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Social Interaction and Reading Achievement Among Children in Poverty

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SOCIAL INTERACTION AND READING ACHEIVEMENT AMONG CHILDREN IN
POVERTY

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

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

By
Kendra M. Boykin
August, 2004

ABSTRACT

SOCIAL INTERACTION AND READING ACHIEVEMENT AMONG CHILDREN IN POVERTY

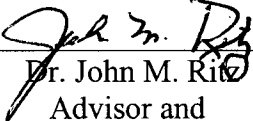
This study examined the reading achievement of second grade students at a Title I school in regards to participation in social interactions after the school day. The participants were divided into two groups, those that have high social interaction after school and those that have low interaction. The two groups of students were compared to determine if any differences existed in reading achievement.

There are several limitations in this study. The test used did not extensively measure reading skills. The PALS tests and teacher perception of retelling skills were the only measures used to assess reading achievement. The majority of the participants were from low socioeconomic households. In addition, the participants were not randomly selected. Only the PALS test scores of second grade students at one Title I school were examined.

Six separate *t*-tests were used to analyze the means of the samples to determine if there was a significant difference in reading achievement between the groups of participants. The *t*-tests compared the reading achievement variables of reading comprehension, fluency, oral reading accuracy, retelling, phonological awareness, and oral passage level read. The results indicated that there were no significant differences in the reading abilities of the students that participated in after-school activities and those that did not. Conclusions, as well as recommendations for future research studies, will be discussed as a result of the conducted research.

APPROVAL PAGE

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

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8-1-04
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I would like to thank those that made my research possible. I appreciate the support from my principal, school division, students and parents.

Kendra Boykin

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CHAPTER I

INTRODUCTION

Reading is a very important skill that makes success in school possible. Unfortunately, it is estimated that 30% of children in the United States have difficulties reading (Espinosa, 2002). Many internal and external factors have an influence on reading ability. Socioeconomic status and home environment were found to affect reading abilities (Molfese, Modglin, & Molfese, 2003). Children from a low socioeconomic status are more likely to have difficulties acquiring basic literacy skills (Gleason, 2001).

Studies have discovered that a link exists between poverty and reading achievement (Adley & Fisher, 2001). Many students from poverty do not come to school ready to learn or to be successful in reading. They lack important literacy foundations. Students who live in poverty score lower on assessments of reading achievement than children who have never been poor (Moor, Gleni, & Driscolli, 2002). Educators are constantly looking for ways to increase the reading achievement among these students.

Studies have been conducted to measure the achievement gap between various ethnic groups and socioeconomic status. The statistics on the reading scores between white and black students and students of poverty are alarming. The National Assessment of Education Progress (NAEP) examined the reading scores of 12th, 8th, and 4th grade students. The following statements were taken from the results of the fourth grade students from 2002. According to the NAEP, 80% of white students and 47% of black students are reading at a basic level or above. Of white students, 20% are reading below a basic level compared to 53% of black children. This study also examined the reading

scores of children in poverty. Fifty-three percent of students on free or reduced lunch are reading at a basic level, compared to 80% of students not on free or reduced lunch. Forty-seven percent of those students are reading below a basic level compared to 20% who are not eligible for free or reduced lunch. There is a large reading achievement gap between these groups (National Center for Education Statistics, 2003).

The United States Department of Education has implemented the No Child Left Behind Act, which has a focus to close the achievement gap between black children and other races. The achievement rate of children in poverty is to also increase each year. Only 12% of black children are reading at the proficient level and 40% of white students are reading at that level. By 2014, 100% of all students are expected to be reading on grade level (U.S. Department of Education, 2003).

The development of language is very rapid during the school years. Children need experiences that will help them become fluent and competent readers. They need opportunities that will help develop oral language skills and phonological awareness (Espinosa, 2002). Children who know about topics in different areas learn new words easier than children who know very little about the world. Semantic knowledge is increased when learning new words. This increase may make it easier for children to read (Gleason, 2001).

STATEMENT OF THE PROBLEM

The purpose of this study was to determine if there was a significant difference in the reading achievement of children in a Title I school between children with high social interaction and those with low social interaction after school.

RESEARCH GOALS

The goals of this study were to answer the following questions:

- a. Do children who interact with peers in organizational or free play score higher on comprehension tests?
- b. Does interacting with groups of children increase oral fluency?
- c. Does peer interaction have an impact on phonological awareness?
- d. Does the oral passage level read of children who participate in high social interaction differ from students with low social interaction?
- e. Is oral reading accuracy affected by social interaction?
- f. Does the interaction with other children after school help develop retelling skills?

BACKGROUND AND SIGNIFICANCE

Many students that live in poverty have limited experiences outside of school. The only time these children have to socialize with others their age is in school, and even that time is limited. Research has indicated that social interactions are important to the development of language and literacy (Espinosa, 2002).

Working at a school where the majority of the students live in poverty has revealed how deprived these children are in many areas. The majority of the students at the school are on free or reduced lunch. Most of the households are single parent, headed by the mother.

