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# A Survey of Out-of-School Activities of Third Grade Students with Above and Below Level Reading Achievement Scores

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A SURVEY OF OUT-OF-SCHOOL ACTIVITIES OF THIRD  
GRADE STUDENTS WITH ABOVE AND BELOW  
LEVEL READING ACHIEVEMENT SCORES

THESIS

Submitted to the Graduate Committee of the  
Department of Curriculum and Instruction  
Faculty of Education  
State University College at Brockport  
in Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science in Education

by

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## Table of Contents

	Page
List of Tables . . . . .	iv
Chapter	
I. Statement of the Problem . . . . .	1
Purpose . . . . .	1
Need for the Study . . . . .	3
Research Design . . . . .	4
Definition of Terms . . . . .	4
Summary . . . . .	5
II. Review of the Literature . . . . .	5
Introduction . . . . .	6
Home Life and Family Relationships . . . . .	
The Relationship Between Play and the Child . . . . .	10
Out-of-School Activities . . . . .	16
Summary . . . . .	21
III. Design of the Study . . . . .	22
Purpose . . . . .	22
Subjects . . . . .	22
Instruments . . . . .	23
Procedure . . . . .	24
Analysis of Data . . . . .	24
Summary . . . . .	26
IV. Results of the Study . . . . .	26
Purpose . . . . .	26
Analysis of Data . . . . .	27
Hypotheses Testing . . . . .	34
Summary . . . . .	36
V. Conclusions and Implications . . . . .	36
Purpose . . . . .	36
Conclusions . . . . .	40
Implications for Research . . . . .	41
Implications for Classroom Practice . . . . .	

Table of Contents (Continued)

	Page
References . . . . .	44
Appendix	
A. Survey of Out-of-School Activities . . . . .	51

List of Tables

Table	Page
1. Out-of-School Activities for Students with Above and Below Level Reading Scores . . . . .	28
2. Out-of-School Activities of Third Grade Boys with Above and Below Level Reading Achievement Scores . . . . .	30
3. Out-of-School Activities of Third Grade Girls with Above and Below Level Reading Achievement Scores . . . . .	32
4. Out-of-School Activities of Third Grade Boys and Girls . . . . .	33

## Abstract

This study surveyed the out-of-school activities of third grade students with above and below level reading achievement scores. Twenty-one students scoring in the first through third and seventh through ninth stanines on the reading comprehension subtest of the Stanford Achievement Test participated in the study. Each child individually completed the out-of-school activities survey, designed and administered by the researcher.

Results of the survey indicated that significant differences do exist in the out-of-school activities of the subjects. The greatest number of differences existed between the above and below level third graders, and the above and below level third grade boys. A smaller number of differences were noted between boys and girls and the above and below level girls. Specific differences in activities are described in the study.

The relationship between out-of-school activities and reading achievement must be further investigated to determine the influence of out-of-school activities on reading achievement. Also recommended for further investigation are the effects of certain variables such as age and parental background on reading achievement and out-of-school activities.

## Chapter I

### Statement of the Problem

#### Purpose

The purpose of this study was to survey and compare out-of-school activities of third grade students with above and below average reading achievement scores.

The following questions were posed:

1. Is there a significant difference in the out-of-school activities engaged in by third grade students with above and below average reading achievement scores?

2. Is there a significant difference in the out-of-school activities engaged in by third grade boys with above and below average reading achievement scores?

3. Is there a significant difference in the out-of-school activities engaged in by third grade girls with above and below average reading achievement scores?

4. Is there a significant difference in the out-of-school activities engaged in by third grade boys and girls?

#### Need for the Study

A great deal of formal and informal learning takes place away from school. A child's physical, social and intellectual development is affected, to some extent, by his life outside of school (Medrich, Roizen, Rubin & Buckley, 1982). Consequently, it is pertinent that



educators and parents alike strive to develop an awareness of children's out-of-school activities.

By the time children finish secondary school, they have spent 11,000 hours in the classroom, and 65,000 hours outside of school (Medrich, et al., 1982). The enormous amount of time spent outside of the classroom necessarily contributes to a child's in-school performance.

Many studies of school achievement have concluded that to understand why children perform differently in school, one must look beyond academics to family backgrounds and home lives of students (Medrich, et al., 1982). A landmark study surveying 570,000 students in 4,000 schools concluded that family background was much more important than school characteristics in explaining differences in achievement among students (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, & York, 1966). Another study, conducted in 1972, determined that variations in what children learn in school depend largely on variations in what they bring to school. This study further stated that "the most important determinant of educational attainment is family background" (Jencks, Smith, Acland, Bane, Cohen, Gintis, Heyns, & Michelson, 1972).

Numerous studies have been conducted to compare socioeconomic background of students to achievement (Coleman, et al., 1966, Jencks, et al., 1972; Matusek & Haskin, 1978; Weinberg, 1974) and to out-of-school activities (Cramer, 1950; Goldstein, 1967; Long & Henderson, 1973; Medrich, et al., 1982; Stendler, 1949). Few studies, however,

have explored the relationship between achievement and out-of-school activities. One such research project, conducted by Starkey and Starkey (1981), surveyed activities of third graders and found that good readers were generally more active and had a wider range of interests than did poorer readers. Implications of the study reported that connections between activities and reading must be established in order to provide ways of helping the poorer student.

It is generally accepted that knowledge brought to the printed page is every bit as important as the information derived from it. As a child learns to read, he must learn to connect material read to his world. This connection is facilitated by exposure to a wide range of experiences. Consequently, surveying a child's experiential background prior to and during the school year may lead to more appropriate and effective teaching. There is a need to determine significant elements in a child's background and to provide a strong foundation for future learning. Time spent away from school is a fundamental and invaluable resource (Thomas, 1970, in Guthrie (ed.), 1980) that needs to be considered by parents, educators, administrators and researchers.

