Correlational study on reading readiness and reading achievement test scores

Josephine A. Morales

Rowan College of New Jersey

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CORRELATIONAL STUDY ON
READING READINESS AND
READING ACHIEVEMENT
TEST SCORES

by
Josephine A. Morales

A Thesis
Submitted in partial fulfillment of the requirements of the
Master of Arts Degree in the Graduate Division
of Rowan College of New Jersey
May 2, 1995

Approved by
Professor

Date Approved 5/3/95
ABSTRACT

Josephine A. Morales

Correlational Study on Reading Readiness and Reading Achievement Test Scores
1995

Dr. Klandeman, School Psychology

The purpose of this study was to determine if a relationship exists between
Reading Readiness and Reading Achievement Test scores. Reading Readiness was
associated with higher Reading Achievement.

Three schools in a low socio-economic section of an inner city school district
provided the sample used in this study. The sample consisted of thirty-five Limited
English Proficient Students (17 boys and 18 girls). All children were of Hispanic
heritage.

The Reading Readiness and Reading Achievement Test scores were compared
and analyzed. A Spearman's rho correlational coefficient was used to measure and
describe the relationship between both reading test scores.

The analysis of the data indicated that there was a very strong positive correlation
between Reading Readiness and Reading Achievement Test scores. The expectation that
students' reading achievement would be higher was substantiated.
MINI-ABSTRACT

Josephine A. Morales

Correlational Study on Reading Readiness and Reading Achievement Test Scores
1995

Dr. Klanderman, School Psychology

To determine if there was a relationship between Reading Readiness and Reading Achievement Test scores. Reading readiness was associated with higher reading achievement. Correlational Analysis - Spearman's rho revealed a strong positive correlation between Reading Readiness and Reading Achievement Test scores. The expectation that student's reading achievement would be higher was substantiated.
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To Jeanne Frances . . . thanks a million for your tender love and sweetness!

Love always,

Josie
CHAPTER ONE

Need/Purpose

There exists substantial research in the area of how Limited English Proficient students (LEP) acquire a second language. Bilingual/Bicultural Education is designed to provide for the educational needs of students who have limited English reading, speaking and writing abilities, and who come from an environment whose dominant language is other than English. This philosophy has strong pedagogical value in instructing young children while using their native language. Bilingual/Bicultural education provides the child with a teacher who is linguistically and ethnically harmonious with them. The teacher creates a climate which diminishes the child’s fears and allows him/her to concentrate on learning while developing a positive self-image (Camden Board of Education, 1988).

The bilingual teacher faces many concerns in regards to her students. She is preoccupied with their reading success, and considers it a fundamental aspect of their development as active and productive members in our society.

Effective reading instruction for bilingual students demands teaching that is developmentally, linguistically, and culturally fit. Wallace and Goodman, 1989, stated that:

"In order to plan instruction in this informed manner, teachers must develop an understanding of the relationship between native-language and second-language learning” (Barrera, R.B., 1992, p. 2).
The Limited English Proficient student has an enormous task: he/she must learn and incorporate a new language and culture while maintaining academic progress in school. In order to achieve this, he/she must develop the ability to interpret before he/she develops the ability to produce the same language. The student cannot be expected to apply abilities for reading and writing which he/she has not learned to use in listening and speaking.

Reading readiness is considered a crucial factor for learning to read. Teachers in first grade level need to recognize which students in her class are prepared to learn to read when they enter.

According to David Elkind, Tufts University psychologist, the early grades are a period when children's attitudes towards school and learning are shaped. It is as they move from home or preschool to the competitive elementary school that they begin to make judgments about their own abilities. Children who feel inadequate may give up.

"The child's budding sense of competence is frequently under attack, not only from inappropriate instructional practices . . . but also from the hundred and one rejection that marks a child's entrance into the world of schooling, competition, and peer-group involvement" (Kantrowitz, B. et al., 1989, p. 51).

Martha Denckla, professor of neurology and pediatrics at Johns Hopkins University, believes that many of 5-year olds are not ready for reading regardless of the years of schooling they may have accumulated.