The researcher began to notice that many of the second graders at this Title I school had limited experiences with after school activities. Very few are involved in extracurricular activities such as sports, cheerleading, and Boy or Girl Scouts. The researcher has also noticed that many do not even play with the neighbors their age. Many students are not allowed to play outside for various safety reasons. Parents have to worry about kidnappings, assaults on children, and violence. Research has pointed out that there has been a decline in social play because of those reasons. Parents have explained that they do not like for their children to play outside with others. Unfortunately, the children did not have a sibling in their household close to their age. They spent a lot of time playing alone, interacting with the computer, or watching television (Mindness, 2001).

Research on examining the socialization of children found in extracurricular activities and the effects on elementary reading achievement has been scarce. Previous research has focused on the impact socialization has on overall achievement. Many studies have focused on students in preschool, middle school, and high school. The research has shown that there is a link between social activities and academic achievement. Consistent participation in extracurricular activities was found to have a positive impact on academic success (Mahoney, Cairns, & Farmer, 2003). Cooper, Valentine and Nye (1999) found that teenagers benefited from participating in extracurricular activities. The activities had a positive impact with no regards to lunch status or ethnicity.

Social interaction is very important for developing early language and literacy skills (Espinosa, 2002). Coplan, Watchman, and Lagace-Seguine (2001) discovered that

play behaviors in preschool had an influence on education. The researchers assessed the children in vocabulary and academic achievement. The academic achievement of children who frequently played alone was less than that of their peers who participated in social play.

Play is very important in developing social and linguistic competences (Farran & Son-Yarbrough, 2001). Pretend play allows children to develop imagination. Imagination helps verbal development because children are using language. They discover new words to use as they participate in their pretend play. Children who played in imaginative ways were found to have a larger vocabulary than those who did not play imaginatively (Kalb, 2003).

The amount of playtime that schools allow for children has decreased over the past years. Many preschool programs no longer stress physical and social activities. The focus is now on academics. This is implemented because it is believed that emphasizing academics at a younger age will lead to better academic achievement in later grades (Mindless, 2001).

Children who live in low socioeconomic areas were found to participate in play that did not have a positive effect on education. They did not participate in the amount of social pretend play as seen in children from other socioeconomic groups. These children were found to parallel play. They play beside their peer, but do not interact with that child. The amount of verbal interaction, language, and social pretend play did not increase as time in those classes progressed (Farran & Son-Yarbrough, 2001).

Children need a lot of time to play creatively and socially interact with one another in positive ways. If household circumstances do not support the important oral and literacy development, then children need an outlet outside of the house.

Improving academic scores, especially in the area of reading, has been a major concern at many schools in the United States. It is important that educators identify factors that may help students in poverty increase their reading achievement. After-school extracurricular activities that emphasize socialization may be an important factor in increasing reading achievement.

LIMITATIONS

The focus of this study was to examine the relationship between reading scores and social interactions of students at a Title I school. The majority of the students were from low socioeconomic households and participated in the free or reduced lunch programs. Only the scores of second grade students at one school were examined. In addition, the participants were not randomly selected.

The scores from the spring PALS test and teacher perception were the only measure used to determine reading achievement. Actual reading achievement may differ from the results of the PALS test. This test did not extensively measure reading comprehension, vocabulary, word knowledge, or phonemic awareness. Because resources were not available to make observations of children in various after-school activities, a survey was constructed to obtain information about time spent in social interactions. Participants may have given answers that they considered to be socially acceptable. The number of participants used may limit the generalization of the study. Only one school

and grade level were examined, which may further limit the ability to generalize the study.

ASSUMPTIONS

The researcher was unable to be present in all classrooms during the administration of the PALS test. Teachers were trained at the beginning of the year on how to properly give the test to students. It was necessary to assume that all teachers administered the PALS test as stated in the teacher's manual.

PROCEDURE

Information from the PALS test will be gathered. Students will read a passage aloud, based upon the number and level of words read correctly. While students are reading, the teacher will rate oral fluency level. Oral reading fluency is rated with the PALS fluency rating guide. Students' oral reading is scored on a three-point scale according to their phrasing and expression. Oral reading accuracy will then be calculated by counting the number of words read correctly divided by the total number of words in the passage. Reading comprehension is assessed in PALS following the oral reading. After reading a passage out loud, students will answer a set of comprehension questions about that passage. The comprehension questions are in a multiple-choice format. To assess phonological awareness, students' scores on sense of spelling and word recognition will be added together to create a summed score. This summed score is compared against grade-level expectations. Finally, teachers will then be asked to rate their students' retelling skills.

The After School Time Survey is an instrument developed to measure the amount of time a student spends interacting with other children. Survey questions will ask the participants to indicate whether they are involved in football, cheerleading, scouts, or other structured after-school activities. The survey will ask the participants to respond to questions that assess time spent watching television, playing video games, and other activities that do not require social interaction. Students will be asked to indicate the types of games they play with their friends. The students will complete the survey in school.