#### Research Design

To examine questions posed in the study, twenty-one third grade students were selected primarily on the basis of performance on a standardized test of reading achievement. Local norming scores were used to determine eligibility for the study. Subjects scoring in the

first through third and seventh through ninth stanines were individually administered the researcher-designed Out-of-School Activities Survey in June, 1983.

#### Definition of Terms

Out-of-school activities - These activities include any activities engaged in by the subjects, exclusive of time spent in school and sleeping.

Reading achievement - The degree of proficiency attained by the subjects, as measured by the reading comprehension subtest of the Stanford Achievement Test, Primary Level II, Form A.

Above average readers - For the purpose of this study, above average readers will be those students who attained scores in the seventh through ninth stanines on the reading comprehension subtest of the Stanford Achievement Test.

Below average readers - For the purpose of this study, below average readers will be defined as those students who scored in the first through third stanines on the reading comprehension subtest of the Stanford Achievement Test.

#### Summary

This study attempted to survey out-of-school activities of third grade students. Participation in various activities were compared to students' achievement in reading, based on standardized test scores. Data were analyzed and conclusions and relationships sought to link academic achievement with outside activities of students.

## Chapter II

### Review of the Literature

#### Introduction

The process of reading is naturally a long and involved one. "One of the key factors of reading lies in the child and his interaction with information-providing adults" (Goodman, cited in Smith, 1973, p. 178). "The language and experience children bring with them to school provides a foundation on which to build reading instruction" (Hall, 1976, p. 7).

The present study investigated the out-of-school experiences children bring with them to school, and their relationship to reading achievement. What a reader already knows influences what he will learn (Anderson, Pichert, & Shirey, 1979). The reader's experiences help to provide him with a schema for comprehending information. Consequently, "an understanding of pupils' backgrounds and prior experiences allows a teacher to keep classroom performance in perspective" (Hittleman, 1978, p. 110). By developing an awareness of students' backgrounds the educator can provide for more meaningful and expansive learning experiences.

An investigation of students' backgrounds can be a vast one. Many areas significantly contribute to a student's performance in and out of class. The following sections will explore areas contributing to a child's out-of-school activities. First, research relating to

home and family life will be summarized. A review of the literature surrounding the importance of child's play will follow. Finally, studies relating directly to children's out-of-school activities will be examined.

### Home Life and Family Relationships

The home life of a student will naturally affect the out-of-school activities and in-school behaviors of many students. This section will explore home and familial factors and their relationships to students' academic ability and achievement.

A study conducted by Robinson (1946) investigated factors contributing to the reading difficulties of thirty disabled students. A team of specialists each examined the students, then shared their findings. The study reported that maladjusted homes or poor inter-family relationships were found to be contributory causes of reading disabilities in 54.5% of the cases studied.

Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, and York (1966) investigated the importance of home and educational factors on 570,000 students in 4,000 American schools. The study concluded that differences in school facilities and curriculum were so little related to achievement differences that their effects failed to appear in a large study. It was decided by the researchers that family background was much more important than school characteristics in explaining differences in achievement among children. Thus further investigation into the effect of home lives on students is warranted.

The influence of socioeconomic status (SES) on children has often been explored. A review of the literature, conducted by Handon (1975), revealed significant positive correlations ranging from .30 to .70 between a child's social class status and specific behaviors indicative of intelligence.

A survey of 360 boys aged eight to nine-and-a-half years of age revealed a difference of 28.8 IQ points on the Wechsler Intelligence Scale for Children between children in the highest and lowest social classes. A difference of 26.7 points was noted between the groups on the Peabody Picture Vocabulary Test (Weinberg, Dietz, Penick, & McAlister, 1974). The study also identified a correlation (.538) between reading and socioeconomic status. A doctoral dissertation by Gamble (1981) further noted a positive relationship between reading comprehension and the income and education of the parents.

Jencks, Smith, Acland, Bane, Dohen, Gintis, Heyns, & Michelson (1972) found a correlation of .35 linking SES with children's test scores. The greatest correlations were those dealing with verbal and general knowledge scores. SES was found to be less related to reading and math scores.

A study of 110 upper-middle class families revealed that the subjects had higher IQ scores as compared to the general population (Hanson, 1975). A survey conducted to study the family backgrounds of the gifted found that the majority of the 456 gifted subjects came from the upper-middle class (Barbe, 1956).

The relationship of socioeconomic variables to second and fifth graders' achievement was explored by Matusek and Haskin (1978). It was

concluded that the most consistent indicators of low achievement were parent income, education and job status.

In retrospect, it has also been noted that the correlation between intelligence, motivation and achievement with indexes of parent stimulation of students in the home are higher than SES indexes (Iverson & Walbert, 1979). The remaining portion of this section will deal with home variables other than socioeconomic status, as they relate to the child and academic ability and achievement.

A number of home variables often contribute to the mental development and capabilities of the child. Studies by Coleman et al. (1966) and Jencks et al. (1972) both concluded that a student's family life has a strong influence on school performance. Gordon (1974), cited in Farrell, 1978) maintained that interactions between parent and child, such as trips to the store and the zoo, were most important in aiding a child's mental growth.

Campbell (1951, cited in Ware & Garber, 1972) studied the home environment of English secondary school students. Results indicated that home variables such as access to music, availability of hobbies, books and magazines, and visits to cultural events all predicted success in the school. An analysis of children's home environments by Ware and Garber (1972) revealed that the availability of learning materials in the home was the most important variable for predicting school success. Parents' expectations for the child's schooling, awareness of child development, rewards for intellectual attainment and press for reading and language development were also considered to be of importance (Ware & Garber, 1972).