"We're confusing the number of years children have in school with brain development, just because a child goes to day care at age 3 doesn't mean the human brain mutates into an older brain. A 5-year old's brain is still a 5-year old's brain." (Kantrowitz, B. et al., 1989, p. 52).
First grade bilingual teachers are concerned with the problem children face when entering first grade with no prior schooling experience. There are also those children who are less mature and who frequently fall behind in their reading achievement.

There exists the need of identifying those children who lack readiness skills but who are placed in first grade because of their chronological age. They are in dire need of programs designed to meet their social and academic needs in order for them to feel adequate and succeed.

First grade bilingual teachers need to have some measures of their Limited Proficient English students' reading readiness ability in order to provide the type of instruction that meets their needs.

In the present, the great majority of retentions occur in the first grade level. If we can find ways to prevent this issue, our children will not only benefit academically but emotionally as well. Our school community and our society at large would also be greatly influenced.

Taking this into consideration and my own experience as a first grade bilingual school teacher, I feel the need of finding ways in which we can service our children better. It is my purpose in this study to investigate the relationship between Reading Readiness Test scores and Reading Achievement Test scores in bilingual first grade. I hope the results may assist bilingual teachers and administrators in the design and implementation of methods, techniques and programs for those students acquiring readiness skills before entering first grade.
There have been numerous studies performed regarding the relationship of reading readiness and reading achievement in English proficient students. These studies have concluded that the relationship is a significant and direct relationship; that reading readiness is in effect an indicator of reading achievement at the end of first grade and thereafter.

Children who enter Kindergarten or first grade are considered to be good users of their native language. They are capable of understanding almost all basic types of English sentences, including statements, exclamations, and questions. This solid language foundation helps children to generalize from what they already know. In contrast, those children who lack well-developed aural and oral language skills have greater difficulties in learning to read (Leu, D.J. et al., 1987).

I believe the importance of my research lies in presenting that the same relationship exists between reading readiness and reading achievement with regards to LEP students. This is even more so in the case of the LEP students where their basic native language skills may not be fully developed.

LEP students who have acquired reading readiness in Kindergarten should be able to score higher and do better academically than those coming to first grade lacking readiness skills.

**Hypothesis**

The hypothesis for this study is: Students who score high on their Reading Readiness Test will score higher in their Reading Achievement Test.
Theory

Reading is a “multifaceted developmental process in which the successful student learns to make the connections that link language, print, and thought.” (Sutton, C., 1989, p. 685). In order to understand messages encoded in the written form, the reader not only needs to be able to break the code, but must possess language facility, conceptual framework and thinking abilities required to comprehend the message (Sutton, C., 1989). Therefore, the four areas important to reading comprehension are: decoding skills, language development/competence, concept/context building, and critical thinking skills/strategies.

Students who are in the early stages of acquiring English can understand and identify a variety of forms of environmental print (e.g. K-Mart, STOP, McDonald’s). Teachers can build upon this ability by integrating print into the classroom environment.

According to Sutton, word recognition instruction requires phonics development. Students need to recognize the grapheme/phoneme connection that links the print form to the oral language. Caution should be observed when working with non-native English speaking students because English is not a phonetically consistent language, particularly in regards to vowels.

In reference to research by Krashen, Dulay, and Burt (1982), Sutton stated that “in the process of acquiring a second language, children develop competence by using the language for real communication” (Sutton, C., 1989, p. 685).
Assumptions

It was assumed that there was no bias in the administration of the Checklist Test (Reading Readiness) and the District Inventory Test (Reading Achievement). A second assumption was that the students were receiving instruction in their dominant language.

Limitations

This study has the following limitations:

1. Students placed in the English Reading groups are Limited English Proficient students.
2. Teachers' personalities, attitudes, teaching styles and efficiency might have influenced the results.
3. Teaching methods, instructional activities, and materials used may have not been similar.
4. Physical environment of facilities may have not been similar.
5. Policy regarding failure or non-promotion.
6. Number of absences by the teacher and/or by students.

Definitions

Bilingual Education - Instruction in two languages, or the use of native language as medium of instruction for any part of the school curriculum. Includes study of the history and culture associated with a student's mother tongue, if other than English.