After reading achievement data and survey results are collected, six *t*-tests will be used to answer the research goals. The reading achievement of students with high social interaction will be compared to the reading achievement of students with low social interaction. The *t*-tests will analyze the results obtained from the measures of fluency, reading comprehension, oral reading level, reading accuracy, retelling, and phonological awareness.

DEFINITION OF TERMS

The Phonological Awareness Literacy Screening (PALS) is an instrument used to measure phonological awareness, which includes spelling and word recognition in isolation. The instrument also includes oral reading passages and comprehension questions. Reading achievement in this study includes various factors. Those aspects are reading comprehension, fluency, oral reading accuracy, oral reading level, retelling, and phonological awareness.

OVERVIEW OF CHAPTERS

Reading achievement among students of poverty and black students is behind that of white students and students from middle class families. Many governmental agencies have noticed and examined the reading scores and noted that there is a large achievement gap. Educators have to make sure that every child succeeds.

Research has shown that social interactions are important to the development of language and literacy. Playing with friends or participating in structured after-school activities have shown to have a positive impact on the academic development of the child.

The subsequent chapters will cover the research problem extensively. Chapter II contains a literature review of topics pertinent to the research. The administration of the PALS test will be detailed in Chapter III, followed by the findings of the study in Chapter IV. The final chapter, Chapter V, will include the summary, conclusions, and recommendations.

CHAPTER II

REVIEW OF LITERATURE

The contents of this chapter will review literature that is relevant to the problem of this study. This chapter is organized into four sections: (1) the influence of oral language on literacy, (2) the effect poverty has on reading ability, (3) the activities that children participate in after school, and (4) the relationship between after-school activities and academic achievement.

THE INFLUENCE OF ORAL LANGUAGE ON LITERACY

The development of oral language is essential to becoming a competent reader. In order to be a successful reader beyond the beginning reader stage, children must have strong oral language development (Ehri, 1995). Lacking important oral language skills leads to unsuccessful literacy acquisition (Roth, Speece, & Cooper, 2002). Developing readers need the opportunity to acquire oral language skills and phonological awareness (Burns, Griffin, & Snow, 1999). Exposure to language makes phonemic awareness possible. This phonemic awareness allows beginning readers to make the association between sound and letter symbols (Burns et al., 1999; Pinnell & Fountas, 1998). Being aware of the connection between sound and letters makes literacy acquisition possible.

The more children hear and respond to speech, the better able they are to refine their language skills (Espinosa, 2002). The Reading First section of The No Child Left Behind Act of 2001 expects all children to read fluently, have enough background knowledge and vocabulary to enhance reading comprehension, be able to construct meaning from print, and develop a motivation to read (U.S Department of Education, 2003). The language skills that children develop are important for this literacy

development. Narrative ability, use of talk while participating in pretend play, and vocabulary use are all language skills that are related to reading (Dickinson, McCabe, & Sprague, 2003; Speece, Roth, Cooper, & de la Paz, 1999). Narrative ability, including retelling, is an important predictor of academic success because it shares many of the same properties with written text (Speece et al., 1999). Children must develop these skills and many other oral language skills in order to read effectively (Gipe, 2003).

Reading is a language-based skill. Having close relationships with others is an important link to language development and literacy (Espinosa, 2002). It is imperative that children acquire an array of language skills before they enter school. According to the research, language is found to have a direct influence on literacy skills. It is important that children have the necessary oral language abilities to achieve success in reading. The only way that students can strengthen their oral language skills is by participating in social interactions with adults and peers.

POVERTY AND LITERACY

Poverty has been found to have an effect on literacy in various ways (Gipe, 2002). Many studies have been conducted to determine why students in poverty are not achieving at the level of their middle class peers. This is a concern because the reading levels of students in poverty are well below those of students of other income levels.

There are approximately 14 million economically disadvantaged children in today's public schools (Proctor & Dalaker, 2003). These children come to school less prepared than their middle class peers. Children from poverty receive less support for early language and literacy development than their peers from economically advantaged homes (Dickinson, McCabe, & Sprague, 2003). Children from poverty are making gains

in basic academic skills. Nevertheless, low-income children continue to score lower on basic academic skills than higher income children (Dyson, Hett, & Blair, 2003). The reading skills of low socioeconomic groups trails the skills of high socioeconomic groups by an average of a school year (Duncan & Seymour, 2000; Dyson et al., 2003). More advanced reading skills such as comprehension and fluency are still very low in disadvantaged children. The achievement gap is getting increasingly larger (Denton & West, 2002).

Low socioeconomic status affects school achievement and many other academic behaviors. Poverty has been found to decrease IQ, verbal ability, and academic achievement of children between the ages of two and eight (Dyson et al., 2003). The effect that poverty has on reading can appear at an early age. Smith and Dixon (1995) discovered that children as young as 48 months from economically disadvantaged families had lower levels of literacy than children from middle class families.

