview data and analyzed it for teachers' kindergarten teaching experience and background knowledge on emergent literacy, teacher preference for half- or whole-day kindergarten programs, time spent on teacher- and student-initiated literacy activities, the quantity of teacher-initiated literacy activities, the materials used in the classroom, and physical setting of the classroom. A macroanalysis was done that involved examining
these broad categories, and a microanalysis involved examining the subcategories within these larger categories. The results of the interviews follow.

Kindergarten Teaching Experience

The teacher informants had many years teaching experience ranging from 13 to 25 years. Years of kindergarten teaching experience ranged from 2 to 15. With regard to kindergarten teaching experience, the teacher from the alternate-day program had 11 years, the three teachers of the morning programs had an average of 10.3 years, the two afternoon program teachers had an average of 8.5 years, and the two whole-day teachers had an average of 9.5 years. All the teachers taught their respective classes for the entire school year during which the data were collected.

Emergent Literacy Versus Reading Readiness

When asked whether they had ever studied the concept of emergent literacy, two said they studied it at workshops. Another teacher said, "Yes." Another response was, "Not in official classes. I had a class called Parent Education for Teachers and they talked about that. I got most of what I know from attending Reading conferences." On the other hand, one teacher said, "In my beginning reading classes." The seventh teacher said, "I've seen it, looked at it, but I don't practice it as such."

When asked about the difference between the concept of emergent literacy and the concept of reading readiness, one teacher said, "I think emergent literacy is more letting the child's writing flow without worrying about spelling. Reading readiness is more specific. You concentrate on sounds and spelling." Another response was, "Reading readiness provides experiences for children to develop cognitive skills for reading."
whereas emergent literacy encourages the child to explore and experiment with writing
and word building.”

Another teacher said, “Since I do not use the emergent reader. I’m not sure how it
works.” Other answers included:

“To me, they are synonymous. Reading readiness seems to be a traditional
concept dealing with more identifying letters, identifying sounds and beginning to put
those sounds and letters together. Emergent literacy seems to deal with whole language,
poems, and rhymes, and fits under pre-reading skills.”

“Reading readiness is what the pre-school is doing. They have the basic tools.
They recognize letters. And then they start recognizing sounds. Emergent literacy to me
is recognizing what I said with my mouth. I could put it in print and then put it back in oral
language by reading it. And it is the whole process of sounding out words or making big
guesses at those words. The invented spelling skills—that whole process of going from
oral language to written language to reading the written language.”

“I think it’s probably close to reading readiness. We work with books, with
literature, more than the phonic books. We still have phonics books in this building. We
do not have a phonics book in Kindergarten that we use. We don’t do a lot of this
workbook thing. We probably do more story dictation.”

“It is more developmentally oriented. You try to find out where the child is and
give him/her what he/she needs to move on. Whereas in reading readiness you might just
practice in the direct activities. We use journals, but not every day, at least once a day.
You hope that they get beyond the point of drawing pictures and into writing.”
Teacher Preference for Whole-day or Half-day Kindergarten

When asked whether it was better for children to attend a morning, afternoon, or whole-day kindergarten program, the two whole-day teachers said that whole-day was better for the children and that their teaching preference was whole-day. The alternate-day teacher said a whole-day program was better because the stress level goes down for both teacher and student. Two teachers of the subjects who attended half-day morning programs said that it was better for students to attend morning programs and that their teaching preferences were morning. Another morning-program teacher said that it depended on the kids. Some kids are morning kids. Some are afternoon kids. Her teaching preference was whole-day. One teacher of subjects from an afternoon program said that morning or afternoon is about the same. She could not say about the whole-day program because she never taught in one. Her teaching preference was either morning or afternoon. The other teacher of subjects attending an afternoon program said that morning kindergarten would be better for children and her teaching preference was morning.

When asked whether length of kindergarten program (half-day, whole-day, or alternate whole-day) would affect students' performance on literacy measures or tasks, the responses included the following. One teacher said,

"I think the length of day is not as important as quality. It depends on who your instructors are. The quality is what matters. Class size may make a difference more than half- or whole-day. I think it depends on how much time a teacher has to spend with each child."

Three teachers (one from a whole-day, another from an afternoon, and the other
from a morning program) said no. Three other teachers (one from a morning, another from the alternate whole-day, and the other from a whole-day program) said yes for different reasons. One reason advanced was, “The whole-day students might perform better. If you had one group for the day you would get to know them better.” Another teacher explained, “I do believe they will perform differently, because I honestly believe I am giving them more time. Students who are slow would have more time to catch up and finish tasks.” The other reason given was, “There is more exposure to literature and more activities in a whole-day program.”

Time Spent on Teacher- and Student-Initiated Literacy Activities

As indicated in Table 27, the time spent in literacy activities varied across the different kindergarten programs. When asked how much time each day was spent on literacy activities, one whole-day teacher said about 90 minutes on teacher-initiated, and 1 hour on student-initiated activities. The other whole-day teacher said she spent 2 hours on teacher-initiated and 1 hour on student-initiated activities. Therefore, an average of 2.75 hours a day was spent on literacy activities in the whole-day programs.

The teacher of the alternate-day program said she spent 75% (3.75 hours) of the school day on literacy activities. It is noteworthy that she reported that her class did journal writing every day. Most of the activities related to print concept development were done almost every day. They discussed about story structure most of the time and wrote stories 2 to 3 times a month.
Table 27

<table>
<thead>
<tr>
<th>Program</th>
<th>Average Daily Literacy Hours</th>
<th>Average Weekly Literacy Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>1.60</td>
<td>9.00</td>
</tr>
<tr>
<td>PM</td>
<td>2.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Alternate day</td>
<td>2.75</td>
<td>11.05</td>
</tr>
<tr>
<td>Whole-day</td>
<td>3.75</td>
<td>13.75</td>
</tr>
</tbody>
</table>

One teacher from the morning program said that she spent approximately $1\frac{1}{2}$ hours on teacher- and student-initiated literacy activities. Another teacher reported spending 45 minutes to 1 hour on teacher-initiated and 30 minutes on student-initiated literacy activities. Another teacher reported spending 2 hours on teacher-initiated and half hour on student-initiated literacy activities. Thus an average of 1.6 hours a day were spent on literacy activities.

From the afternoon program, one of the teachers reported spending $1\frac{1}{2}$ hours on teacher-initiated and a half hour on student-initiated literacy activities totaling 2 hours on literacy activities. The other teacher reported spending 75% (1.9 hours) of the instructional time on teacher-initiated, but did not have a lot of time for student-initiated activities. Thus an average of approximately 2 hours was spent on literacy activities daily in the afternoon programs.

The respondents varied in their views concerning the length of the kindergarten school day. The teachers who taught in the whole-day and alternate-day kindergarten programs preferred the whole-day programs because there was more time for enriching activities that included songs, poetry, discussion topics, gym, computer science, and library time. One teacher said that if they were given more time to do a task, they would
do it better. One teacher expressed dislike for hurrying the children or postponing completion of tasks which robbed children of confidence. One half-day teacher also disliked the time constraint of the half-day program. On the other hand, three half-day teachers felt that children would get too tired if they were in school for more than a half day.

Quantity of Teacher-Initiated Literacy Activities

The interview data revealed that several of the categories and subcategories of literacy activities listed by Morrow et al. (1998) were included in the various kindergarten programs. It is interesting to note that the teachers in most of the kindergarten programs reported that they engaged children in the majority of the 49 activities in the 6 broad categories listed. Most of the children were engaged in all the subcategories of the following major categories of activities: storybook reading activities; activities related to knowledge about print; and comprehension activities that included discussion about story structure and story retelling by children. Table 28 summarizes the engagement of students in the listed teacher-initiated literacy activities. Table 29 summarizes the engagement of students in listed teacher-initiated writing activities.

Table 28

Engagement in Teacher-Initiated Literacy Activities

<table>
<thead>
<tr>
<th>Program</th>
<th>Average Number of Listed Literacy Activities</th>
<th>% of Listed Literacy Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>43.3</td>
<td>88.3</td>
</tr>
<tr>
<td>PM</td>
<td>45.5</td>
<td>92.8</td>
</tr>
<tr>
<td>Alternate day</td>
<td>46.0</td>
<td>93.8</td>
</tr>
<tr>
<td>Whole-day</td>
<td>42.5</td>
<td>86.7</td>
</tr>
</tbody>
</table>

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Table 29

<table>
<thead>
<tr>
<th>Program</th>
<th>Average Number of Listed Writing Sub-categories</th>
<th>% of Listed Writing Sub-Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>7.7</td>
<td>75.3</td>
</tr>
<tr>
<td>PM</td>
<td>8.5</td>
<td>77.3</td>
</tr>
<tr>
<td>Alternate day</td>
<td>10.0</td>
<td>90.9</td>
</tr>
<tr>
<td>Whole-day</td>
<td>6.0</td>
<td>54.5</td>
</tr>
</tbody>
</table>

The two teachers in the whole-day program engaged the children in an average of 42.5 (86.7%) different types of listed teacher-initiated literacy activities. The main category in which children did not engage was writing activities. The writing-activities category had 11 subcategories. The two whole-day programs reported engaging children in an average of 6 (54.5%) listed writing subcategories. Both whole-day programs did not record writing stories, taking dictation from the teacher, journal writing, or teacher writing morning or afternoon messages.