LEPs (Limited English Proficient student) - Pupils whose native language is other than English and who have sufficient difficulty speaking, reading, writing or understanding the English language. (Bilingual/Bicultural Handbook, p. 6)
Reading Readiness - It involves physical development, emotional stability, mental maturity, language development, social readiness, and a desire to learn. (Reeves, R., 1966, p. 5)

High Score - 75% or higher

Low Score - below 70%

Overview

In Chapter II, the review of literature about reading readiness and reading achievement will be presented. It will cover current philosophies and research studies in the field of readiness for reading. Chapter III presents the design of the study, including samples, measures used, analysis and summary. Chapter IV includes the analysis of results and Chapter V presents a summary and conclusion, the practical implications of the study and the bibliography.
CHAPTER TWO

Introduction

The present study is an investigation which seeks to further demonstrate the relationship which exists between reading readiness and reading achievement. Educators believe that readiness programs provide experiences that smooth the way for children, getting them ready for the time when reading arrives in a least traumatic manner and with greater chance for success (Itzkoff, S.W., 1986).

The following review of literature examines the effects of reading readiness on reading achievement. Studies performed by various researchers on this field will serve as evidence of the importance of initial reading instruction. The value of reading aloud to children and other activities that promote phonological awareness will also be discussed in this chapter.

Reading Factors

Many researchers have looked at the influence of reading readiness on reading achievement. Some factors that have been considered as playing a major role in reading readiness are chronological age, mental age, sex, experiential background, and oral-language development (Otto, W. et al., 1979). Recent studies draw the conclusion that readiness is a developmental condition influenced not only by those factors but by their combination as well.
Minnie S. Behrens on her study, *An Evaluation of Reading Readiness*, on the social background, experiences, and the physical status of 203 first grade children concluded that:

"a confounding problem for children in the beginning stages of learning to read is suggested in Piaget’s construct regarding cognitive development itself, not just in the emergence of concepts regarding the nature and purpose of language. Reading instruction makes demands in children’s cognitive capacities that do not appear to fit their reasoning abilities" (Douglas, M.P., 1989, p. 94).

Piagetian theory considers approximately age seven to be the time when the concrete- operational stage is fairly well established. Many cultures consider that age as the time where first signs of maturity occur, and it is the traditional time for beginning their children’s formal education (Douglas, M.P., 1989).

According to Otto (1979), although in our society children are required to be six years old before entering first grade, chronological age is a poor criterion of ability to read. Another supporter of this position is Durkin. According to Cornacchia (1989), in her studies, Durkin posited that it is senseless to think of a specific chronological or mental age for reading. Durkin believed that the child’s age had not too much to do with learning to read but most important was the nature of the reading program being utilized (Cornacchia, 1989).

**Initial Reading Instruction**

Reading is a process of extracting meaning from the printed form of language. The knowledge of the sound, the shape of words and sentences are relevant if they provide meaningful concepts to the child. The relationship between readiness training and
reading is that the accomplishment of reading is most efficiently achieved by emphasizing those skills that are the closest to the actual process of reading: letter-sound recognition, identification of letters and numbers relating to words and concepts (Itzkoff, 1986).

According to Itzkoff there are two rationales for having a highly articulated readiness program:

"A program of readiness experiences will smooth the way for all children so that when the time of reading arrives, it can occur with the least trauma and the greatest chance for success" (Itzkoff, S.W., 1986, p. 77).

"The second rationale is that modern society demands universal literacy. Given our growing knowledge of the depth and incidence of reading disabilities, plus the astounding rate of illiteracy, suffered especially by males, the potential diagnostic role of readiness programs appears increasingly vital (Itzkoff, S.W., 1986, p. 78).

A child is considered to be ready to read when she/he is capable of distinguishing letter shapes, differentiates various sounds, can distinguish and identify the sound of letters of simple words. He/she must be able to hear and discriminate sound differences in letter and word pronunciation (Itzkoff, 1986).

In our school system the child entering first grade is around six years of age. According to previously noted reading chronology, most children should be reading by the age of seven, with the average age at about 6.5. Children who enter first grade without the school or home experiences that prepare them for methodical reading instruction must obtain remedial readiness during the first months in grade 1.
Remedial reading provides the child with visual letter-word equivalents of his/her natural language. The six-year-old child understands and speaks his/her natural language, the problem is to decode the symbols on the page.