The home environment of children has a large effect on reading achievement. One cause for the large achievement gap in reading is that poor children have fewer books, and a smaller variety of books at home than their middle class peers. There is a positive relationship between the number of books at home and reading scores. The number of different reading materials at home has decreased over the last twenty years (Campbell, Hombo, & Mazzeo, 1999). Parental education and occupation also have an effect on literacy acquisition. Bowey (1995) discovered that parental jobs are correlated to the literacy skills in their children. Preschoolers whose parents held low income blue collar or clerical jobs had a deficit in verbal working memory and letter knowledge, skills that are important to early reading achievement. Children from high socioeconomic families

scored higher on preschool vocabulary, sound identity, name knowledge, phoneme identity, and rhyme.

Phonological awareness is a necessity in early reading development and reading achievement. Many poor children who struggle in reading do not understand the connection between orthography (print) and phonology (sounds of language). Low socioeconomic status is associated with lower knowledge of letter recognition, phonemics, recognition and storage of words, and the abilities to decode words (Bowey, 1995; Duncan & Seymour, 2000).

Although children from poverty enter school with skills that are behind their middle class peers, parents and educators need to find a way for all students to enter school on the same level, or accelerate to the reading levels of their peers. Developing the underlying skills for literacy development is becoming increasingly important.

TIME SPENT AFTER SCHOOL

There is a limited amount of research that addresses the use of time among children. The research that exists focuses on the after-school behaviors of white, middle class children (Posner, Vanell, & Lowe, 1999). Many studies have examined the amount of time that children watch television, and the effects that watching television have on academic achievement.

After school time is an important part of a developing child's day. This is the only time when a child can play, socialize, play sports, and participate in enrichment activities. These activities help develop important skills that are needed in school (Posner et al., 1999). In addition, positive after school activities are a way to reduce some of the negative effects of poverty (Baker & Witt, 1996; Posner & Vandell, 1994). Knowing how

children spend their time after school can predict educational performance (Cooper, Valentine, Nye, & Lindsay, 1999).

Many middle class children have the opportunity to participate in scouts, sports, and other structured activities (Posner & Vandell, 1994). Many children from poverty do not have those opportunities. Children from low-income homes have less peer companionship. They are isolated from peers in more out of school activities than children from the middle class (Patterson, Vaden, Griesler, & Kupersmidt, 1991; Posner & Vandell, 1994). The amount of time that low-income children spend interacting with others in structured activities was found to be very low. Posner et al. (1999) found that 20% of low-income students watched television after school. Only eight percent of the students participated in extracurricular activities or coached sports.

Children spend an average of 40 hours a week playing video games, watching television, or searching on the Internet (Kalb, 2003). Television watching is associated with lower achievement. Research has found that language skills diminish when a child repeatedly watches over three hours of television daily (Larson & Verma, 1999). Students who watch less television score higher on reading tests. Donahue, Finnegan, and Lutkus (1999) found that only 18% of students who watch six hours or more of television a day are reading at a basic level. The rest of the students are reading below the basic level. Too much television watching can lead to a decrease in concentration during reading. It can also lead to slower acquisition of reading skills (Cooper et al., 1999). Watching television displaces academic and brain stimulating activities. Students watching cartoons and other non-educational programs are less likely to read and less likely to participate in educational activities such as art, music, or puzzles (Cooper et al., 1999; Gleason, 2001).

As the above literature suggests, television watching negatively impacts reading skills. Students need to participate in activities that will cause a decrease in television watching. Participating in structured activities, free play, or academic enrichment activities will all contribute to the cognitive development of the child. More literature is needed to describe the after-school behaviors of elementary age students, especially students from poverty.

AFTER SCHOOL ACTIVITIES AND ACHIEVEMENT

Most of the literature on the effects of extracurricular activities on academic achievement focuses on students in high school. Many of the studies have concentrated on participation in sports, school related after-school clubs, and non-school related activities. Few studies have focused on the race and economic differences among participation in extracurricular activities and school achievement (Speece et al., 1999).

Students from low-income areas have experiences and backgrounds different from their middle class peers. Students need to be actively involved in their environment so that they can develop the background knowledge for literacy development (Gipe, 2002). Developing background knowledge is one of the components of the No Child Left Behind Act (U.S Department of Education, 2003). This increased background knowledge will lead to an improvement in reading comprehension.

Structured programs that encourage student participation may be able to provide a positive use of free time and help improve academic performance (Baker & Witt, 1996). Participating in extracurricular activities has many benefits. It encourages peer interactions and cooperation. It builds student-adult relationships and provides structure and challenge. It may also expose children to positive peer models (Holloway, 2002).

Various studies have discovered that student participation in after-school activities has a positive effect on academic achievement (Camp, 1990; Gerber, 1996; Marsh, 1992). Achievement in reading, vocabulary, and math were found to be positively influenced by after-school activities. High school students who participate in extracurricular activities are found to have higher intellectual and social development than those who do not participate in activities (Black, 2002). A longitudinal study discovered that consistent participation in after-school activities was related to high educational success in high school (Mahoney, Cairns, & Farmer, 2002). Silliker and Quirk (1997) examined the academic achievement of student athletes during and after the soccer season. The participants had a higher grade point average during the soccer season.