The two teachers in the afternoon programs engaged children in an average of 45.5 (92.8%) listed teacher-initiated literacy activities. Like the whole-day programs, the main category in which children did not engage was writing activities. Both afternoon classes engaged in an average of 8.5 (77.3%) subcategories. Both teachers reported that their students did not take dictation from the teacher. These teachers did not write morning and evening messages. In one afternoon class, the children did not engage in writing stories. This teacher reported that she allocated insufficient time for writing and expressed the feeling that this study reemphasized that need. The teacher said, "That's
why I am glad you are here, because it re-emphasizes the need for emergent writing skills.”

This also applied to one morning class. For this morning class, the most neglected category was writing activities. The children did not engage in writing stories, taking dictation from the teacher, nor did the teacher write morning or afternoon messages. Another morning teacher reported non-engagement in these activities as well as journal writing, drawing or writing in response to storybook reading, dictating stories to the teacher, and teacher writing experience charts. She said that she did not emphasize writing enough. The third morning teacher reported 100% participation in all listed literacy activities. The three teachers in the morning programs engaged their kindergartners in an average of 43.3 (88.3%) literacy activities listed. With regard to writing activities, they engaged in an average of 7.7 (70%) subcategories.

The teacher of the alternate-day kindergarten program reported that the kindergartners engaged in 46 (93.8%) of the literacy activities listed. The children in the class engaged in 10 (90.9%) writing subcategories. Like two of the other programs, these children did not participate in taking dictation from the teacher. The teacher did not engage the children in reading magazines. However, these children were engaged in all the other literacy activities most of the time.

Physical Setting and Literacy Materials

The physical environment varied from classroom to classroom. Some classrooms were larger than others. Not all had the clearly defined areas or centers (literacy, writing, maths, social studies, science, or other content areas), but the rooms facilitated whole-
group, small-group, and individual literacy activities.

Interview and observation data revealed that the classrooms generally had an abundance of environmental print and literacy materials. As indicated by the teachers' check marks on Morrow et al.'s (1998) Checklist for Evaluating the Literacy Environment, only one morning program did not have a check-out or check-in system for children to take out books. The whole-day programs and the alternate-day program did not have a system for recording books read. The alternate-day program and one whole-day program did not have an organizational system for shelving books. Only one morning program did not have a quiet area for the classroom designed for reading (literacy center), but one morning program was reported as having children participate in designing such a center. There were two morning programs, one afternoon program, and one whole-day program that reported having felt-board and story characters with related books. There were two morning programs and one whole-day program that reported having materials for constructing felt stories. There were two morning programs, one afternoon programs, and one whole-day program that reported having story manipulatives (roll movie or puppets with related books).

All classrooms had a place for children to display their literacy work. However, only one morning program was reported to have writing posters and a bulletin board for children to display their writing themselves. None of the classrooms had a message board for children to post messages for teacher and students. Only the alternate-day program and one morning program had a current-events board. Only one morning class had a place for some students to store Very-own words. The alternate-day program and one afternoon program reported keeping journals that had samples of the children's writing.
No teachers reported keeping folders for children to place samples of their writing.

The Literacy Curriculum

When asked what role they played in selecting and implementing the kindergarten literacy program, five different responses are reported. One teacher said, "The three kindergarten teachers that have been here, we put this curriculum together. We have been here long enough to do that." Another teacher emphatically stated, "I am very much in charge of what the children are learning. We have guidelines, we have a curriculum that we follow. But the way we follow it is up to me." Another autonomous response was, "I have everything to do with selecting the reading program. I have a curriculum. I can choose to follow it or not, as long as I am using my best judgment in teaching these children emergent literacy skills." A similar response was, "I have quite a bit of say in what should be purchased for the kindergarten. I was able to say what we do and don't do in kindergarten." On the other hand, one teacher expressed no input in the design of the curriculum. "The curriculum was pretty much in place when I came to kindergarten."

In addition to eliciting information on the role that the teachers played in selecting and implementing the literacy curriculum, I reviewed the literacy curriculum documents of the various classrooms. Of the four different curriculum guides examined, three had just a listing of objectives for developing reading, writing, listening, and speaking skills. Only one of these three was structured to include outcomes, learning strategies, materials, and indicators (evaluation). These curricula matched the developmentally appropriate standards outlined by the National Association for the Education of Young Children and the International Reading Association (1998), as well as by such reading authorities as
Morrow et al. (1998). However, there was no guide for implementing an interdisciplinary approach to achieve an integrated school day in which literacy is integrated across the curriculum. No thematic units were suggested or supplied.

The fourth curriculum examined was the same one used by one afternoon and two morning programs in this study. This one had a more complete framework that included a philosophy, rationale, goals, and suggestions for the physical arrangement of the classroom that included the arrangements of centers, basic equipment and materials, and scheduling. It advocated developmentally appropriate practices, for each subject area, that were based on the integrated model. It also provided an example of an activity unit centered around a single theme or topic. However, it did not emphasize a distinct emergent literacy perspective and the integrated language arts approach to literacy instruction. After describing a thematic approach and suggesting how the entire curriculum could be centered around that theme for 1 month, Bauer (1991) stated:

> As the year progresses, children who are ready and interested in learning to read should be provided with many easy-to-read books. During choosing time or free play, the teacher may take a minute or two to listen to a child read or encourage the child to learn without allowing reading to dominate the program. The temptation to begin teaching formal reading to these children is strong. Times when they should be playing in the play store or sandbox ought not to be used in drilling on phonics or filling in worksheets. (p. E-4)

Whereas the literature curriculum emphasized the importance of a literacy-rich environment at home and at school. Bauer (1991) clearly stated that “teaching children to read is not the goal of using books in kindergarten” (p. H-8). There was some measure of contradiction between the current professional literature on what is developmentally appropriate and what was documented as developmentally appropriate for certain aspects of literacy development. For example, Bauer (1991) stated, “Children are provided many
opportunities to see how reading and writing are useful before they are instructed in letter names, sounds, and word identification” (p. L-2).

These statements in the curriculum document were misleading and did not harmonize with the emergent literacy perspective which advocates not only for a thematic approach to instruction that integrates the curriculum, but also for the integration of the language arts across the curriculum throughout the entire school day. Whereas reading should not be allowed to “dominate the program,” balanced reading and writing instruction should be intrinsic to every curriculum area. There should be no waiting for children to be “ready” before providing them with suitable books to read.

Summary of Results

The results of this investigation were presented in three sections. Section 1 dealt with the results of student performance on the tasks measured by the Preliteracy Inventory. Section 2 dealt with the results of the parent survey on the home literacy environment, and section 3 dealt with results of teacher interviews on the classroom literacy environment. The Preliteracy Inventory data revealed that, for each concept measured, the majority of students were in the process of developing the required skills. However, students were identified who fell below developmentally appropriate benchmarks. Twenty-five (22%) children needed help with print concepts. Twenty-two (19%) children needed help with story concepts. Eleven (10%) children needed help with writing their names, and 20 (18%) children needed help with writing the story. There was no significant difference in performance on print and story concepts among students from the four kindergarten programs. However, a significant difference in performance on
writing concepts was found. The afternoon program performed significantly lower than their counterparts in the other programs.

Frequency data for the home literacy environment revealed that most homes provided many of the characteristics of a rich literacy environment for their children. Of the six null hypotheses tested, only one was rejected. The Chi-square test of independence found a significant relationship between the frequency with which a child is read to and the child's ability to read words and phrases in books ($\chi^2 = 10.37, p < .01$).
CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Summary

The purpose of this study was to assess the influence of the home and classroom literacy environment on the emergent literacy development of kindergartners. The study also investigated the relationship between selected home environment variables. Furthermore, the study explored whether there were differences in the performance of students from the morning, afternoon, alternate whole-day, and whole-day kindergarten programs. The idea behind this investigation was to determine where students were at in their literacy development and to enable parents and teachers to examine their beliefs and practice.

This study was a response to the great concern for early literacy development. Early childhood and literacy educators are emphasizing that early literacy development should be based on a literacy curriculum that is developmentally appropriate. Objectives should be guided by an emergent literacy perspective and the integration of the language arts in providing balanced literacy instruction.

Early literacy assessment is worthwhile in attempting to secure a solid literacy foundation. Assessment of the performance of the students on print, writing, and story concepts could provide a relatively holistic view of the kindergartners’ emergent literacy
development. Also, there has been a long-standing debate on the length of the kindergarten day and whether children from whole-day programs perform better than their counterparts from half-day programs. The assessment of student performance in this study added to the ongoing debate. There is much research support for the importance of the home and classroom literacy environment on children's literacy performance. Therefore, it was viewed as crucial to examine these environments. The aim was to identify essential characteristics that influenced the children's literacy performance in these two settings.