Byrne and Fielding-Barnsley (1991) conducted an experiment with 64 preschoolers trained with a program designed to teach an aspect of phonemic awareness. The training program emphasized recognition of certain phonemes and taught initial and final position of the targeted phoneme.

A comparison of pre-training and post-training measures of phonemic awareness demonstrated greater gains by the experimental group. The increased levels of phonemic awareness not only occurred with the trained phonemes but with untrained phonemes as well. A test on word recognition demonstrated that most of the children who dominated phonemic awareness and who knew relevant letter sounds could use their knowledge to decode unfamiliar printed words (Byrne, B., Fielding-Barnsley, R., 1991).

Scarborough, Dobrich and Hager (1991) examined the relations of reported household literacy patterns to the reading abilities of adults and children. They studied 64 middle-class children and their 112 biological parents.

The children were observed during their preschool years and followed up until the end of the second grade. During this period of time, parents were asked about their reading pattern frequencies, parent-child reading, and their children's independent book activity in the home. Responses were compared according to the parent's reading skills and the children's reading achievement in second grade. The results of this longitudinal study demonstrated that the 22 preschoolers who became poor readers had less frequent
early literacy-related experiences than the 34 children who became better readers (Scarborough, H.S., Dobrich, W., Hager, M., 1991).

Arthur Reynolds conducted a longitudinal study on 1,530 lower-income minority children. The study used the children's first- and second-year reading and mathematical achievement, as well as their socio-emotional maturity. The data included school readiness attributes, intervening Kindergarten influences, and intervening first-year social-psychological influences. Major results of this study demonstrated that cognitive readiness in Kindergarten had pervasive indirect effects on first- and second-year outcomes, and that variables directly alterable by families and school such as pre-Kindergarten experiences, motivation, mobility, and parental involvement had significant influence in early school outcomes.

It also demonstrated that entering Kindergarten readiness and Kindergarten reading was the variable that had the greatest effect on first grade reading achievement (Reynolds, A.J., 1991).

Extended day programs have taken into consideration research findings in implementing their curricula. Their emphasis is on assisting those students who are "least ready" for Kindergarten by providing them with cognitive, social and physical skills.

Ruth Barnstein conducted a study at Detroit Public schools to find out the effectiveness of Extended Day Kindergarten during 1985. A sample of the population was randomly selected. Two groups were selected for comparison purposes: control and experimental groups. The California Achievement Test, Level 10, Form C, was
administered to both groups. The result of the test revealed a significant difference in reading readiness in favor of the experimental group (Barnstein, 1985).

One of the most important recent studies on this area of reading readiness is Marilyn Jagger Adams' book, *Beginning to Read*. In her book, Adams considers preschoolers' ability to recognize and name letters of the alphabet, their general knowledge about text (which is the front of the book, the back, whether the story is told by pictures or print, the way to turn the pages) and their awareness of phonemes (the speech sounds correspond to individual letters) as the three powerful predictors of children's eventual success in learning to read (Adams, M.J., 1990).

"Preschoolers' awareness of phonemes holds impressive predictive power, statistically accounting for as much as 50% of the variance in their reading proficiency at the end of the first grade" (Adams, M.J. et al., 1990, p. 6).

Reading aloud to children is considered to be the single most important activity for building the knowledge and skills that children require in order to learn to read. Adams and Osborn mention ethnographic research documents on children who enter school lacking literacy preparation and the difficulties they and their teachers will encounter in order to make up for their needs.

"Activities that promote phonological awareness and spelling-sound correspondences should be helpful but cannot be sufficient. Theory and research firmly indicate that the system of knowledge and processes that support reading is complex and interactive. To develop properly, its parts must be developed conjointly" (Adams, M.J. et al., 1990, p. 7).

The best predictor of a child's success in schooling appears to be his success in learning to read in the first grade. Children's first grade reading achievement is
considered to depend most of all on how much they know about reading before they enter formal schooling. Adams and Osborn concluded that reading differences are due to learning and experience.