Participation in after-school activities may be beneficial to students of all ages. It may be especially helpful for students in poverty. These students will have a chance to interact with classmates and develop the oral language skills that may be beneficial to literacy development.

SUMMARY

Oral language skills are essential for reading development. Students from poverty need to have social interaction with peers after the school day. The various social activities that students can participate in after-school may have a tremendous effect on their academic achievement. Participating in sports, clubs, cheerleading, scouts, or playing with friends will help with oral language development. With the implementation of the No Child Left Behind Act, it is important that all students have the opportunity to develop the skills necessary for high reading achievement.

CHAPTER III

METHODS AND PROCEDURES

This chapter describes the methods and procedures used to examine the problem statement of this descriptive research study. The population of the participants in the study will be described in detail. A description of the PALS test used to measure the literacy achievement of the participants, followed by a description of the questionnaire designed to determine social interaction are also included. Procedures for data collection and an explanation of the statistics to be used to analyze the data will be discussed in this chapter.

POPULATION

Participants were from an urban elementary school, which includes kindergarten through fifth grade. The school used in the study is an accredited elementary school. This school met all criteria set forth in the Standards of Accreditation for Virginia. The school also received Title I compensatory education funds. The majority of the participants were eligible for free or reduced-price lunch programs. Most of the students who attended this school were African-American and primarily from low socio-economic status households.

The entire population of second graders at this Title I public school was asked to participate in the research study. There were five second grade classrooms at this school, and 48 students participated in the survey.

INSTRUMENTS USED

The Phonological Awareness Literacy Screening (PALS) has been supported by a grant from the Virginia Department of Education through Virginia's Early Intervention

Reading Initiative. PALS is used by 98% of the schools in Virginia. The Spring PALS test was administered to all students in second grade in May, 2004. The classroom teacher gave the test to each child individually. The PALS measured knowledge of important literacy skills such as phonological awareness, oral passage reading, fluency, and comprehension. The benchmark score determined for the PALS test was 54. The scores on the test could range from 0 to 76. A score below 54 indicated that the student had not met the grade level criteria for passing the test. Therefore, the student had deficits in reading skills and needed additional instruction in reading. A score of 76 indicated that the student exceeded the basic literacy skills for second grade.

Fluency was measured on a scale from 1 to 3. A fluency rating of 1 indicated that word-by-word reading was evident, the reading was slow paced, and the reading lacked intonation and expression. A fluency rating of 2 indicated that the student read at a reasonable pace and some meaningful phrases were apparent. However, the reader included poor phrasing and intonation. A fluency rating of 3 indicated that the reading was fluent, included few repetitions, and had good expression and intonation.

All students were given a list of second grade words to read. Depending on how successful they were on reading the list of words, the students read another list of words. The students had the possibility of reading words from pre-primer level to fourth grade level. Students read a passage based upon the highest word list read. Next, students were given the comprehension part of the test. The comprehension scores could range from 0% correct to 100% correct. Comprehension questions were given from the passage read.

Participation in after-school activities was measured with a questionnaire developed for use in this study. The questionnaire contained seven questions. Participants

responded to the survey by selecting either yes or no on five of the questions. Two questions were in the open-form format. The first three questions measured social interaction after school; the next two questions measured lack of social interaction; the last two questions required the participants to name the activities that are played with friends, and to indicate what is done once they leave school. The questionnaire is shown in the Appendix of this research study.

METHODS OF DATA COLLECTION

All second grade students received a parental consent form to participate in the study. The form indicated that the study was concerned with the relationship between after-school activities and reading performance. The informed consent form also indicated that the student would be given a questionnaire to complete at school.

Scores from the PALS test were collected from each classroom teacher by the researcher. The researcher administered the questionnaire to each classroom of participants. The participants were instructed to circle the most applicable answer or to write an answer for the open-form questions. The second grade teachers were asked to indicate the retelling skills of their students from a scale of 1 to 3. A score of 1 indicated that the student had weak retelling skills. The main elements of the story were omitted and the story was not retold in order of events. A score of 2 suggested that the student had reasonable retelling skills. Most of the main events were included and the student told the story in order, including some beginning, middle, and end elements. A rating of 3 showed that the student knew how to retell the story in a coherent manner. All of the important story elements were included.

STATISTICAL ANALYSIS

The participants were placed in two categories. Based upon the results of the questionnaire, the students were either placed in the group that participated in after-school social activities, or the group that did not participate in after-school social activities. The goal of this research study was to discover if there was a significant difference between the two groups. Since test scores collected were interval data, six separate *t*-tests were used to answer the research questions. The means of the samples were calculated and analyzed to determine if there was a significant difference between the two sample means.

Data from the PALS comprehension were collected. The comprehension test scores were examined, using a *t*-test, to determine if there was a significant difference between the students who participated in after-school social activities and those who did not. A second *t*-test was used to determine if there was a significant difference in the oral reading fluency of the high and low social interaction groups. The third *t*-test was used to examine the overall PALS scores of the students participating in the study. The scores were analyzed to determine if there was a significant difference among the phonological skills of the two groups. Next, a fourth *t*-test was used to determine if there was a significant difference in the oral reading level of the students that participated in after school social activities and those who did not. The fifth *t*-test was conducted to find out if participation in social activities impacted on oral reading accuracy. The final *t*-test examined if social interactions had an affect on retelling skills.