Identifying variables related to early literacy development in order to explain and predict student literacy proficiency has always been of much concern to researchers. Since the home literacy environment is considered so important to early literacy development, several home variables associated with literacy success were examined in order to investigate relationships. These variables included the frequency with which a child is read to at home, the child's ability to retell stories using pictures in storybooks, the number of books a child has at home, the frequency with which a child goes to the library, and the child's pattern of viewing television, video, and educational television programs. The classroom literacy variables examined included the teachers' kindergarten teaching experience, their background knowledge on emergent literacy, teacher preference for half- or whole-day kindergarten programs, the quantity of teacher- and student-initiated literacy activities, time spent on literacy activities, and the materials used in the classroom.

The review of the literature covered several areas related to early literacy development. It began with historical perspectives on kindergarten programs, tracing
their development from their beginnings in 1837 with Friedreich Froebel in Germany, and with Margaret Schurz in the United States in 1856. They were originally whole-day programs until the great depression in the United States when economic factors influenced many school systems to cut their programs to half day. Other reasons for half day include the increased student population and teacher shortage in the 1950s. Academic concerns were the main reasons why whole-day kindergarten programs reemerged in the 1960s and 1970s. Today, academic, socioeconomic, and political factors undergird the debate of the merits of half-day versus whole-day kindergarten.

The literature review also dealt with the conflicting empirical evidence of the benefits of whole-day versus half-day programs. Generally, most studies have found significant differences in favor of whole-day programs in which children score significantly higher than their counterparts. The latest study cited in the review was conducted by Morrow et al. (1998) who found that high-quality whole-day programs do make a difference in student performance on the literacy measures used. The measures were based on the emergent literacy perspective that has replaced the reading readiness perspective. Literacy acquisition is conceptualized as a developmental continuum rather than as something that is acquired at a particular age or stage.

The several theoretical models of reading contributing to the theoretical framework that guided the study included the theories of Piaget and Vygotsky. In Piaget's theory of cognitive development the principle of active involvement and the learners' interaction during learning are fundamental to cognitive development. Vygotsky's theory of intellectual development postulates that the social context is crucial to the acquisition of mental functions. Other theoretical models included the interactive
theoretical models of literacy learning that assumes parallel processing of textual
information and prior knowledge, the sociocognitive reading model that emphasizes the
social context as influencing the reading process, and Rosenblatt's transactive theory that
views meaning as residing in a dynamic transaction between reader and text.

The literature review also outlined the reading and writing assessment standards
produced by the International Reading Association and the National Council of Teachers
of English Joint Task Force on Assessment (1994) that undergirded the assessment done
in this study. Additionally, support for the importance of the home and classroom literacy
environment was provided, and the checklist used for evaluating the classroom literacy
environment was presented.

The study employed a causal-comparative design to compare four different types
of kindergarten programs. Observation, face-to-face interview, and a survey were
methods used in data collecting. The population for the actual study was defined as the
246 kindergarten children who attended the five elementary schools in the two selected
school districts in a southwestern Michigan county. The effective sample consisted of
114 students, and their seven teachers, along with 110 parents of the student sample.

The study employed two measuring instruments. The Preliteracy Inventory was
individually administered to the student sample to obtain information about their concepts
of a story, concepts of print, and writing concepts. The Home Literacy Environment
Inventory was used to obtain information about the home literacy environment including
activities that may impact on the child's emergent literacy development. Semi-structured,
face-to-face interviews were conducted with the classroom teacher-informants concerning
their teaching experience, time spent on literacy activities, type of materials, and type of literacy activities engaged in.

Nine hypotheses were tested. ANOVA and ANCOVA were performed to test the first three hypotheses in order to determine whether or not there were significant differences among the performances of the children from the four different kindergarten programs. The Chi-square test of Independence was applied for acceptance or rejection of the six null hypotheses tested with regard to the relationships between the home literacy variables.

Question 1 asked, "Is there a relationship between the type of kindergarten program and the performance levels of the kindergartners on print, writing, and story concepts?" Table 30 summarizes the overall performance rating of the students on each concept. It was revealed that 62 (54%) students were in the process of developing and 27 (24%) students had mastered the print concepts measured.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Needs Help</th>
<th>Developing</th>
<th>Mastered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print</td>
<td>25 22</td>
<td>62 54</td>
<td>27 24</td>
</tr>
<tr>
<td>Story retelling</td>
<td>22 19</td>
<td>85 75</td>
<td>7 6</td>
</tr>
<tr>
<td>Writing name</td>
<td>11 10</td>
<td>103 90</td>
<td>- -</td>
</tr>
<tr>
<td>Writing story</td>
<td>20 18</td>
<td>71 62</td>
<td>23 20</td>
</tr>
</tbody>
</table>

Table 30

Overall Performance Rating Percentage of Students on Concepts Measured by the Preliteracy Literacy Inventory

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There were 85 (75%) students who were in the process of developing and 7 (6%) students who had mastered the story concepts measured. There were 103 (90%) students who were in the process of developing the skill of writing their names. There were 71 (62%) students who were in the process of developing and 23 (20%) who had mastered the writing story skills measured. There were 25 students or fewer who needed help in developing the skills measured on each concept. Twenty-five students needed help with print concepts; 22 needed help with story retelling; 20 needed help with writing story; and 11 needed help with writing name.

The null hypothesis tested “There is no significant difference in performance on print concepts among children in the various kindergarten programs” was retained. The null hypothesis tested “There is no significant difference in performance on story concepts among children in the various kindergarten programs” was retained. However, the null hypothesis tested “There is no significant difference in performance on writing story concepts among children in the various kindergarten programs” was rejected \( F(3, 109) = 5.796, p < .01 \). The children in the afternoon kindergarten program performed significantly lower than their counterparts in the other kindergarten programs.

Question 2 asked, “What are some essential characteristics of the home literacy environment?” There were 110 parents who completed and returned the Home Literacy Inventory, a response rate of 96%. Descriptives for the salient items were provided. The data revealed that most parents provided a rich literacy environment for their children. With regard to the home environment, the only null hypothesis rejected was “There is no significant relationship between how often a child is read to and whether the child is able to read words and phrases in books” \( \chi^2 = 10.37, p < .01 \). Of the children who were read
to daily, more were reported to read words and phrases in books than the children who
were read to less frequently.

With regard to the home literacy environment, the following five null hypotheses
were retained: (1) There is no significant relationship between how often a child is read to
in the home and the child's ability to retell stories using pictures in storybooks ($\chi^2 = .52,\
p > .05$); (2) There is no significant relationship between how often a child goes to the
library and how many books a child has at home ($\chi^2 = 7.23, p > .05$); (3) There is no
significant relationship between emphasis placed on reading (reflected by the number of
children's books in the home) and children's pattern of viewing television ($\chi^2 = 2.16,\
p > .05$); (4) There is no significant relationship between emphasis placed on reading in
the home (reflected by the number of books in the home) and the children's pattern of
video viewing ($\chi^2 = 2.23, p > .05$); and (5) There is no significant relationship between
emphasis placed on reading in the home (reflected by the number of books in the home)
and the children's pattern of viewing educational television programs ($\chi^2 = .21, p > .05$).

Question 3 asked, "What are some essential characteristics of the classroom
literacy environment?" Seven teachers were interviewed and their literacy curriculum
documents examined. Their kindergarten teaching experience ranged from 2 to 15 years.
Most teachers taught in kindergarten classes that reflected their preference for length of
school day (whole- or half-day). With regard to the average weekly time spent on literacy
activities, the whole-day programs spent 13.75 hours, the alternate whole-day program
spent 11.25 hours, the afternoon program spent 10 hours, and the morning program spent
8 hours. With regard to their views on whether length of school day would affect student
performance on literacy measures or tasks, three teachers said yes, three said no, and one said that it is the quality of time spent that matters.

The various kindergarten programs engaged in 90-95% of the listed teacher-initiated literacy activities. However, only the alternate whole-day program was reported to have a high percentage (91%) of engagement in the listed writing activities. The morning, afternoon, and whole-day programs were reported to engage in 70%, 77%, and 55% of the listed writing activities respectively.

Not all classrooms had clearly defined centers (literacy, art, music, math, science, social studies, or other content areas). However, the rooms facilitated different organizational structures—whole-group, small-group, and individual. There was an abundance of environmental print and literacy materials. Some teachers reported that they were involved in the development of their literacy curricula and were autonomous in implementing them. Although most teachers said they were familiar with the concept of emergent literacy, the emergent literacy perspective was not explicitly reflected in any of the written curriculum documents.