“They are due to differences that we can teach away ... provided, of course, that we have the knowledge, sensitivity, and support to do so”. “As daycare legislation is developed by our government, I hope with all my heart that it will recognize that effective daycare, instituted for the children and their families and towards our own country’s long-term interests, is less about babysitting that it is about child development. I hope it will be designed to support the environment and personnel that are best able to foster the social cognitive, and linguistic nurturance that all children need all day long” (Adams, J.M. et al., 1990, p. 8).

Darlene M. Cornacchia studied the influence of preschool reading readiness skills instruction on first grader’s reading achievement on her study of 52 subjects from the Elizabeth School system. Cornacchia included those who did not have reading readiness exposure and those who did.

She concluded that “reading readiness for preschool does have a positive, though not a statistically significant effect on Kindergartners and first graders” (Cornacchia, D.M., 1989, p. 15).

Reading Instruction With Bilingual Students

On another research study, Siegel and Hansen examined the policy issue of schools providing formal reading instruction to bilingual students. They conducted a national follow-up study on 3,959 high school seniors who had or had not entered a Kindergarten beginning reading program in the fall of 1973. The data they gathered
allowed them to determine if beginning reading instruction in Kindergarten, as opposed to waiting until first grade, was related to adult reading competence.

Siegel and Hansen's major conclusion on their study was that "those students who received formal beginning reading instruction in Kindergarten, as opposed to those beginning it in first grade, were clearly better readers as seniors in high school" (Siegel, D. F. et al., 1990, p. 5).

They also found that those students who received the Kindergarten reading instruction had 14% fewer students in remedial classes at both the elementary and high school levels. This was considered an important economic and educational issue because remedial instruction is not only costly for school districts but it is also considered ineffective and highly related to the number of drop-outs.

Siegel and Hansen stated that bilingual students who participated in the Kindergarten reading instruction demonstrated "clear patterns of higher vocabulary and reading comprehension scores and required less remediation as seniors in high school than those who did not receive the early reading instruction" (Siegel and Hansen, 1970, p. 13).

They concluded that their study provides support to the positive effects of beginning formal reading in Kindergarten generalized to bilingual children. Siegel and Hansen consider that the question that the school policy makers now face is:

"Why are we not providing formal reading instruction to all children at the Kindergarten level?" (Siegel and Hansen, 1990, p. 15).
Summary

All throughout my research of literature there was evidence of the importance of reading readiness for reading achievement. According to many of the studies, reading readiness not only prepares the child for a fruitful future in school but also saves time and money to school districts when, due to children's academic achievement, there is less need for the implementation of remedial programs. Lower rates of drop-outs have also been reported.

Too little research has been conducted in the field of reading readiness and reading achievement. The largest amount found was from the 1970s. Among these studies only very few considered the Limited English Proficient students. Due to the latest growth of this population, further studies need to be conducted. Research on this area will help us better understand the importance of reading readiness and the most effective ways of achieving this with the LEP students.

The importance of my study relies on the use of this particular population (LEPs). These research findings will give us an insight into the difficulties encountered by Kindergarten and first grade teachers in Bilingual School Districts and will help us address the situation accordingly.
CHAPTER THREE

Sample

Three schools in a low socio-economic section of an inner city school district provided the sample used in the study. This sample consisted of 35 Limited English Proficient students (17 boys and 18 girls). All children were of Hispanic descent. The students ranged approximately between ages 5.0 - 5.11 (Kindergarten) and 6.0 - 7.0 (first grade).

The students were screened through a Home Language Survey and a Language Proficiency Test (Maculaitis) before being placed in a bilingual setting. The New York Lab Test (New York Language Assessment Battery Test) was administered in order to place the students for instruction according to his/her dominant language (English or Spanish).

Request for the use of subjects' records was submitted to the district's Board of Education and granted. Students' names were kept confidential by the use of numerical assignment.

Design

The study is an ex-post facto research using a within subjects approach/correlational design.
Limited English Proficient students participating in a bilingual Kindergarten class were administered the District Checklist Test at the end of Kindergarten and the District Skills Inventory Test at the end of first grade.

The tests were administered by the bilingual classroom teachers during the month of June of each corresponding year (1992, 1993) to the whole class as a group. Children were monitored by the Instructional Assistant who checked that the children were answering the specific test item.