A similar study measured home variables before school started and correlated them with reading achievement at three grade levels (Shea & Hanes, 1977). It was concluded that the parents' expectations for schooling, awareness of child development, rewards for achievement, provisions for outside learning opportunities, press for reading and language development, and trust in the schools accounted for a significant portion of variance in reading achievement.

Parent-child interactions may also affect a child's intellectual development and academic achievement. A study of children aged one to three years revealed that parents of high-level intellectually capable children spent twice as much time involved in intellectually valuable activities with their children than did parents of average children. Parents of high-level intellectually capable children also were found to spend more time actively participating with and encouraging their children's experiences (Watts, Halfar, & Chan, 1974).

The amount of time spent by parents with children is not the most important aspect of a parent-child relationship. A survey of parents' time conducted by Benson, Medrich and Buckley (1976, in Guthrie (ed.), 1980) concluded that everyday activities such as eating, working and watching television together showed no relationship to achievement. Attending cultural activities and church, encouraging hobbies, playing games and reading together were, however, significantly associated with school achievement. Participation in such activities were found to be especially significant in the achievement of children with low socioeconomic status.



Finally, a compilation of surveys (Muth, 1973) further demonstrated the concept that the home and continuity plays a more influential role than the schools in students' achievement. Parental and cultural influences account for most differences in reading achievement at all levels. Parents and homes are of paramount importance in providing experiences and developing attitudes and behaviors that will be taken to school by each student.

#### The Relationship Between Play and the Child

Before one can examine children's out-of-school activities, one must recognize the importance of play in a child's life. Play is a vital aspect of a child's life. It is a means by which a child comes to terms with his world and the people in it. "Through play the child learns to manipulate objects, master body control and social relationships, and deal with psychological problems" (Bettelheim, cited in Strom, 1981, p. 104). Play evokes thought, language and activity. It permits children to deal with intellectual processes, and helps to develop thought processes and cognitive comprehension (Weininger, 1978). Through play, a child formulates a personal schema to be referred to throughout life (Isaacs, cited in Weininger, 1978).

Research on play has included studies of play characteristics, developmental stages of play and, more recently, the contributions of play to cognitive development (Tyler, 1976, p. 98). These areas will be further explored in this section.

### Characteristics of Play

Play can be characterized by many factors. John Dewey believed that play: a) takes the form of physical or mental action, b) is a serious, continuous activity, c) is the basis for work, d) is deeply absorptive, and e) demands intelligent, consciously determined actions to satisfy the individual (Dewey, cited in Shivers, 1981). Furthermore, Dewey maintained that the spontaneity of play was not equal to spur-of-the-moment activity, and that play without a purpose is merely physical activity.

In recent years play has been considered to be an activity, unlimited in form, which is determined by the participant and provides satisfaction to him (Sapora & Mitchell, 1961). Play is also characterized by freedom of choice, absence of imposed standards and voluntary choice of rules. It may be structured or spontaneous (Tyler, 1976).

### Developmental Stages of Play

Numerous studies have been conducted to observe and categorize play in terms of developmental stages. Generally, development is broken down into roughly three to five stages. Each stage is also further divided, especially during the first three years of life.

Lefrancois (1980) described play in three stages based on Piaget's classification of games. The first stage, sensorimotor play, involves manipulation of objects and performing activities simply for sensation. Infants engage in this stage most frequently, as they wave their hands, creep, and walk. The second stage, imaginative play, occurs most frequently in pre-schoolers. This level includes make-believe games,

daydreaming, and relating to an imaginary playmate. The third level of development, social play, is most evident in school age children. This type of play involves two or more children and often takes the form of games with defined rules.

Sapora and Mitchell (1961) maintained that life may be divided into play periods. Birth to six years, or early childhood, evidences rapid change. During this time the child progresses from seeking the attention of others, to running errands, to ritualism. By four years of age the child desires social interaction with some group activity.

Sapora and Mitchell's second play period, later childhood, includes two stages. At the primary level, ages six to eight, children gain skills for physical activity. At this age children seek to test themselves. Imitation is still obvious when playing. At the intermediate level, ages nine through twelve, children seldom play alone. This age group seeks team games. The last play period, early adolescence, from twelve to fifteen years, shows little change in play behavior, though interests change to suit adulthood (Sapora & Mitchell, 1961).

Brian Sutton-Smith (cited in Strom, 1981) organized play development into four categories. The first, imitative play, progresses from the child imitating the parent and daily activities to finally imitating other people as a whole. Exploratory play develops at the same time as imitative play (birth to five years). By age three, the child becomes aware of play and begins to playfully explore speech as well as objects. The third stage, testing play, begins with large motor testing in the early years. Testing games, in which one player takes the role of "It" usually arise by the age of five. This play evolves into testing team

ability by the age of ten. The final category of play, model building, consists of organizing tea parties and truck stops. This type of play is most evident at four years of age.

Stages of play were also summarized by Naumberg (1978). Babyhood play consists of repetitive sensory, motor experimental, and imitative types of play. From three to six years of age children partake in imaginary, imitative and dramatic play modeled after family conditions, relationships and animals. Children at this stage often test their large motor skills.

A transition of play styles is seen from ages six to twelve. Imaginative play loses its appeal as team sports and competition become popular. Children at this age realize the importance of friends, and become interested in having collections and pets. After the age of twelve, the greatest interests lie in organized athletic games, and other types of play become less prevalent.

Some researchers have focused their attention to the socialization aspects of developmental play. Weininger (1978) maintains that children progress from solitary play to spectator play to parallel play in which an individual partakes in solitary activities in the presence of others. By age four, some interaction arises in the associative play stage. Finally, at school age, children begin to take roles and play together, although early attempts to do so often fail.