Conclusions

Assessment of kindergartners' literacy performance was very useful in identifying where they were at in their emergent literacy development. Assessing the home and classroom literacy environments enabled parents and teachers to reflect on their practice and also to examine the relationships between home literacy environment variables. Emerging from the findings are indications that the students differed in performance on writing concepts only. Some kindergartners needed help with each concept measured.
Reading frequently to children at home was shown to be related to children's ability to read words and phrases from books. Generally, the homes and classrooms in this study exerted a positive influence on student performance on emergent literacy measures. The implication is for early intervention in order to help students' performance to harmonize with developmentally appropriate benchmarks and to provide literacy-rich environments for children.

Findings

There were 75 (78%) or more students who were in the process of developing or had mastered the skills measured. There were 25 (22%) or fewer students whose performance indicated that they needed help in developing the skills measured on each concept. This means that their performance fell below developmentally appropriate benchmarks.

The Home Literacy Environment data revealed that most parents provided a rich literacy environment for their children. The Classroom Literacy Environment data revealed that kindergarten teaching experience ranged from 2 to 15 years. With regard to the average weekly time spent on literacy activities, the whole-day programs spent 13.7 hours, the alternate whole-day program spent 11.25 hours, the afternoon program spent 10 hours. The various kindergarten programs engaged in 90-95% of the listed teacher-initiated literacy activities. However, only the alternate-day program was reported to have a high percentage (91%) of engagement in the listed writing activities. The morning, afternoon, and whole-day programs were reported to engage in 70%, 77%, and 55% of the listed writing activities respectively.
Not all classrooms had clearly defined centers (literacy, art, music, math, science, social studies, or other content areas). However, the rooms facilitated different organizational structures—whole-group, small-group, and individual. There was an abundance of environmental print and literacy materials. Some teachers reported that they were involved in the development of their literacy curricula and were autonomous in implementing them. Although most teachers said they were familiar with the concept of emergent literacy, the emergent literacy perspective was not explicitly reflected in any of the written curriculum documents.

The following findings relate to the testing of the nine hypotheses. Apart from the null hypotheses 3 and 4 which were rejected, there were seven hypotheses were not significant at less than the .05 level; therefore they were retained.

1. There was no significant difference in performance on print concepts among students in the four kindergarten programs.

2. There was no significant difference in performance on story concepts among the students in the four kindergarten programs.

3. There was a significant difference in performance on writing concepts among the students in the four kindergarten programs. The children from the afternoon kindergarten programs scored significantly lower than their counterparts in the other programs.

4. There was a significant relationship between how frequently a child is read to in the home and the child’s ability to retell stories using the pictures in storybooks. More of the children who were read to daily were reported to read words and phrases in books than the children who were read to less frequently.
5. There was no significant relationship between how frequently a child is read to in the home and the child's ability to retell stories using pictures in storybooks.

6. There was no significant relationship between how many books a child has at home and how frequently a child goes to the library.

7. There was no significant relationship between emphasis placed on reading (reflected by the number of children's books in the home) and the children's pattern of television viewing.

8. There was no significant relationship between emphasis placed on reading (reflected by the number of children's books in the home) and the children's pattern of video viewing.

9. There was no significant relationship between emphasis placed on reading (reflected by the number of children's books in the home) and the children's pattern of educational television programs.

**Discussion**

Discussion of the Student Performance on the Preliteracy Inventory Data

The first guiding question asked, "What is the relationship between the type of kindergarten program and the performance levels of the kindergartners on print concepts, writing concepts, and a concept of story?" As a result of the consideration of the first guiding question, it was evident that overall student performance was favorable, except for the 25 (22%) students who needed help with print concepts, the 20 (18%) students who needed help with writing concepts, and the 22 (19%) students who needed help with writing concepts. It is to be expected that children would be at different levels of literacy
development in kindergarten. However, concern is justified for those who were identified as being in need of help because their performance fell below developmentally appropriate benchmarks. What the assessment reveals can be used to provide appropriate instruction.

Print Concepts

Identifying "What" we read (identifying print as opposed to pictures) posed very little difficulty for the children. No "What" task measured, had less than 92% correct response rate. Students performed better at the "What" tasks of print concepts than at the "Why" and "How" tasks. Three of the tasks measured on the "Why" component of print concepts seemed hard for several students. Explaining why someone would read the print on a T-shirt, on a truck's door, and on a price label, was difficult for 48%, 28%, and 22% of the students respectively. The correct response rate for the tasks that measured "How" we read was very good for all items except the identification of a period, a capital letter, and the word "the." It was surprising that only 42% of the students identified "the," only 39% of the students identified a period, and 77% identified a capital letter. The overall results for print concepts revealed that whereas the performance of the majority of students harmonized with developmentally appropriate goals, there were 25 (22%) students who needed help in developing those skills measured. This finding suggests that these students could be at risk for reading problems if there is no appropriate intervention.

Story Concepts

Generally the students seemed to have acquired a concept of story because more than 91 (70%) students included six or more of the eight story elements measured in their
retelling of the story. *Homer the Goose.* The story element that seemed to be most
difficult was story beginning. It was surprising that only 13 (11%) students began the
story appropriately, for example, “One day” or “Once upon a time.” Two other story
elements—descriptions and conversation—were omitted by more students than were
desirable. Just 74% and 72% students included descriptions and conversation,
respectively, in their story retelling. More than 81% of the students included all the other
elements.

Overall performance on writing story retelling concepts was generally good,
considering that 85 (75%) students were rated as being in the process of developing those
skills measured, and 7 (6%) students had mastered enough of the skills measured.
However, there is much concern for the 22 (19%) children whose ratings suggested that
they needed help in developing the skills measured and that prerequisite skills were also
needed.

Whereas oral language development was not measured in this study, oral language
was the vehicle through which story concepts were measured. Most children
demonstrated a great facility with oral expression, and this was too striking to escape the
attention of the researcher. This finding is supported by the children’s interaction with
parents who used language in a social context of the home. The frequency with which
parents read to their children at home and children’s imitation of their parents’ language
may have been crucial factors in their high level of proficiency of oral expression and use
of the conventional elements found in a story. There were 69 (61%) parents who reported
reading daily to their children. 25 (22%) parents reported reading to their children 4-6
times a week, and 98 parents reported that their children retold stories using pictures in storybooks.

Interaction with parents in other social contexts was also reported. For example, 86% of the parents reported that their children visited the zoo. 63% of the parents reported that their children visited the circus. 68% of the parents reported that their children visited the museum. 76% of the parents reported that their children visited the airport, and 76% of the parents reported that their children visited the amusement park. Such an exposure may have been crucial factors that enhance their general facility with oral language.

Writing Concepts

As was expected, there was variation among the students in their writing performance. Using Sulzby’s (1986) categories of writing development, 71 (62%) children were at the stage of writing recognizable letters. Although most kindergartners fell in that category, there were marked differences in their writing. Some children wrote recognizable letters related to words they intended to write, others wrote letters unrelated to the words they intended to write. Others wrote the correct letter for only the beginning sound of the word, or for beginning and ending sounds. The performance of these children indicated that they were in the process of developing story writing skills, and instruction should continue in this area at that time. There were 23 (20%) children who were at the stages of writing with invented spelling and correct spelling. Their ratings suggested that they had achieved sufficient mastery to be judged proficient.

As some children wrote they made lip movements and sounds of the letters and
words they intended to write. Different degrees of sound and symbol association were demonstrated. This observation provided support for the importance of emphasizing phonemic awareness and phonics in early literacy development. Children's ability to attend to sounds in spoken words and to be able to associate letters with those sounds as they write are very challenging and time-consuming tasks for kindergartners. Adams (1990 cited in Morrow et al., 1998), stated. "The most difficult task is segmenting the phonemes in spoken words and manipulating phonemes to form different words" (p. 67).

It is as children are aware of the sounds in the spoken word, and as they know how to make the association of sounds with symbols, that they move closer to invented and conventional spelling (Read, 1971).

It was interesting to note the many children who hesitated and said they could not write when asked to do the writing story task. The reason for this most likely lies in their own understanding of what conventional writing is, and their own inability to produce it. Their responses also suggest that they needed the reassurance that, generally, kindergartners may not be able to write conventionally. They needed more acceptance and encouragement for what they could do, whether it was drawing, scribbling, letter-like characters, recognizable letters, invented spelling, or correct spelling.

It is to the children's advantage for parents and teachers to provide ample opportunity for writing throughout each day and to positively reinforce their efforts. It was reassuring to note that all parents reported that their children had access to writing materials and attempted to write at home. Parent modeling was reported to be good in this regard. Only 11% of the parents reported that their children did not observe them writing.
After testing the null hypothesis, "There is no significant difference in performance on writing concepts among the students from the different kindergarten programs," the null hypothesis was rejected. Whereas there was no significant difference among the children from the whole-day, alternate whole-day, and morning programs, the children from the afternoon programs scored significantly lower on writing story concepts than their counterparts in the other programs. This finding is not consistent with the findings of Morrow et al. (1998) that found that the children in the whole-day kindergarten scored significantly better on the writing test than their counterparts who attended half-day programs. The reason for this difference most likely lies in the quantity and quality of writing experiences provided. According to the interview data, 60% of the children in the afternoon program were not provided with a satisfactory amount of writing experiences. On the other hand, interview data revealed that the kindergartners of the alternate whole-day program had the highest percentage (91%) of engagement in writing activities. This may explain why the many kindergartners of the alternate whole-day program did not hesitate to begin the writing story task. Many of them did not say "I cannot write" or "I cannot spell." Rather, they approached the writing story task with greater confidence than their counterparts. This may also explain why the alternate whole-day kindergartners obtained the highest mean score, though not statistically significantly different, for the writing story task.