SUMMARY

The purpose of this study was to determine if the literacy skills of students of poverty differ as a result of social interactions. The reading achievement of second grade students at an urban Title I school were analyzed to answer the research goals. The PALS test, a published instrument, a questionnaire developed by the researcher, and teacher input were used to collect data necessary to implement the study. Six *t*-tests were used to determine if social interactions had an influence on literacy skills. The following chapter will describe the findings as related to the research questions.

CHAPTER IV

FINDINGS

The purpose of this study was to determine if the literacy skills of students of poverty differ as a result of social interaction. The literacy skills of interest were fluency, oral passage level read, reading comprehension, retelling, phonological awareness, and reading accuracy. This chapter describes the findings of the research. First, the results of the survey will be discussed. Then the findings will be presented. The research was guided by the following six questions (a) Do children who interact with peers after school in organizational or free play score higher on comprehension tests? (b) Does interacting with groups of children increase oral fluency? (c) Does peer interaction have an impact on phonological awareness? (d) Does the oral passage level read of children who participate in high social interaction differ from children with low social interaction? (e) Is oral reading accuracy affected by social interaction? (f) Does the interaction with groups after school help develop retelling skills?

SURVERY RESULTS

Student survey responses were analyzed regarding the types of social activities engaged in after school. The majority of the respondents, 63%, indicated that they were involved in organizational activities or they played with friends three or more times a week. The most frequently listed activities played with friends were football, basketball, hide and seek, and tag. A few of the respondents played imaginative games such as school, house, and reenacted television shows and movies. Less than half, 37%, of the students indicated that social interaction with friends was uncommon. The majority of the

children with low social interaction reported spending time alone watching television and playing video games. Many of these students indicated that when they did interact with friends, the activity engaged in the most was playing video games.

Responses from the survey regarding social interaction after school are shown in Table 1. Students that participated in organizational activities and who played with friends after school three or more times a week were placed in the high social interaction group. Students that did not play with friends and rarely interacted with other children were placed in the low social interaction group.

| High Social Involvement 63% (N = 30) | | Low Social Involvement 37% (N = 18) | |
|---|---------------------|--|---------------------|
| Organizational Activities | 33% (N = 16) | Do not Play with Friends | 14% (N = 7) |
| Play with Friends | 30% (N = 14) | Rarely Play with Friends | 23% (N = 11) |
| Total | 63% (N = 30) | | 37% (N = 18) |

Means, standard deviations, and sample size for each measure of reading achievement are reported in Table 2.

| | High Peer Interaction (N = 30) | | Low Peer Interaction (N = 18) | |
|---------------|-----------------------------------|-------|----------------------------------|-------|
| | SD | M | SD | M |
| Comprehension | 84.3 | 22.04 | 89.6 | 14.99 |
| Fluency | 2.2 | .702 | 2.11 | .718 |
| PALS Score | 67.06 | 8.5 | 66.16 | 7.9 |
| Passage Level | 3.26 | .670 | 3.06 | .523 |
| Accuracy | 96.8 | 2.44 | 97.2 | 1.75 |
| Retelling | 2.17 | .819 | 2.00 | .745 |

READING COMPREHENSION

The first research question was concerned with how reading comprehension scores related to peer interaction after school. The independent samples t test comparing the reading comprehension of second grade students with high and low peer interaction after school was not statistically significant $t(46) = .8930, p > .05 = 1.681$. Students who interacted with other children after school in organizational activities or free play did score differently on reading comprehension ($M = 84.3, SD = 22.04$) than did students with low peer interaction ($M = 89.66, SD = 14.99$).

FLUENCY

The second research question was interested in the influence social interactions had on oral reading fluency. An independent samples t test compared the reading fluency of students with high social interaction in comparison to students with low interaction. Reading fluency was not statistically significant $t(46) = .417, p > .05 = 1.681$. Students that interacted socially with other children after school ($M = 2.2, SD = .702$) did not read more fluently than students who spent time alone ($M = 2.11, SD = .718$).

PHONOLOGICAL AWARENESS

The third research question focused on the influence interaction with other students in organizational or free play had on phonological skills. The PALS test scores were examined. The independent samples t test comparing the PALS scores of the students with high social interaction and low interaction was not statistically significant $t(46) = .789, p > .05 = 1.681$. Students that played and interacted with friends after school

($M = 67.06$, $SD = 8.5$) did not score higher on measures of phonological skills than those students who participated in frequent solitary play ($M = 66.16$, $SD = .793$).

ORAL PASSAGE

To address the fourth research question, an independent samples t test was conducted to compare the PALS oral passage level read of the students with high and low social interaction. The t test was not statistically significant $t(46) = 1.053$, $p > .05 = 1.681$. Students that interacted with peers three or more times a week ($M = 3.26$, $SD = .678$) did not read at a higher passage level than students who rarely interacted with friends after school ($M = 3.06$, $SD = .523$).