Sullivan (1953) described play socialization stages as including:

- 1) adult-oriented play, in which the child imitates or is directed by an adult;
- 2) informal-individual play, where social contact and rules are not essential;
- 3) informal-social play, which requires contact

with others; 4) individual-competitive play with formal rules; and 5) competitive-cooperative play, which is equivalent to team games. Seagoe (1962) conducted a variety of studies dealing with play socialization levels and found them to be developmental in nature across cultures. Seagoe (1970) also found that play with adults was negligible after age five, and that competitive play increased steadily from ages five to eight.

#### Play, Cognition and Academic Achievement

Play is the child's means of living and of understanding life (Isaacs, cited in Weininger, 1978). "Because everything the child does is play, then play must be important for almost every aspect of the child's development" (Lefrancois, 1980, p. 324). Scarfe (1962) further described play as the "most complete of all educational processes, for it influences intellect, emotions, and the body of the child" (p. 120). The relationship between play and learning appears to be a strong one.

Through play a child acquires intellectual interests and becomes more social. Actual experience is considered to be the basis for abstract thought (Sapora & Mitchell, 1961). Considering the developmental nature of play and the child, it has been suggested that motor play and sensory play should precede intellectual play, which should then precede intellectual work.

Consequently, one may infer that educators should become more aware of children's play development and its contributions to learning. Play permits direct learning and exploring, experience with thoughts, and an understanding of causality (Weininger, 1978). Play is also

valuable in language development and integration of experiences. A child's learning of integrative and comprehension skills are reduced when children can't play (Weininger, 1978). Perceptual, language, and social delays can, in fact, be remediated when properly sequenced play activities are presented (Stein & Sessions, 1973). Play's role in childhood education depends on teachers' understandings of play as a major influence in learning.

Several studies have investigated the relationship of play to learning, education, and academic achievement. Singer (1973) found that children with imaginary friends watched TV less, were less aggressive, were less bored, smiled more and were more advanced in language development. Children less prone to make-believe play appeared to be at a disadvantage in school achievement, especially areas requiring verbal skills.

Play activities tend to vary according to achievement level and socioeconomic level. A study observing deprived children concluded that these children did not know how to play (Pavenstedt, 1967). A study of play in three American subcultures recognized that gifted children had attained consistently higher play socialization levels than average children (Seagoe, 1971). Boys with learning disorders were significantly lower in play socialization, but only at age eight.

A study conducted by Pellegrini (1980) examined the relationship between play, sex, socioeconomic status and kindergartners' achievement on the Metropolitan Readiness Test. Intercorrelations between play and achievement proved to be highly significant at the .001 level, with reading readiness and play being the strongest correlates at .75.

Play proved to be the only significant predictor variable in this study. Results of this study imply that "skills used in higher modes of play were required in reading and writing" (Pellegrini, 1980, p. 535).

Wolfgang (1974) explored the relationship between cognitive areas of reading and selected developmental aspects of play of first graders. He discovered that Developmentally Advanced Readers (DAR's) attained high levels of symbolic and dramatic play, but were able to sustain play for significantly less time than Developmentally Delayed Readers. Wolfgang concluded that DAR's were skilled at symbolic play and were ready to move beyond to higher levels of play.

In summary, "play is the most natural way for a child to use his capacities, to grow and learn new skills" (Caplan & Caplan, 1973, p. 239). As children mature, play often evolves into more organized, and less leisurely out-of-school activities. Nevertheless, the variety of activities which fill the child's after school hours contribute greatly to his formal and informal learning activities.

#### Out-of-School Activities

The out-of-school activities of children provide the experiences upon which learning becomes meaningful. Several researchers have investigated leisure patterns of children in terms of socioeconomic status. Stendler (1949) surveyed and compared children of various ages and social classes. At the first grade level, upper-middle class children were found to play in or around a playhouse, sandbox and swingset in their backyards. The children attended Sunday school and story hour at the library frequently, but rarely went to movies. The

white-collar children usually played near a swingset and attended movies often. Many of the girls in this group had started dancing or swimming lessons. The first graders from the working class played in the neighborhood and went to the movies with parents. Neither boys nor girls attended story hour.

At the fourth grade level, upper-middle class children were often involved in scouting and self-organized clubs. They often took music, riding and religious lessons. This group had a tendency to bicycle and collect things often. The white-collar fourth grader also belonged to scouts and took dancing or piano lessons, but had fewer collections or hobbies than the upper-middle class. The working class child spent less time in organized activities than the other two groups and spent more time performing chores and babysitting.

Upper-middle class sixth and eighth graders of the study continued to be actively involved in out-of-school activities. While they did have jobs at home, none worked for pay. The white-collar student in this age group belonged to organizations, but also had paying jobs. Working class children sometimes joined the YMCA, but did not take any lessons. The author of the study concluded that children from lower class backgrounds had more freedom and spent more time in unsupervised play. Upper and middle class children were more likely to have their free time supervised by their parents.

Cramer (1950) conducted a study which surveyed the activities of 68 upper-class children, aged six through fourteen. It was found that 85% of the subjects took dancing lessons, 53% took music lessons, and 47% belonged to some sort of organized activity. All of the children



were active in after-school sports. Although this study did not directly compare leisure of different socioeconomic groups, it is evident that the upper-class children lead active out-of-school lives.

In contrast to Cramer's study, Berger (1960, in Goldstein (ed.), 1967) surveyed use of leisure time by adolescents. Results of the study revealed that the participation of lower-income groups in voluntary associations was minimal. Furthermore, 70% of the 100 working-class subjects belonged to no clubs, organizations or associations.