Discussion of Home Literacy Environment Data

The second guiding question of this study asked, "What are the essential characteristics of the home literacy environment of the kindergartners in the selected
school districts?" After considering the findings, the literacy environment of most homes was reported to be very conducive to emergent literacy development. Many parents provided a reasonable quantity of children's books at home and read to their children frequently. Many parents were able to state the favorite book or author of their children, which indicates high parental involvement in their children's reading.

With regard to what children attempted to write, there was not much consistency between the results from the Preliteracy Inventory data and the results from the Home Literacy Inventory data. Student performance on the Preliteracy Inventory indicated that 103 (90%) students were developing the skill of writing their names. However, only 60 (55%) parents reported that children attempted to write their names at home. This finding suggests that name writing must have been emphasized a lot in the classroom. It was disappointing that only 13 (12%) parents reported that their children attempted to write stories. The International Reading Association and the National Association for the Education of Young Children (1998) emphasize that parents and teachers expose children to a range of text forms including stories. Initially, invented spellings are to be expected.

One item on the Home Literacy Inventory asked, "What is your child's favorite activity at home?" This question was more of a general nature. Examining home activities was not the primary purpose of the study. However, the specific information in this regard provided a richer picture of the children's recreational habits. Several categories emerged. Play was the category that ranked the highest. This is consistent with the stage of development of kindergartners. Only 7% of parents reported reading and 8% parents reported writing as their child's favorite activity. This was somewhat disappointing. With parent education on the integration of literacy with play, there may
be more parents who would be willing to promote literacy in the context of play, thus generating a greater love for reading and writing.

The null hypothesis. "There is no significant relationship between how often a child is read to and whether the child is able to read words and phrases in books." was rejected. This finding indicates that the more frequently children are read to, the better they are able to read words and phrases from books. This finding is consistent with the view of Moss (1998) who promotes reading to children every day as the single best thing you can do to make them become good readers.

An interesting finding was the retention of the null hypothesis. "There is no significant relationship between how often a child is read to in the home and the child’s ability to retell stories using pictures in storybooks." In this study, 98 (90%) parents reported that children were able to retell stories using the pictures in storybooks. There were 69 (63%) parents who reported that they read daily to their children, 26 (24%) parents who reported that they read 4-6 times a week, and 14 (13%) parents who reported that they read 1-3 times a week. This finding suggests that children will retell stories using pictures in storybooks independent of the frequency with which they are read to. This is certainly an area for future research.

In this study, the relationship between the number of books in the home and how often a child visited the library was investigated. Only 20 (18%) parents reported that their children visited the library 1-3 times a week. There were 69 (63%) parents who reported that they seldom visited the library (less than 3 times a week), and 18 (17%) parents who reported that their children never visited the library. The null hypothesis. "There is no significant relationship between how often a child visits the public library
and how many books that child has at home.” was retained. It would be interesting to investigate where parents obtain the children’s books they reported to have at home, and how updated those books are. The International Reading Association and the National Association for the Education of Young Children (1988) support regular visits to the school or public library to ensure that children’s collections remain continually updated. An interesting area for further research is the impact of the public library on kindergartners’ home literacy environment.

The following null hypothesis was retained. “There is no significant relationship between emphasis placed on reading (reflected by the number of books in the home) and the children’s pattern of television viewing.” This finding does not support previous studies to which Moss (1998) refers. These studies reveal that children’s interests are ignited by what they view on television, and they read more than they would otherwise. If parents plan for television viewing and try to get involved by encouraging children to discuss, make predictions, and engage in related reading and writing activities, television viewing may be a help rather than a hindrance to literacy development.

Discussion of the Classroom Literacy Environment Data

The third guiding question of this study asked, “What are the essential characteristics of the classroom literacy environment of the kindergartners in the selected school districts?” After considering the findings of the observational and interview data, several trends emerged. The atmosphere in most classrooms was pleasant and most children seemed emotionally secure. The respect teachers had for children was very
obvious. Children also seemed to respect one another. There is also much to discuss about the classroom environment which includes the type of materials, the type of literacy activities in which the students engaged, and the amount of time allocated for literacy activities, and most importantly, the teachers’ knowledge and practice of emergent literacy.

The best teacher’s response to the difference between the two concepts—emergent literacy and reading readiness—stated, “Reading readiness provides experiences for children to develop cognitive skills for reading, whereas emergent literacy encourages the child to explore and experiment with writing and word building at their level.” In most of the other responses the difference was not clearly pointed out. Teachers did not clearly articulate that reading readiness suggests teaching a set of prescribed skills (that include sequence of letters, sounds, and high-frequency words) and ensuring mastery of these skills before formal reading begins. On the other hand, emergent literacy assumes that literacy development begins with early exposure to language, reading, and writing at home and in the community. The language processes—reading, writing, listening, and speaking—develop concurrently. Children attempt to demonstrate reading and writing behaviors but until they can do so in a conventional manner, we acknowledge their literacy accomplishments as legitimate literacy behaviors. As they emerge in their reading and writing, teachers and parents should be supportive and should provide much opportunity for the development and expressions of emergent literacy behaviors (Burns et al., 1996).

Neither did the various curriculum documents reflect a well-defined emergent literacy perspective. In one curriculum that guided two morning programs and one
afternoon program. there were misleading statements, statements that conflicted with the emergent literacy perspective. For example, “As the year progresses, children who are ready and interested in learning to read should be provided with many easy-to-read books.” The emergent literacy perspective advocates that children be surrounded with books and be read to long before they can show interest in learning to read. Another example of a misleading statement is, “The temptation to begin teaching formal reading to these children is very strong. Times when they should be playing in the store or sandbox should not be used in drilling in phonics or in filling in worksheets.” The emergent literacy perspective advocates for the integration of literacy across the curriculum, and that includes integrating literacy with play.

Teachers seemed to have great autonomy in implementing their literacy curricula. Although most teachers and curricula did not explicitly state the difference between the reading readiness concept and the emergent literacy concept, most of the literacy activities the students were engaged in were activities that fostered the development of emergent literacy skills. In this regard, the stated curriculum was not always the implemented curriculum. One of the exceptions was the writing activities. Four teachers did not allow students the opportunity to write stories. Three teachers did no journal writing with their students. It may be argued that this influenced the initial response to story writing by so many children who said, “I can’t write” or “I can’t spell.”

There seemed to be an underlying issue in the teachers’ responses to the question which asked whether it was better for children to attend a morning, afternoon, or whole-day kindergarten program. For some teachers, the issue was length of school day. Whereas a half-day program is appropriate for the endurance level of the children, they
thought it did not provide adequate time to complete activities without being rushed.

However, with more time in the whole-day program, the students in this study did not perform significantly better on any of the concepts measured. This finding was inconsistent with the finding of Morrow et al. (1998), who found that children in the whole-day programs performed significantly better on tests that included story retelling, writing, and print concepts. In their study, the longer programs were demonstrated to be better.

It was interesting to note that the additional time spent in the whole-day kindergarten program did not result in much-increased engagement in pure literacy activities or in literacy integrated in content area subjects. With regard to time spent on literacy activities, interview data revealed that the whole-day programs spent an average of 13.75 hours, whereas the alternate-day programs spent an average of 11.25 hours, the afternoon program spent an average of 10 hours, and the morning program spent an average of 8 hours. Additionally, more time did not reveal engagement in more literacy activities. The interview data revealed that the whole-day program engaged students in the least number of listed writing activities (54%) and the least number of listed teacher-initiated literacy activities (88.5%). Therefore, in this study, a longer school day was not demonstrated to be much more advantageous to literacy engagement and literacy development as indicated by the results of the Preliteracy Inventory Data. The kindergartners in the whole-day program did not perform significantly better on any of the concepts measured than their counterparts in the other programs.

The views of the National Association for the Education of Young Children find tremendous support here. A longer day is better than a shorter one only when the
The program is of a better quality. The association views the distinction as an important one because the extra time in a whole-day program may not be used to the best advantage.

One teacher from an afternoon kindergarten program whose class consisted of 60% of the afternoon program sample, admitted that she did not spend a lot of time on developing writing skills. Her formal introduction of writing was a failure and it was an area that she wanted to work on. This could be one of the contributing factors to the significantly low performance by the afternoon kindergartners on the writing story task of writing concepts.