Students were instructed to listen carefully to the directions given by the teacher, to pay attention to the sample items, and first grade students were instructed to read when indicated.

The teachers followed the Teacher's Manual for each test and scored them according to the corresponding answer key in the Teacher's Manual.

Test scores were reported to the Bilingual Department at the end of the school year. These data were the one gathered and utilized for this study.

**Measures**

The 35 participants were administered the District Checklist Test at the end of Kindergarten and the District Skill Inventory Test at the end of first grade by their corresponding bilingual classroom teacher.

The Checklist District Test has the following sub-tests: Animal Recognition, Letter Recognition, Capital/Lower Case Letters, Positional Words, Opposites, Go Together, Beginning Sounds, Rhymes, Ending Sounds, Vocabulary, First/Last,
The First Grade District Skills Inventory Test encompasses the following skills:

I. Word Analysis

II. Vocabulary/Decoding

III. Comprehension

IV. Language Mechanics/Expression

V. Locating, Organizing and Remembering
   (Study Skills)

The test has a total of 100 items.

The District's Skills Inventory Test was developed by teachers and supervisors working in the district. The format and skills presented followed the Comprehensive Test of Basic Skills (CTBS), Fourth Edition, 1989, MacGraw Hill design and the Reading Series by Houghton Mifflin. Content and accuracy were carefully monitored by the test developers. About twice as many items were created before final test selection. The test was tried out in the district schools. The data collected as well as teacher's input were utilized during the revision of the test. Items reflecting possible bias in language, representation of ethnic groups or subject matter were eliminated.

The main objective in developing this test was for diagnostic purpose only. It is a pre- and post-assessment tool. As a curriculum-referenced test, its content is grouped into clusters of items found in the curriculum such as:

I. Word Analysis

II. Vocabulary/Decoding

III. Comprehension
IV. Language Mechanics/Expression

V. Locating, Organizing and Remembering
   (Study Skills)

The test developers also provided a Teacher's Guide that presents essential information about test content as well as directions to be followed at the time of administering the test. A conversion table is also included in order to convert the raw scores into percentages.

The content validity of this test is considered to be high because the items included represent the subject matter it was intended to cover. This can be checked by comparing the content descriptions and the test items to the Quarterly Topic Plans (QTP). The QTP are the corresponding skills to be covered during each marking period as established by the Board of Education. It also represents the content and skills present in the Reading Series being used (Houghton Mifflin).

The test discriminative validity allows for grouping of students mastering and those non-mastering the skills presented. This test measures reading achievement demonstrating its face validity. It also contains the appropriate stimulus material related to the variable being assessed (reading achievement).

The District Kindergarten Checklist Test was developed by teachers and supervisors in the school district. They followed the skills taught in the Kindergarten curriculum. The purpose of this test is to assist teachers in identifying the individual needs of their students and to identify those students eligible for the Basic Skills Improvement Program (BSIP). At the end of the school year it is used to assess the students' growth.
Procedure

The Kindergarten Checklist Test was administered at the end of the 1992-93 school year by the bilingual classroom teacher. The teacher followed the Teacher’s Manual which provided the instructions and examples. Each student received a test booklet in which they made an “x” to mark their responses. The examples were demonstrated on the chalkboard to the whole group. The Instructional Assistant monitored the students in order to corroborate that they were answering correct items. The test was administered during two sessions of 45 minutes. The students took a five-minute break after 20 minutes of testing.

At the end of the testing period the teacher marked each test following the Answer Key. This provides objectivity in the marking process. Raw scores obtained were then transformed into percentages. These scores were reported to the Bilingual Department who allowed its use for the purpose of this study.

The Kindergarten students who remained in the Bilingual Program for the following school year (first grade 1993-94) were followed up. For this study only those students who remained in the same school were utilized.

The first grade teacher administered the District Skills Inventory Test in June 1994. The test administration lasted three consecutive days. Each session lasted 45 minutes and corresponded to the three major areas: Vocabulary, Reading Comprehension and Study Skills.

The teacher followed the Teacher’s Manual for directions and examples which she demonstrated on the chalkboard. The teacher read the instructions to the students.
Students were provided with test booklets in which they recorded answers by filling the circle under their particular choice.