A five year study conducted by Medrich, Roizen, Rubin, and Buckley (1982), examined the leisure habits and time use of 764 sixth grade students. A lengthy interview was conducted with the subjects and the subjects' parents to gain an in-depth view of students' out-of-school activities.

The relationship between parent-child interactions was investigated during the study. Results showed that 37% of the parents worked on hobbies with their children. Fifty-one percent helped with homework, 69% played games and 82% watched TV together. Further analysis of the time spent watching TV revealed that light viewers were twice as likely to be involved in organized activities such as sports and lessons. Overall, however, parents favored organized activities, and 79% of the subjects were involved in at least one after-school activity.

This study further investigated differences between the out-of-school activities of boys and girls. Forty-five percent of the boys and 26% of the girls enjoyed team sports. When alone, however, 48% of the girls liked to read, as compared to 37% of the boys. The majority

of children voiced a preference for physical activities when playing with friends.

Both groups enjoyed maintaining hobbies, though differences existed in the types of hobbies preferred. Boys tended to become involved in making and fixing, whereas girls leaned toward expressive hobbies such as painting, arts, and crafts. Girls were twice as likely to be responsible for household chores.

In their conclusion, the authors maintained that "a great deal of formal and informal learning takes place away from school . . . which contributes to the physical, social and intellectual development of children (Medrich et al., 1982, p. 243). "In order to understand why children perform differently in school, one must look beyond academics to family backgrounds and home lives of students" (p. 4).

Few studies have investigated the relationship between out-of-school activities and academic achievement. Surveys of leisure activities of the gifted are one source of such information. A list of characteristics of the gifted by W. Abraham (in Miller & Price, 1981) provides insight into leisure activities. Abraham maintains that gifted children often have interests that are spontaneous and varied. Such children usually collect things in an orderly manner, and have numerous (three to six) involved hobbies. They tend to enjoy games involving rules and systems as well as solitary work and play. The gifted child often participates in many extracurricular activities and may show artistic and/or musical interest and talent.

Cox (in Miller & Price, 1981) examined personal traits of gifted children. He found that the gifted are active, curious, and outgoing,

and tend to involve themselves in many activities. Cox also maintained that the leisure activity most characteristic of giftedness is reading. Such children read to support hobbies, explore new interests, gain understanding of a sport, or just for fun. Generally, gifted children "select leisure activities for the same reason as other children, but their interests are broader, larger in number, and more vigorously pursued" (p. 113).

Long and Henderson (1973) collated logs of 150 fifth graders' activities. All subjects could read at or above grade level. The most popular activity, according to the study, was watching television. Children spent approximately fifteen hours per week doing so. Other activities engaged in regularly by the subjects were: free play, ten hours a week; organized activities and homework, four hours a week; and chores and reading, less than two hours a week. Boys were found to spend less time on chores and organized activities, and more time on free play and TV than the girls. Girls spent twice as much time performing chores than did the boys.

An investigation of differences between third graders was conducted by Starkey and Starkey (1981). Two hundred and ten students reading at or above expectancy, and 147 students reading below expectancy were interviewed. Of the children surveyed, all of the achievers participated in one or more organized activity, while only fifty of the under-achievers were involved in such activities. Achievers were twice as likely to have pets at home, and three times as likely to have hobbies. Achievers also voiced enjoyment in reading for fun more often than the underachievers. There was no significant difference between the

subjects concerning library visits, favorite school subjects and activities, and the amount of time spent watching TV. It was found that time spent watching television was closely related to the time of year the study was conducted.

Starkey and Starkey (1981) concluded that changing some habits of underachieving students may lead to greater achievement. However, they caution that the relationship between leisure activities and results in reading must be further investigated. It is the purpose of the present study to further investigate this relationship.

#### Summary

Time spent outside of school contributes greatly to a child's in-school performance. Variables contributing to out-of-school life were examined in this chapter. Socioeconomic status and family relationships tend to influence the quality of out-of-school activities.

The realm of play was also explored. Play is a major contributor to a child's maturation. Since play is developmental in nature, a child's age will sometimes determine his activities.

The final section of the chapter reviewed the literature concerning leisure patterns of children. Leisure patterns were found to be influenced by socioeconomic status, sex, parents, and possibly, academic achievement.

## Chapter III

### Design of the Study

#### Purpose

The purpose of this study was to survey and compare out-of-school activities of third graders with above and below level reading achievement scores.

#### Subjects

The subjects of this study were twenty-one third grade students attending a parochial suburban school near Rochester, New York. Twenty-five students scoring in the first to third and seventh through ninth stanines on the reading comprehension subtest of the 1973 edition of the Stanford Achievement Test, Primary Level II, Form A were originally selected for the study. Classroom teachers further eliminated four students, whose achievement was not accurately reflected by the subtest scores.

#### Instruments

Stanford Achievement Test, 1973 edition, Primary Level II, Form A: Scores received on the reading comprehension subtest were used to determine student eligibility for the study. The subtest consists of sixteen paragraphs with a total of forty-eight multiple choice items. The subtest begins with simple two-sentence paragraphs and concludes with more difficult paragraphs of six or seven sentences. The subtest

samples comprehension of explicit meanings, such as recall of detail and main ideas, as well as implicit meanings, such as the use of context clues.

Survey of Out-of-School Activities (See Appendix): This questionnaire, designed by the researcher specifically for the study, was based upon those used in similar studies, but was not validated. The survey consists of eleven questions concerning students' out-of-school activities. Each question requires a yes or no response, and is followed by probing questions to allow for answer clarification. The survey concludes with eight open-ended questions, allowing students to provide information regarding favorite activities.