To further discuss the importance of quality, the morning kindergarten programs were reported to have engaged students in less of the listed writing activities than the afternoon program—morning programs (70%) and afternoon programs (77.3%). Yet, the morning programs performed better, though not statistically significant, on the writing story tasks. It can be argued that the quality of time spent on literacy activities is more important than the quantity of literacy activities engaged in.

With regard to literacy materials, observational data supported the interview data that indicated that the various classrooms generally had an abundance of environmental print and literacy materials. Morrow et al. (1998) refer to motivation theory that supports accessible and challenging materials related to content-area subjects or themes. Materials that most programs needed included the following: a system for recording books read; a bulletin board for children to display their writing themselves; a message board for children to post messages for teacher and students; a place for students to store Very-own words; portfolios or folders for students to place samples of their writing, and a current-events board.

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The post-interview responses of participating teachers did provide evidence that this study led to reflections that had practical significance. One teacher’s reflection was, “This study may help teachers determine whether their kindergarten program provides adequate learning time and experiences for the children in their district.” Another interesting response was, “This study has forced me to reflect on my teaching practice. It has reminded me of the need for emphasis on emergent writing and the need for centers in the classroom.” Other responses included the following:

“It was interesting to see this project unfold. We know that children enjoy and learn more if stories are introduced, reviewed, and reread. The willingness of the students to make attempts at writing was great. The task was presented in a very positive manner. It helped to reinforce my awareness of emergent literacy.”

“This study does help in one’s reflection of what is really being taught in reading. Are we giving chances to help them relate literacy to books, play, art, and other curriculum areas? It helps us pause and reflect on the connection between reading and writing.”

“It is good for all teachers to review old methods and keep up with new ones, and use the best methods in order to produce the best results. This study has sensitized me to some techniques I have not yet used but will use in the future. This study is useful to all parents. Even a small toddler needs to be encouraged to communicate through reading and writing.”

“I think this study is absolutely beneficial. I love hearing about all the latest research. I happen to benefit from this. We as teachers must always reflect on our practice, and research helps us to do that. We can change or modify our practice as
needed. We can also inform parents how to promote literacy development in their children."

Recommendations

Further Research and Development

The foregoing discussion forms the basis for the following recommendations.

1. Future research is needed that includes more classes from the various types of kindergarten programs. Replication of the study could include a minimum of five classes from each type of kindergarten program. Such a sample may yield more generalizable results.

2. It might be interesting to replicate this study on a sample that includes a more proportionate representation of the different ethnic groupings in the population.

3. Although the data from this study seem to suggest no significant difference in performance among students on print and story concepts, there is still more research to be done. Future research should establish some more control of the classroom literacy environment in seeking to determine differences among performance of students in the various programs. For example, research should be done on groups that follow a similar curriculum, that have a similar amount of time allocated for literacy activities, that are provided with similar materials, and that have the opportunity to participate in similar literacy activities.

4. Further qualitative research is needed to investigate how teachers integrate literacy in the content areas at the kindergarten level and also to determine the quality of time spent on literacy.
5. Future research should consider a longitudinal study that allows for repeated observations of a child's concepts of print, writing, and story. Repeated observations may yield more authentic information than that collected at one point in time. Replication of this study using more observation of the development of the various emergent literacy concepts is recommended.

6. It might be useful to investigate the effects of the implementation of an emergent literacy curriculum on literacy achievement of kindergartners over time, for example, first-graders, third-graders, and eight-graders. In addition to literacy achievement, effects on other variables could be explored, for example, attitude toward schooling, incidence of grade retention, independent learning, creativity, and self-discipline.

7. Another issue that might be interesting to study would be the effect of other related factors on emergent literacy development. These include affective factors, socioeconomic factors, educational background of parents, and teaching experience of kindergarten teachers.

8. Hypothesis 7 investigated whether there is a significant relationship between emphasis placed on reading (reflected by the number of children's books in the home) and the children's pattern of television viewing. Even though the null hypothesis was retained, it seems to be a very promising area for future research to investigate the relationship between television and video viewing and children's interest in reading. It might be worthwhile to investigate whether television interests can motivate kindergartners' reading of related books or magazines.

9. Immediate, appropriate intervention should be implemented for all the
kindergartners whose performance ratings revealed that they needed help. Small-group or one-on-one instruction should be provided based on the particular needs.

10. There should be ongoing evaluation of emergent literacy concepts and the findings should be used to style instruction to meet individual needs of kindergartners.

11. Due to the time required for individual assessment, a reading specialist should be assigned by the school or district administration of each school to provide support for teachers. This support includes using various measures to assess reading and interpreting the results for planning and enhancing instruction. Where this is already in effect, initiatives should be continued and improved.

12. Staff development efforts should be directed at enhancing the teachers' knowledge base on emergent literacy and improving their practice.

13. Kindergarten curricula should be revised to reflect the current findings in the professional literature on early literacy. An emergent literacy perspective should be clearly defined and reflected in the stated goals, objectives, teaching and learning strategies, and methods of instruction. Through collaborative efforts, sample thematic units should be included, illustrating how language arts could be integrated throughout the entire school day.

14. Parent education programs should be arranged especially for parents of the children whose performance ratings indicated that they needed help.

15. Parents and teachers should provide opportunities for story retelling and
emphasize all the basic story elements. Especially, practice should be given for appropriately stating the story beginning.
Dear Ms. Murphey,

I am writing to request permission to purchase and use part of the 1995 edition of the Metropolitan Performance Assessment materials for my dissertation. The approximate number of students to be tested is 100, therefore, I may need 4 Preliteracy Inventory kits and 4 Literacy Environment Kits.

The topic of my dissertation is "The Development of Selected Emergent Literacy Concepts in Selected Schools in a Southwestern Michigan School District." The purpose of this research effort is to assess the impact of the home and classroom environments on the development of print, writing, and story concepts of kindergartners in selected schools. Through qualitative and quantitative analysis it will describe home and classroom literacy environments and the extent to which kindergartners have acquired print, writing, and story concepts.

The Preliteracy Inventory would be individually administered. The general and specific directions for administering the Preliteracy Inventory as outlined on the Inventory's "Directions for Administering" would be followed. The Home Literacy Environment Inventory would be sent home with the child for the parents to complete and return to the teacher. The Classroom Literacy Environment Inventory would be used when conferencing with the class teachers to assist them in conducting a quick check of the resources and environment in their classrooms.

Thank you in anticipation of your kind consideration of my request.

Sincerely,

Magdalene Tobias
Doctoral Student
Ms. Linda Murphey  
The Psychological Corporation  
Legal Affairs Dept  
555 Academic Court  
Dan Antonio, TX 78204-24908

Dear Ms. Murphey,

I am writing to endorse the research project of Magdalene Tobias, a doctoral student at the above University. Her dissertation is entitled “The Development of Selected Emergent Literacy Concepts in Selected Schools in a Southwestern Michigan School District.” This research project requires the use of the 1995 edition of the Metropolitan Performance Assessment. More specifically, she would need the Preliteracy Inventory and the Literacy Environment Inventory kits.

Steps would be taken to ensure that all testing will be conducted under appropriate supervision and that the assessment materials will remain secure.

Thank you for considering the request for permission to purchase and administer the Inventories.

Sincerely,

Hinsdale Bernard Ph.D.  
Dissertation Committee Chair  
Associate Professor of Education.  
Andrews University
March 31, 1999

Dear Parent/guardian:

Educators of young children have recognized the need for collecting information on the writing and reading development of kindergarten children. Assessment is an important step in helping your child become a great reader and writer.

I am writing to seek consent for your child to participate in a research project that involves individually assessing your child on reading and writing tasks that are appropriate for kindergarten children. This assessment, which will take approximately twenty minutes, will be conducted at your child’s school. This dissertation project is part of the requirements for the completion of a Ph.D. degree in Curriculum and Instruction at Andrews University. The purpose of the project is to gain better insights about your child’s print, writing, and story concepts. These are important concepts for success in developing the ability to read and write.

The information collected during the months of April 1st to June 11th, 1999, will be shared only with your child’s parent/guardian and his/her teacher. Knowledge of how your child is progressing in reading and writing will be very important in planning reading and writing instruction. It is the intention of this project to ultimately further extend and enrich the opportunities for kindergarten children to become great readers and writers.

There are no hazards or risks associated with the assessment. The information collected will be held in strictest confidence. Your child’s name will not be used in the written report of the project that would be shared with the school district administration. Your consent is voluntary. Even if you give consent, your child will have the option to withdraw from participating in the assessment at any time.

If you agree for your child to participate, you will also be asked to complete a Home Literacy Environment Inventory. This inventory will ask questions about some home-related activities that your child does, and that are relevant to reading and writing. If you consent for your child to participate in this literacy assessment, please complete and return one consent form to your child’s teacher. You may keep the other consent form for your records. Thank you for your cooperation. If you have any questions, please feel free to contact me any time between 6.30 A.M. and 7.30 P.M. Monday through Friday, and on Sunday at (616) 471-6961, or page me any time at (616) 332-1012. You may also contact Dr. Bernard at (616) 471-6702. If there are any questions concerning your child’s rights as a research subject, please contact Andrews University’s Human Subjects Review Board at (616) 471-6088.