At the end of the three-day testing period, the teacher marked the tests using the Answering Key provided in the Teacher's Manual. The raw scores that were obtained were transformed into percentages using the conversion table included in the Teacher's Manual as well. These scores were then reported to the Bilingual Department and were collected for the purpose of this study.

Students' names were not utilized in order to keep confidentiality. Numbers were used instead.

Analysis

A statistical analysis was performed on these data using a correlational study: Spearman's rho. Chapter IV will present this information in detail.
CHAPTER FOUR

It was hypothesized that bilingual students with high scores in their Reading Readiness Test would also have high scores in their Reading Achievement Test. This chapter will discuss the technique used for analyzing the data and the findings as they relate to the hypothesis.

Analysis of data

A Spearman's correlation coefficient for ranked data or Spearman's rho was used to measure and describe the relationship between Reading Readiness Test scores and Reading Achievement Test scores.

The data presented in Table 4.1 shows the Mean, Median, and Standard Deviation for the Reading Readiness Test and the Reading Achievement Test scores, respectively.

The mean score for the Reading Readiness Test was 40.49; the median score was 42.00; and the standard deviation was 11.28.

The mean score for the Reading Achievement Test was 70.54; the median score was 71.00; and the standard deviation was 17.34. (See Table 4.1.)
TABLE 4.1

Analysis of Data

<table>
<thead>
<tr>
<th></th>
<th>Reading Readiness Test</th>
<th>Reading Achievement Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>40.29</td>
<td>70.54</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>42.00</td>
<td>71.00</td>
</tr>
<tr>
<td><strong>Std. Dev.</strong></td>
<td>11.28</td>
<td>17.34</td>
</tr>
</tbody>
</table>

The analysis of the data using a Spearman's correlation coefficient revealed that there was a very strong relationship between Reading Readiness Test scores and Reading Achievement Test scores. The correlation coefficient of Reading Readiness Test scores and Reading Achievement Test scores was calculated to be 0.971. The correlation coefficient is represented by “r”, where “r” is equal to 0.971. If “r” is greater or equal to 0.9 but less than 0.99, there is said to be a very high correlation. In this case, there is a very strong positive correlation because the correlation coefficient “r” is greater than 0.9 but less than 0.99.

Figures 4.1 and 4.2 present a comparison of Reading Readiness and Reading Achievement Test scores of each subject in the study. Students' Reading Achievement Test scores increased significantly. Figure 4.3 depicts the mean scores for the Reading Readiness and Reading Achievement Tests.

The analysis indicates that there was a very strong positive correlation between Reading Readiness Test scores and Reading Achievement Test scores. The data did support the hypothesis, thus the hypothesis was accepted.
Comparison of Test Scores

![Bar Chart]

Figure 4.1
Comparison of Test Scores

![Graph showing comparison of test scores between Reading Readiness Test and Reading Achievement Test for subjects 1 to 35. The graph displays individual scores ranging from 0 to 100.](image-url)
Comparison of Mean Scores

![Graph showing comparison of mean scores for Reading Readiness Test and Reading Achievement Test.](image)

Figure 4.3
CHAPTER FIVE

Summary

The purpose of this study was to determine the relationship between the Reading Readiness and the Reading Achievement Test scores, and to add to the existing evidence of this relationship.

A post-facto study using test scores of 35 Limited English Proficient students in a low socio-economic urban school district was conducted. Data from the Reading Readiness Test at the end of Kindergarten and from the Reading Achievement Test at the end of first grade were gathered. A Spearman's correlation coefficient for ranked data was used to measure and describe the relationship between the Reading Readiness and the Reading Achievement Test scores.

The analysis of the results indicated that there was a very strong positive correlation between reading readiness and reading achievement test scores.

Discussion

The findings of this study indicate that those readiness skills previously learned in Kindergarten serve and are carried on as background knowledge for the acquisition of further reading knowledge, assisting the student to perform and achieve at a higher level. These findings show a very strong correlation between readiness and achievement. The strength of the relationship supports the notion that students who score high on readiness will also score high in reading achievement measures.
Student's reading achievement is considered to depend on how much they know about reading prior to entering formal instruction. The experiences the child has had are the key to their reading accomplishments. All children need to be provided with opportunities that expose them to a wide range of experiences which enhance and develop them socially, cognitively, and linguistically.