#### Procedure

The original survey was administered to five students randomly chosen from second and fourth grade. After each administration, students were asked if there was any other out-of-school activity they did that was not mentioned. Students were also asked if any other questions should be added. Suggestions were then incorporated into the final questionnaire.

Twenty-five third grade students were chosen for the study, based on achievement scores on the reading comprehension subtest of the Stanford Achievement Test, Primary Level II, Form A, administered in October, 1982. Subjects were identified, using local stanine scores as the major criterion. Students scoring in the first through third and seventh through ninth staninees were chosen as tentative subjects. The subject list was then screened by the classroom teachers to determine if scores were reflective of students' current achievement.

Four students were eliminated in this manner, with the classroom teachers taking into consideration classroom performance, basal placement, and teacher observation.

The final group of subjects consisted of ten girls and eleven boys, for a total of twenty-one students. Four girls and six boys were categorized as having attained above average reading achievement scores, having placed in the seventh through ninth stanines. Five boys and six girls placed in the first through third stanines, and thus were considered as having below average reading achievement scores.

The survey was administered individually by the researcher in June, 1983. Questions were read orally by the researcher. Responses were recorded by the examiner both manually and on cassette recorder.

#### Analysis of Data

Positive responses to questions two through eleven were tallied and converted into percentages. Percentages were then converted into t-scores for determining significant differences between two proportions.

Question one was used as an introduction to the interviewing process, and thus was not further incorporated into the study. Questions twelve through seventeen were used by the researcher to informally check for consistency of the subjects' responses.

#### Summary

The purpose of this study was to survey and compare out-of-school activities of students with above and below level reading achievement scores. Twenty-one third graders were selected on the basis of performance on the reading comprehension subtest of the Stanford Achievement

Test, administered in October, 1982. Each student was surveyed by the researcher in June, 1983. Students responded orally to a questionnaire designed and administered by the researcher.



## Chapter IV

### Results of the Study

#### Purpose

The purpose of this study was to survey and compare out-of-school activities of third grade students with above and below average reading achievement scores. Comparisons were made between above and below level students, above and below level boys, above and below level girls and third grade boys and girls.

#### Analysis of Data

Upon completion of the out-of-school activities survey, students' positive responses to questions 2 through 11 were tallied and converted to percentages. Significant differences were determined by using the following formula for calculating t-scores for determining significant differences between two proportions:

$$\underline{t} = \frac{\hat{P}_1 - \hat{P}_2}{\sqrt{\frac{pq}{n_1} + \frac{pq}{n_2}}}$$

In the above formula,  $\hat{P}_1$  = proportion in group 1,  $\hat{P}_2$  = proportion in group 2,  $n_1$  = the number in group 1,  $n_2$  = the number in group 2,  $p = \alpha$  ( $< .05$ ), and  $q = 1 - \alpha$ .

## Hypotheses Testing

### Hypothesis 1

Table 1 lists comparisons and t-scores ( $p < .05$ ) in response to the null hypothesis: there is no significant difference in the out-of-school activities of third graders with above and below level reading achievement scores. The null hypothesis was not rejected for survey questions 3, 8, 9, and 10. Responses to survey questions 2, 4, 5, 6, 7, and 11 indicated rejection of the null hypothesis. Survey question 1 was used as an introductory question by the researcher to establish rapport during the student interviews, and thus is not further discussed in the study. Elaboration upon the significant differences in out-of-school activities engaged in by above and below level readers follows.

A significant number of the above average group answered positively to question 2, "Do you belong to any clubs?" in comparison with the below level group. The only club mentioned by any of the subjects was scouting. Informal, student-organized clubs were not accepted as valid club membership by the researcher.

Ninety percent of the above average group indicated that they had collections of objects (question 4), including stickers, shells, rocks, coins, sports cards and the like. Fifty-five percent of the below average group had formed such collections, thus there was a significant difference between the two groups.

Significant differences were also noted in enrollment in after-school lessons, (question 6) such as swimming, music, and dancing, and in membership on teams (question 7), mainly soccer teams. The above average student participated in a significantly greater number of such

activities. The above average group also had significantly more chores to do at home (question 11). Home responsibilities included taking out the trash, dusting, vacuuming, and setting the table.

Below level students voiced a significant difference to question 5, "Do you like to make things?" Ninety-one percent of the below level students enjoyed making models, wooden objects, holiday crafts, and pictures. Seventy percent of the above average group enjoyed such activities.

Table 1

Out-of-School Activities for Students with  
Above and Below Level Reading Scores

Question	% of positive responses		t score for differences between two proportions
	Above Level N=10	Below Level N=11	
2	30	9	2.21*
3	90	73	1.79
4	90	55	3.68*
5	70	91	2.21*
6	90	27	6.63*
7	70	27	4.53*
8	80	82	.21
9	100	100	.00
10	50	45	.53
11	100	73	2.84*
Total N = 21			Critical $t$ ( $p < .05$ ) = 2.086 * Significant Difference

## Hypothesis 2

The second null hypothesis to be tested was: there is no significant difference in the out-of-school activities of third grade boys with above and below level reading achievement scores. Results are shown in Table 2. Survey questions 8 and 9 failed to reject the null hypothesis. Data pertaining to the remaining eight questions substantiated rejection of the null hypothesis.

A significant number of above level boys expressed membership in clubs (question 2), as compared to the below level group, none of whom belonged to clubs. One hundred percent of the above level group indicated having a wide variety of hobbies (question 3), including sports, fishing, and building. Sixty percent of the below level boys had hobbies, such as sports, drawing, and model building.

Question 4 surveyed the students' ownership of collections. Forty percent of the below level boys collected items such as rocks and model cars, while 93% of the above level group housed stamp, coin and sports card collections. A significant difference between the two groups was noted.