Sincerely,

Magdalene Tobias
Doctoral Candidate

Hinsdale Bernard, Ph.D.
Dissertation Committee Chair
Associate Professor of Education
PARENT/ GUARDIAN CONSENT FORM FOR LITERACY ASSESSMENT

Project title: The Effects of Home and Classroom Literacy Environments on the Emergent Literacy Development of Kindergarten Students in a Southwestern Michigan School District.

I have read and understood the description given to me about the research project, and have been fully informed about the nature and purpose of project, and my rights as a parent. I understand that:
• this project which involves literacy assessment of kindergartners, is part of the requirements for the completion of a Ph.D. in Curriculum and Instruction at Andrews University;
• it is the intention of this project to ultimately further extend and enrich the opportunities for kindergarten children to become great readers and writers;
• the information obtained will provide educators with insights about the print, writing, and story concepts of kindergarten children and will be very important in planning reading and writing instruction that will meet my child’s needs;
• the individual assessment will take approximately twenty minutes and will be conducted at my child’s school during the period April 1st to June 11th, 1999. It will involve reading and writing tasks that are appropriate for kindergarten children;
• the information collected on my child is confidential and will be shared only with my child’s parent/guardian and his/her teacher. My child’s name will not be used in the written report of the project that will be shared with the school district administration;
• there are no hazards or risks associated with the assessment and my consent is voluntary. Even if I consent, my child will have the option to withdraw from participating in the assessment at any time without prejudice;
• all children whose parents complete and return the Home Literacy Inventory, on time, will receive a gift.

I hereby give consent for my child ___________________________ to participate in the reading and writing assessment. I have had all my questions satisfactorily answered and I have received a copy of this consent form. If I have any further questions I can call Magdalene Tobias at (616) 471-6961. Her mailing address is 500 Garland Ave., Apt. G-16, Berrien Springs, MI 49103. I can also call Dr. Bernard at (616) 471-6702. I understand that if I have any further questions about my child’s rights as a research subject, I can contact Andrews University Human Subjects Review Board at (616) 471-6088.

_ / _ / _ (Parent or legal guardian) _ / _ / _ (Date) (Relationship)

_ / _ / _ (Witness) (Date)

_ / _ / _ (Investigator) (Date)

Thank you for your kind cooperation.
March 31, 1999

Dear Parent/Guardian:

Thank you for consenting for your child to participate in the project that involves assessing him/her on reading and writing tasks. This dissertation project is part of the requirements for the completion of a Ph.D. degree in Curriculum and Instruction at Andrews University. The purpose of the project is to gain better insights about your child's print, writing, and story concepts. This study has the potential for helping your child to become a great reader and writer.

The project also involves collecting information on the child's home literacy environment through the attached inventory. The information you will provide is very important so that I can compare your child's home literacy environment with his/her performance on the literacy assessment done at school. At the end of the project, I will be willing to review your child's performance with you. The information you will provide will enable me to be in a better position to discuss with you how your child can become a great reader and writer. I am kindly requesting your help in completing the inventory and returning it tomorrow to your child's teacher. It is extremely important that you return it tomorrow.

All information will be held in strictest confidence. Your name is not needed because the inventory is coded to facilitate matching parent and child inventories, and follow-up activities. At no time will your name, nor your child's name, be used in the report of this study that would be shared with the school district administration. Furthermore, your participation in completing this inventory is purely voluntary and you may withdraw from this project at any time without prejudice.

If you have any questions concerning this project or completing this inventory please feel free to contact me any time between 6:30 A.M. and 7:30 P.M. Monday through Friday, and any time on Sunday at (616) 471-6961, or page me any time at (616) 332-1012. You may also contact Dr. Bernard at (616) 471-6702. If there are any questions concerning your rights as a research subject, please contact Andrews University's Human Subjects Review Board at (616) 471-6088.

At the end of this project, a gift will be given to all children whose parents complete and return this inventory. The parents will receive brochures with tips for making their children great readers and writers. Thank you for your kind cooperation.

Sincerely,

Magdalene Tobias
Doctoral Candidate

Hinsdale Bernard, Ph.D.
Dissertation Committee Chair
Associate Professor of Education

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March 31, 1999

Dear Teacher,

I am writing to seek your consent to participate in a research project. This project is part of the requirements for the completion of a Ph.D. degree in Curriculum and Instruction at Andrews University. The purpose of the project is to gain better insights about the development of print, writing, and story concepts of kindergarten children.

This study can be very significant for teachers. They will be able to view literacy assessment data that has been individually collected on kindergarten children. Also, they will be able to discuss their literacy beliefs and instructional practices, as well as those currently advocated in the most professional literature and research. Furthermore, this study will help educators to better understand the complexities involved in early literacy development.

The study will include an interview with kindergarten teachers of the student sample during the months of April to June 1999. If you consent, you will be asked some questions related to kindergarten children and the literacy environment of your classroom. There are no hazards or risks associated with the interview. At no time will your name be used in the written report of this study that would be shared with the school district administration. Your consent is voluntary. Also, even if you give consent, you may withdraw from participating in the interview at any time, without prejudice.

If you have any questions concerning this project please feel free to contact me at any time between 6:30 A.M. and 7:30 P.M. on Monday through Friday, and any time on Sunday at (616) 471-6961, or page me any time at (616) 332-1012. You may also contact Dr. Bernard at (616) 471-6702. If you have any questions concerning your rights as a research subject, please contact Andrews University’s Human Subjects Review Board at (616) 471-6088.

I would deeply appreciate your cooperation in participating in an interview. If you agree to do so, please complete and return one consent form and keep the other one for your records. Thank you.

Sincerely,

Magdalene Tobias
Doctoral Candidate

Hinsdale Bernard, Ph.D.
Dissertation Committee Chair
Associate Professor of Education
TEACHER CONSENT FORM FOR INTERVIEW

Project title: The Effects of Home and Classroom Literacy Environments on the Emergent Literacy Development of Kindergarten Students in a Southwestern Michigan School District.

I have read and understood the description given to me about the research project, and have been fully informed about the nature and purpose of the project, and my rights as a research subject. I understand that:

• this project which involves interviewing kindergarten teachers of the student sample, is part of the requirements for the completion of a Ph.D. in Curriculum and Instruction at Andrews University;
• the intention of this project includes providing teachers with an opportunity to reflect on their own practices and beliefs, with regard to kindergarten literacy instruction, with the hope that their practice will be enhanced;
• the information obtained will provide educators with insights about the complexities involved in emergent literacy development;
• the face-to-face or telephone interview will take approximately thirty minutes and will be conducted at my school during the period April 1st to June 11th, 1999. It will involve answering questions related to kindergarten children and the literacy environment of my classroom;
• the information collected from me is confidential and at no time will my name be used in the written report that will be shared with the schools and the district administration;
• there are no hazards or risks associated with the interview and my consent is voluntary. Even if I consent, I will have the option to withdraw from participating in the interview at any time, without prejudice.

I, ________________________________, hereby consent to participate in the interview. I have had all my questions satisfactorily answered and I have received a copy of this consent form. If I have any further questions I can call Magdalene Tobias at (616) 471-6961. Her mailing address is 500 Garland Ave., Apt. G-16, Berrien Springs, MI 49103. I can also call Dr. Bernard at (616) 471-6702. I understand that if I have any further questions about my rights as a research subject, I can contact Andrews University Human Subjects Review Board at (616) 471-6088.

________________________________________________________________________
(Name) ____________________________ (Date)

________________________________________________________________________
(Witness) ____________________________ (Date)

________________________________________________________________________
(Investigator) ____________________________ (Date)

Thank you for your kind cooperation.
Dear Sir/Madam,

I am about to conduct a research project entitled "The Effect of Home and Classroom Literacy Environments on the Literacy Development of Students in a Southwestern Michigan School District." This research project is part of the requirements for the completion of a Ph.D. degree in Curriculum and Instruction at Andrews University. It attempts to assess the impact of the home and classroom environments on the development of print, writing, and story concepts of kindergarten students.

The study can be very significant for it provides parents and teachers with the opportunity to reflect on their beliefs and practices. There will be scope for explaining to parents and teachers the researcher's observations of their respective children's performance on the Preliteracy Inventory Tasks. This study can provide parents, teachers, school administrators, curriculum planners, and policy makers with local empirical data which can be used as a reference point for future planning and improvement.

One of your recent publications has proven to be a very valuable resource to me. I refer to Morrow, L. M., Strickland, D. S., & Woo, D. G. (1998). Literacy in Half- and Whole-Day Kindergarten: Research to Practice. I am writing to seek your permission to use some of the teacher interview questions (pp. 167-168) as a means of conducting semistructured interviews. Also, I would like to use "The Checklist for Evaluating the Literacy Environment" (pp. 100-101) as a means of observing the literacy materials in the classrooms. The source would be appropriately cited in order to give credit to the authors.