ORAL READING ACCURACY

The fifth research question examined the involvement social interaction had on oral reading accuracy. The t test was not significantly different $t(46) = .627$, $p > .05 = 1.681$. Students with high social interaction did not read at a more accurate level ($M = 96.8$, $SD = 2.44$) than students with low social interaction ($M = 97.22$, $SD = 1.75$).

RETELLING SKILLS

The final research question was interested in the retelling skills of students with high social interaction and low social interaction after school. The independent samples t test comparing the retelling skills of these two groups of students was not statistically significant $t(46) = .704$, $p > .05 = 1.681$. Students that frequently interacted with peers after school did not have higher retelling skills ($M = 2.17$, $SD = .819$) than students with low peer interaction ($M = 2.00$, $SD = .745$).

SUMMARY

The independent samples *t* tests used to analyze the reading achievement of the students with high and low social interaction found no significant difference between the two groups. Students that participated in after school social activities did not achieve higher in the areas of fluency, reading comprehension, retelling, oral reading level, oral reading accuracy, and phonological awareness.

The next chapter will summarize the contents of the research. Conclusions will be drawn based upon the results presented in this section. Recommendations for future research studies will also be discussed.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The first part of this chapter will include a brief description of the problem statement and research goals. Following will be the significance and limitations of the study. The population, instruments, methods of data collection, and statistical procedures will be explained. Next, answers to research goals will be presented based upon data collection. Finally, recommendations for future research will be discussed.

SUMMARY

The purpose of this study was to determine if there was a significant difference in the reading achievement between children with high social interaction and those with low social interaction after school. The goals of this study were to answer the following questions: (a) Do children who interact with peers in organizational or free play score higher on comprehension tests? (b) Does interacting with groups of children increase oral fluency? (c) Does peer interaction have an impact on phonological awareness? (d) Does the oral passage level read of children who participate in high social interaction differ from children with low social interaction? (e) Is oral reading accuracy affected by social interaction? (f) Does the interaction with groups after school help develop retelling skills?

Improving the academic achievement of impoverished students is a major concern in the United States. A large achievement gap exists between students of poverty and affluent children (National Center for Education Statistics, 2003). The research shows that there is a relationship between social activities and academic achievement.

According to previous research, consistent participation in extracurricular activities has a positive impact on academic success (Mahoney, Cairns, & Farmer, 2003).

Unfortunately, research focusing on the influence social interaction has on the reading achievement of elementary students in poverty is insufficient. Several research studies focus on social interaction in regards to the development of language and literacy in preschool students. Other research examines the influence after-school activities have on the academic success of high school students.

Readers should consider several limitations to this study when interpreting the results. First, only 63 % of second-grade students from one elementary school participated. It may be difficult to generalize the results from this study to other age groups. In addition, the PALS test and teacher perception of retelling skills were the only measures used to assess reading achievement. The test used in the study does not extensively measure reading skills. In addition, the researcher used the information provided by the second grade students on the survey to determine social interaction after school.

Participants for this study were from an accredited Title I elementary school in an urban setting. The majority of the students that attended the school were African-American. Many of the students were from low socio-economic households and participated in the free and reduced lunch program.

The instrument used to assess reading achievement was the Phonological Awareness Literacy Screening (PALS) test. The PALS test was designed to measure knowledge of important literacy skills such as phonological awareness, oral passage reading, fluency, and comprehension. Participation in after-school activities was

measured with a questionnaire developed for use in this study. The questionnaire was completed by the students and contained seven questions used to measure social interaction after school.

Each student in second grade received a parent consent form. Students that returned the signed consent form participated in the study. The researcher administered the survey to the students during the school day. The participants were instructed to circle the most applicable answer or to write answers for the open-form questions. PALS test results were collected from each teacher. The teachers were also asked to rate the retelling abilities of their students.

After analyzing the results from the survey, the participants were placed in two categories. They were either placed in the group that participated in after-school social activities, or the group that did not participate in after-school social activities. The goal of this research study was to discover if there was a significant difference between the two groups. Since test scores to be collected were interval data, six separate *t*-tests were used to answer each research question. Scores were analyzed to determine if there was a statistically significant difference between the groups in reading achievement.

CONCLUSIONS

The first purpose of this research study was to determine if interaction with peers in organizational or free play improved reading comprehension skills. According to the data from the 48 participants, students with high peer interaction and students with low peer interaction scored similar on the comprehension tests, $t(46) = 4.17, p > .05 = 1.681$. There was no significant difference in reading comprehension between the two groups.

The mean comprehension level for each group was greater than 80% correct on the tests. Both groups were found to have good comprehension skills.