Eighty percent of the below level boys voiced interest in making things (question 5), mainly models and woodcraft objects. This is significantly different than the above level group, in which 50% of the boys enjoyed such activities.

In question 6, students were asked if they take any lessons outside of school. All of the above level boys were enrolled in at least one set of lessons, which encompassed subjects such as swimming, music and computer. Twenty percent of the below level boys were enrolled in lessons, thus a significant difference between the two groups exists.

Table 2

Out-of-School Activities of Third Grade Boys with  
Above and Below Level Reading Achievement Scores

Question	% of positive responses		t-score for differences between two proportions
	Above Level N=6	Below Level N=5	
2	50	0	3.79*
3	100	60	3.03*
4	83	40	3.26*
5	50	80	2.27*
6	100	20	6.06*
7	100	40	4.55*
8	83	60	1.74*
9	100	100	.00
10	67	20	3.56*
11	100	40	4.55*

Total N = 11      Critical  $t$  ( $p < .05$ ) = 2.262      \*Significant difference.

Team membership (question 7) also varied significantly, as 100% of the above level group belonged to sports teams, as compared to 40% of the below level boys.

Significant differences between the two groups were evident in question 10. Sixty-seven percent of the above level group responded affirmatively to the question "Do you have a pet?," as compared to 20% of the second group. Finally, 100% of the above level group related they did have chores to do at home (question 11), such as taking out

the trash, hauling wood and doing dishes. In comparison, 40% of the below level boys mentioned having jobs to do at home.

### Hypothesis 3

Table 3 lists data testing the null hypothesis: there is no significant difference in the out-of-school activities of third grade girls with above and below level reading achievement scores. Responses to questions 2, 3, 5, 7, 8, 9, and 11 failed to reject the null hypothesis. The null hypothesis was rejected in survey questions 4, 6, and 10.

In response to the question "Do you collect anything?" (question 4), 100% of the above level group answered affirmatively, as compared to 67% of the below level group. Items collected included stickers, rocks, shells, and bottle caps.

Seventy-five percent of the above level group indicated that they take additional lessons (question 6) such as swimming, music and dancing outside of the regular school day. In comparison, 33% of the below level group were enrolled in swimming and skating lessons.

Sixty-seven percent of the below level girls revealed that they had a pet (question 10), and enjoyed playing with and caring for it. In contrast, 25% of the above level group of girls had pets.

Table 3

Out-of-School Activities of Third Grade Girls with  
Above and Below Level Reading Achievement Scores

Question	% of positive responses		t-score for differences between two proportions
	Above Level N=4	Below Level N=6	
2	0	17	1.2
3	75	83	.57
4	100	67	2.34*
5	100	100	.00
6	75	33	2.98*
7	25	17	.57
8	75	100	1.77
9	100	100	.00
10	25	67	2.98*
11	100	100	.00

Total N = 10    Critical  $t$  ( $p < .05$ )    \*Significant difference :

#### Hypothesis 4

Results of testing the null hypothesis: there is no significant difference in the out-of-school activities engaged in by third grade boys and girls, are shown in Table 4. Survey questions 2, 3, 4, 6, 8, 9, and 10 failed to reject the null hypothesis. Three questions, numbers 5, 7, and 11 rejected the null hypothesis.

A significant difference was noted in responses to question 5, "Do you like to make things?". Sixty-four percent of the boys voiced pleasure in making things, whereas 100% of the girls enjoyed such

activities. Girls listed drawing pictures, making holiday crafts and cooking when asked what they like to make. The boys most often enjoyed working with wood and making models.

Question 7 polled students' team memberships. Seventy-three percent of the boys belonged to teams, as compared to 20% of the girls. Soccer and baseball were listed as the favorite teams.

Finally, 73% of the boys listed chores required of them at home (question 11). One hundred percent of the girls surveyed had regular home duties. This difference between the two groups was statistically significant.

Table 4

Out-of-School Activities of Third Grade Boys and Girls			
Question	% of positive responses Boys N=11	% of positive responses Girls N=10	t-score for differences between two proportions
2	27	10	1.79
3	82	80	.21
4	64	80	1.68
5	64	100	3.79*
6	64	50	1.47
7	73	20	5.58*
8	73	90	1.79
9	91	100	.95
10	45	50	.53
11	73	100	2.84*
Total N = 21			Critical $\underline{t}$ ( $p < .05$ ) = 2.086

\*Significant difference



### Summary

The results of this study indicate that significant differences exist in the types of out-of-school activities engaged in by the subjects. A comparison of students attaining above and below level reading achievement scores (hypothesis 1) revealed that the above level students partake in significantly more team activities, collecting, after-school lessons and household chores than do below level students. Below level students tended to enjoy making things more often than did the above level students.

Boys attaining above level reading achievement scores (hypothesis 2) participated in significantly more clubs, hobbies, out-of-school lessons, and teams than did boys attaining below level scores. The above level group also had more collections and pets at home, as well as more household duties assigned to them. In contrast, the below level group of boys voiced a greater enjoyment for making things than the above level group.

Hypothesis 3 indicated significant differences between above and below level girls in the areas of collecting, taking lessons, and having pets. Girls attaining above average reading achievement scores tended to have collections more often than the below level group, and were enrolled in more out-of-school lessons. Girls attaining below average reading achievement scores had significantly more pets at home than did the above level group of girls.

A comparison of third grade boys and girls (hypothesis 4) revealed differences in expected chores at home, team memberships, and making

things. Girls tended to enjoy making things more often than did the boys. Girls also had significantly more chores to do at home. Boys, on the other hand, belonged to more teams than did the girls. No other significant differences between the boys and girls were evident.