Thank you in anticipation of your kind consideration of this research effort.

Sincerely,

Magdalene Tobias
Doctoral Candidate

Hinsdale Bernard Ph.D.
Dissertation Committee Chair
Associate Professor of Education
Dear Sir/Madam,

I am about to conduct a research study entitled "The Effect of Home and Classroom Literacy Environments on the Literacy Development of Students in a Southwestern Michigan School District." This research project is part of the requirements for the completion of a Ph.D. degree in Curriculum and Instruction at Andrews University. It attempts to assess the impact of the home and classroom environments on the development of print, writing, and story concepts of kindergarten students.

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Sincerely,

Magdalene Tobias
Doctoral Candidate

Hinsdale Bernard Ph.D.
Dissertation Committee Chair
Associate Professor of Education
Semi-Structured Teacher Interview

Teacher’s Name: ____________________________________________

School: ____________________________________________

Teaching Experience

1. How long have you been teaching? _________

2. What grades have you taught and for how long? ________________

3. How long have you taught in a half-day kindergarten program? ______________

4. Did you ever teach in a whole-day kindergarten program? ______________

5. How long have you taught this kindergarten class? ______________

6. What is your typical daily program like? ___________________

7. What educational courses have you taken in reading? _________________

8. Did you ever study about the concept of emergent literacy? ________________

9. What do you see different about emergent literacy than the concept of reading readiness? _____________________________________________________________
Likes and Dislikes

10. What do you like about teaching in a half-day kindergarten program?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

11. What do you dislike about teaching in a half-day kindergarten program?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Role and Expectations

12. What role did you play in selecting and implementing the kindergarten program with respect to literacy?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

13. What are your expectations of your students with respect to reading and writing development?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

14. How much time in each day do you spend on teacher-initiated literacy activities?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
15. What types of literacy materials do you use in your classroom? (See checklist on last page)

16. Describe the types of teacher-initiated literacy activities you usually do in your classroom?

*Storybook reading activities*

- Telling stories
- Reading stories to children
- Discussing storybooks
- Teacher modeling of storytelling with the use of props
- Reading poetry, rhymes, and fingerplays
- Visiting the library
- Children reading independently
- Reading magazines
- Reading big books

*Activities related to knowledge about print (how often do you do these?)*

- Letter recognition
- Whole-word recognition
- Word-families
- Sound-symbol relations
- Directionality
- Chanting rhymes
- Color identification
- Shape identification
- Identifies labels and print in the environment
- Demonstrates that print, not pictures, carries the main meaning of a story.

*Comprehension strategies (how often do you do these?)*

- Prestory discussion
- Poststory discussion
- Discussion about story structure and sequencing
- Literal activities
- Story retelling by children
- Answers questions about a story
- Following directions

*Writing activities*
Wrote own name
drawing or writing in response to storybook reading
Writing stories
Making books
Dictating stories to the teacher
taking dictation from the teacher
teacher writing morning/afternoon message
teacher writing experience charts
journal writing
Writing about pictures
Writing letters to others

Oral language activities

Talks about own pictures
tells own story
Vocabulary development
Sharing time or show tell
discussion related to thematic units
Calendar
The weather

Literacy integrated into content areas

Social Studies
Play
Music
Art
Math

Any other activities not mentioned?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

17. How much time each day do you spend in student-initiated literacy activities (during free-choice center time)?
18. Describe the types of student-initiated literacy activities that take place in your classroom.

Reading (alone and with others)

- Conventional and emergent oral reading of books
- Conventional and emergent oral reading of magazines
- Conventional and emergent oral reading of newspapers

Print-awareness activities

- Using alphabet board games
- Tracing cardboard letters
- Using the computer for letter identification games
- Matching words to pictures

Listening

- Use of headsets with taped stories to listen to books

Writing

- Emergent and conventional writing for creating books
- Writing on the blackboard
- Writing greeting cards
- Writing letters
- Journal Writing
- Copying charts
- Dictating stories to the teacher
- Writing stories
- Writing stories on the computer

Demonstration of comprehension through story retelling

- Use puppets to retell a story
- Felt characters and a felt board to retell a story
- A roll story box to retell a story
- Doing a chalk talk to retell a story (drawing the story as it is told).

Dramatic play and literacy

- Promote literacy-related play activities
19. Do you think literacy instruction will be different in a morning, afternoon, or whole-day program?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

20. What do you think are advantages of a half-day kindergarten program?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

21. What do you think are disadvantages of a half-day kindergarten program?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

22. If you were in a whole-day kindergarten program, how much time would you allocate for literacy activities?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

23. Do you think it is better for students to attend a morning, afternoon, or whole-day kindergarten program?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

24. If you had a choice which program would you prefer to teach, morning, afternoon, or
25. Do you think that length of kindergarten program (half-day versus whole-day) and time of program (morning or afternoon) would affect student performance on literacy assessment measures or tasks?

Post Data-collection and Postinterview Reflections

I would greatly appreciate if you would write, very briefly, your reflections on the significance of this study for kindergarten teachers.

Thank you sincerely for your kind cooperation with me in my research project. I will always remember you and will make the results available to you.

Magdalene Tobias
Doctoral Candidate
APPENDIX C

LITERACY ASSESSMENT PROJECT REPORT
Instrument used: The Preliteracy Literacy Inventory is part of the Metropolitan Early Childhood Assessment Program that provides an assessment of emergent literacy concepts—print concepts, writing concepts, and story concepts.

Performance rating: Nurss (1995, p. 39) explains The Performance Ratings (‘+’, ‘✓’ and ‘-’) that indicate performance on the skills assessed by the Inventory:

+ This rating indicates that the child has mastered enough of the skills measured by the Inventory tasks at this time to be judged proficient.

✓ This rating indicates that the child is in the process of developing the skills measured by the Inventory tasks. Instruction should continue in this area at this time.

- This rating indicates that the child needs help in developing the skills measured by the Inventory tasks. Activities related to the development of prerequisite skills may be needed.

Section 1: Print Concepts

It is critical for kindergartners to understand some of the many features of print. To assess this knowledge they were asked several questions from each of the following categories.

A. What We Read. The child was asked to discriminate print from pictures on the storybook pages. The child had to recognize that print (not pictures) is what is read.

Score obtained: ( %)

B. Why We Read. The child was asked to state why someone would read selected print thus demonstrating his/her understanding of the purpose for reading.

Score obtained: ( %)

C. How We Read. The child was asked to demonstrate the direction in which print is read, where the reader would begin and end on a page, and to identify any letter and a capital letter, any word and specific words, and a period.

Score obtained: ( %)

Overall Score on Print Concepts: ( %). Performance Rating: _____

Section 2: Story Retelling

The child was asked to retell a story told to the class in order to determine if he/she has acquired a concept of story, and included basic story structures in his/her story.
This task did not assess the accuracy of the recall of the content of the story. The check mark (✓) indicates the story elements the child included during story retelling.

- Described story beginning
- Named story setting
- Named significant characters
- Included at least three events in logical sequence
- Described at least one feeling of a character
- Used descriptive words at least twice
- Gave at least one example of the characters speaking
- Indicated story ending

Score obtained: ( 0%). Performance Rating: ____

Section 3: Writing Concepts

Part A—Writing Name
The child was asked to write his/her name. The check mark (✓) indicates how the child wrote his name.

- No attempt
- Scribbles
- Letters formed backwards, incorrectly, or upside down
- Correct letter formation and spelling

Performance Rating: ____

Part B—Writing Story
The child was asked to write a story about a story character. The check mark (✓) indicates his/her stage of writing expression.

- No attempt
- Pictures
- Scribbling
- Letter-like characters
- Recognizable letters
- Invented Spellings
- Correct spelling

Performance Rating: ____

I would be delighted to meet with parents to answer any further questions and to provide a more detailed report of your child’s performance on the Preliteracy Inventory tasks. Do not hesitate to call me at (616) 471-6961.

Magdalene Tobias
Doctoral Candidate
SELECTED BIBLIOGRAPHY


VITA

NAME: Magdalene Tobias

Date of Birth: 13th September 1951

Place of Birth: Trinidad, West Indies

Undergraduate and Graduate Schools Attended:

Caribbean Union College, Trinidad

University of the West Indies

Andrews University

Degrees Awarded:

Bachelor of Arts, Caribbean Union College, 1983

Master of Education, University of the West Indies, 1996

Doctor of Philosophy, Andrews University, 2000

Experience:

Elementary School Teacher, Trinidad and Tobago, 1969-1979 and 1983-1984

Reading Facilitator, Ministry of Education, Trinidad and Tobago, 1984-1992

Instructor, Valsayn Teachers’ College, Trinidad and Tobago, 1992-1996

Contract Instructor, Andrews University, Berrien Springs, Michigan, 1996-1998

Adjunct Instructor, Lake Michigan College, Benton Harbor, MI, 1998-2000