Given the relationship between readiness and achievement, reading readiness programs should be available to all children who are beginning to read. Such reading readiness programs should emphasize topics that are of interest to the students thus developing an interest in reading and thereby achieving reading skills. Children should perceive reasons for learning to read and develop positive attitudes toward reading through numerous and diverse activities.

We must recognize that readiness is a continuous and cumulative process that is associated with students' development and academic achievement.

Conclusions

Based on the results of this study, I concluded that Limited English students who have had experienced reading readiness in Kindergarten in a bilingual classroom setting prior to entering first grade demonstrated higher reading achievement at the end of first grade.

The priority of early education should be to provide children with programs that foster their cognitive development and promote their social, emotional and physical development as well. It should not be used solely to remedy any disadvantages in the children's background. The experiences obtained through these readiness programs
provide the children with background knowledge and skills that will promote reading achievement in first grade. Reading readiness experiences provide the fertile ground in which the seeds for further knowledge will have the opportunity to sprout and grow!

I believe that this study will assist in the understanding of the relationship between Kindergarten reading readiness education and reading achievement of Limited English Proficient students.

Implications and Recommendations

As a result of this study several implications come to mind. One implication is that LEP students who receive readiness skills prior to entering formal schooling (first grade) demonstrate higher reading achievement at the end of first grade. A second implication is that school districts with Limited English Proficient student population should insure that these children are provided with preschool and Kindergarten experiences prior to entering first grade.

Children with no readiness experience (Kindergarten), but who meet the criteria of 6.0 years in order to enter first grade, should be allowed to enter Kindergarten instead. The Kindergarten experience will provide these children with the opportunity to develop readiness and social skills which are crucial in first grade thus ensuring a smoother transition to the educational system.

Researchers interested in the study of reading readiness and reading achievement should focus on other possible relationships between the language used for instruction and test scores. Limited English Proficient students receive instruction in their dominant language: mother tongue or English.
Another topic for research would be the study of students who received reading readiness in Kindergarten and those who entered first grade with no prior schooling experience. Further research may also want to investigate the effect of mobility and its relationship with reading achievement using a Limited English Proficient population. Another important area of research is the optimal age and methodology of second language instruction. Research is needed in the areas of language acquisition and reading achievement of Limited English Proficient students.

It would be interesting and challenging to apply this study to a larger population and to determine which specific readiness skills, if any, account for variance in reading achievement. A longitudinal study on students who received readiness and a comparison with those students dropping out of school or graduating from high school and/or continuing further education could add to the knowledge of the relationship between readiness and achievement.

There is an unlimited amount of research to be conducted in the field of Limited English Proficient students, reading achievement, and school success especially since our society is ethnically diverse.
Bibliography


Camden Board of Education (1988). *Bilingual/Bicultural Education Handbook*. Division of Curriculum and Instruction, Camden City Public Schools, Camden, N.J.


Dr. Roy Dawson
Camden Board of Education
201 Front and Cooper St.
Camden, NJ 08102

Dear Dr. Dawson:

I am a certified Bilingual teacher at Cooper's Poynt School. At the present time I am completing the requirements toward a Masters Degree in School Psychology at Rowan College. My thesis will be based on a study of my own students tests scores (Kindergarten Checklist Post test and District Inventory first grade post test 1994). I request permission to access students' records for this information and to make reference to the School and District as necessary.

It is my intention to share my findings with the Bilingual Department.

Enclosed please find an outline of my proposal for your consideration.

Thanking you in advance,

Sincerely,

Josephine A. Morales
December 14, 1994

Ms. Josephine Morales
Bilingual Teacher
Cooper's Poynt School
Camden, NJ 08102

Dear Ms. Morales:

It is a pleasure to notify you that at the meeting of the Board of Education held on November 21, 1994, your request to conduct a research study on "Analyzing Data from Kindergarten Checklist Post-tests (1993) and District Inventory 1st Grade Post-tests (1994)" was approved.

Sincerely,

Roy J. Dawson, Jr., Ed.D.
Superintendent of Schools

RJD:md