The findings were inconsistent with reviewed research. Previous research studies indicated that active involvement with the environment and participation in after school activities developed background knowledge. This development was helpful in facilitating improvement in reading comprehension and overall academic achievement (Camp, 1990; Gerber, 1996; Gipe, 2002; Marsh, 1992). A possible explanation of the findings was the test used to measure reading comprehension consisted of no more than six questions. The skills required to answer the questions did not require high-level thinking. The questions asked were at the recall level. A formal assessment consisting of more reading comprehension skills at higher levels may offer a different insight on the comprehension abilities of the students. It can be concluded that peer interaction had no influence on the PALS reading comprehension score. Participating in activities with friends, or having a lack of social interaction, did not have an impact on comprehension at the recall level.

The second goal of this study was to discover if interacting with groups of children after school increased oral fluency. The fluency rates of both groups of students were similar. There was no significant difference between the fluency rates of the two groups, $t(46) = .417, p > .05 = 1.681$. The mean fluency level of both groups was approximately level 2. The means of the students in the high and low social interaction groups indicated that the text was read at a reasonable pace and some meaningful phrases were used. However, stress, pitch, and intonation were not used to convey the meaning of the text. In conclusion, social interactions did not have an influence on oral reading fluency at the second grade level. Participating in after school activities with other

students was not found to lead to fluent reading with good expression and intonation. In addition, having low social interaction was not related to slow paced, word-by word reading.

The third objective of the study examined phonological awareness in relation to social interaction. According to *t*-test analysis of the means of the samples, $t(46) = .789$, $p > .05 = 1.681$, participants in both groups spelled and read approximately the same number of words correctly. The phonological skills of the high social interaction group and the low social interaction group were not statistically different. Socialization did not have an influence on the number of second, third, or fourth grade words read correctly.

Contradictory to prior research, data from this research study concluded that peer interaction did not impinge on phonological skills. Coplan, Watchman, and Lagace-Seguine (2001) discovered that the vocabulary of children that played with others was more than children who played alone. In addition, language had a direct influence on reading skills. Participating in social interactions was found to strengthen oral language proficiency (Espinosa, 2002). However, the previous research only focused on the influence language had on vocabulary in preschool students. The findings in this study may be in contrast to prior research because children in second grade have already acquired large word knowledge. Socialization in the school setting had impacted on the learning of vocabulary. It can be concluded that talking and playing with friends after school did not improve the phonological skills of the participants in the study. Other factors influenced the phonological skills in these second grade students.

The next objective of the research study was to analyze the oral reading level of children who participated in high social interaction in comparison to the children with

low social interaction. Oral reading level was not statistically different between the groups, $t(46) = 1.053, p > .05 = 1.681$. The average passage level read of both groups was a third grade passage. In conclusion, social interaction did not have an impact on the oral reading level read.

The fifth research goal examined the oral reading accuracy of the high and low social interaction groups. The researcher wanted to find out if peer interaction had an influence on oral reading accuracy. Oral reading accuracy was similar between the two groups, $t(46) = .627, p > .05 = 1.681$. In conclusion, neither high nor low social interaction had a bearing on the oral reading accuracy of the students.

Once more, there is a difference between the current findings and preceding research. After-school activities were found to have a positive influence on high school students. The students had higher academic success than students who did not participate in after-school activities (Black, 2002; Mahoney, Cairns, & Farmer, 2002). Nevertheless, the age level of the students and the impact of schooling may have a great influence on the lack of disparity between high social interaction and low social interaction groups.

The final research question was concerned with the influence social interaction had on retelling skills. The means of the two groups denote that both the low social interaction group and the high social interaction group had similar retelling skills, $t(46) = .704, p > .05 = 1.681$. Both groups had mean retelling skills around level 2. This level indicated that the readers described some key story events, briefly mentioned the problem, and stated the major characters and setting in the story. It can be concluded that participating in activities with other students did not have an influence on retelling skills.

In closing, social interaction was not found to have an impact on reading achievement in second grade students. Parents of children in poverty do not need to worry that their child's lack of after-school activities and social interaction will have a negative affect on reading achievement. However, parents must make sure that their child's indoor activities are not inadvertently hindering literacy development.

RECOMMENDATIONS

Social interaction and elementary academic success is an area of interest that would benefit from further research studies. Future studies might investigate several factors, including the following: (a) How do the developing skills of preschoolers in poverty relate to social interaction? (b) How does social interaction after school affect the literacy skills of kindergarteners in poverty? For example, the researcher would look at the literacy skills of alphabet knowledge, consonant blends, and vowel sounds. (c) What influence does social interaction in preschool have on later reading achievement in first and second grade? (d) What types of after-school activities would students of poverty most likely see gains in reading?

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APPENDIX

The After School Time Survey

Purpose: The purpose of this survey is to find out what you do when you leave school.

Directions: Circle or write an answer for each question. Please answer truthfully.

1. Are you involved in any activities with other children? (Girl Scouts/Boy Scouts, sports, cheerleading, etc.) yes no

2. Do you play with your friends 3 or more times a week? yes no

3. Do you talk to your friends after school? yes no

4. Do you watch 3 or more television shows a day? yes no

5. Do you play video games 2 or more days after school? yes no

6. What do you do when you leave school?

7. What kind of games do you play with your friends?