## Chapter V

### Conclusions and Implications

#### Purpose

The purpose of this study was to survey and compare out-of-school activities of third grade students with above and below level reading achievement scores. Conclusions were based on the specific group surveyed and only pertain to the sample group or a similar population.

#### Conclusions

Conclusions derived from the results of the study will be based upon groupings formed by each of the four hypotheses tested.

Hypothesis 1 assumed that no significant differences existed in the types of out-of-school activities engaged in by above and below level third grade readers. The null hypothesis was rejected for the majority of activities surveyed. On the whole, above average students were involved in a wider range of activities than were the below average students.

The above average group participated in activities such as organized clubs, teams and out-of-school lessons and owned more collections than did the below average group. These findings were consistent with those in a study conducted by Starkey and Starkey (1981). Such differences in students might be considered as having provided broader experiences and a larger schema for reading for the

above average group. Some activities may have enriched skills used in reading. For example, students owning collections may be more adept at organizing and classifying information.

Parental values might also account for significant differences. A family who values education may tend to enroll their children in after-school lessons or clubs as a means of providing a wider range of learning experiences.

Expectations of parents may also contribute to a child's academic success. A parent who expects a child to perform household duties might also expect a child to be responsible in an academic sense. In this study a significantly greater number of the above average group were assigned household duties than were the below average group.

The only activity that was significantly different in favor of the below level group was that of making things. The below level readers enjoyed creating things with wood, paper, yarn, etc., more than the above level group. These activities were generally considered to be solitary ones by the students, and seemed to be substituted by reading in the above level group, as indicated by responses to the survey question: "What do you like to do by yourself?" This difference may also be interpreted as indicating the preference of the below level group to work with their hands.

The total group of subjects were also compared on the basis of sex in the fourth hypothesis. Fewer significant differences were seen in this grouping than in the comparison of above and below level readers. It seems that sex role stereotypes have become less prevalent in this group of students.

Significantly more girls than boys preferred making things. This difference may be accounted for in several ways. It could be that the girls preferred quiet, sedentary types of activities such as arts and crafts, whereas the boys, when alone, often chose to ride bikes and play video games. There also appeared to be a difference in the interpretation of the question by the two groups. Boys usually equated "making things" with building models or wooden objects. The girls, on the other hand, considered drawing pictures and cooking to be "making things" as well.

Two other questions indicated significant differences between the groups. The boys were much more likely than the girls to belong to organized sports teams, perhaps due to sex stereotyping by the parents. The girls, on the other hand, were more likely to have household responsibilities. Both of the above findings were consistent with those of the in-depth Children's Time Study conducted by Medrich, Roizen, Ruben, and Buckley (1982).

The greatest number of differences in the study were noted between boys with above and below level reading achievement scores (hypothesis 2). Above level boys were significantly more involved in a wide variety of activities such as collecting, taking lessons, cultivating hobbies, and belonging to teams and clubs. The above level boys also tended to have more home responsibilities and pets than the below level boys.

Such differences are of significant importance, considering that the majority of disabled readers are boys (Mazurkiewicz, 1960). There appears to be a marked difference between boys reading below and above grade level.

One may account for some of the differences in light of the fact that reading has been considered by some to be a feminine activity (Filangieri, 1979). If reading is indeed considered as feminine by some of the subjects, other activities such as collecting, scouting, lesson taking, and performing household tasks may also be considered to be typically feminine. This tenet, however, would not account for significant differences noted in team membership.

Generally, it appears that the below level group of boys simply did not have interests that were as varied as the above level boys. In terms of reading achievement, this lack of experience would account for the below level subjects having a narrower schema for reading and possibly a lessened desire to learn and experience new things. Consequently, the below level group may not have as strong a need or desire to learn to read proficiently.

The final group to be compared was the above and below level girls (hypothesis 3). Relatively few differences existed between the two groups.

The above level group of girls tended to have more collections and took more lessons outside of school than the below level group. These differences may be accounted for in terms of parental involvement in instilling a variety of interests in their children. It may also be a reflection of a lower socioeconomic status, though this variable is beyond the realm of this study. At any rate, the below level group of girls seem to have been exposed less to new experiences than the above level group.

A final difference was noted in response to the question "Do you have a pet?". In contrast to the Starkey and Starkey study (1981), the below level group of girls had more pets at home than the above level group. The above and below level group of boys surveyed, however, indicated the opposite relationship between pet ownership and reading achievement. Thus, ownership of pets did not have a consistent relationship to reading achievement in the present study.

#### Implications for Research

Limitations of this study provide many areas to be further explored. Since conclusions of the study relate only to the subjects surveyed, further research could be conducted exploring the variables of age, socioeconomic status, and parent background. A similar study might also be conducted by choosing a population based on national norming scores on a standardized test, as opposed to the use of local norms in the present study.

A survey of out-of-school activities might be conducted by incorporating the use of parent interviews, as has been the practice in similar studies (Medrich et al., 1982; Stendler, 1949).

Studies of a similar nature might also be conducted at various times throughout the school year. Since the present study was conducted in June, very little mention of television viewing was made by the subjects. This is in contrast to results of previous studies, in which a majority of students' out-of-school time was spent watching TV (Freeman-Towner, 1981; List, 1978; Medrich et al., 1982; Neuman & Prowda, 1982).

Finally, it is necessary to further determine the relationship between out-of-school activities and reading achievement. It is difficult to determine from the present study if a wide range of interests were present before reading skills were developed, or if the subjects developed varied interests as a result of their reading proficiency.

#### Implications for Classroom Practice

It is imperative that the classroom or special teacher gain insight to students' out-of-school lives. This can enable the instructor to gear lessons and units to students' interests, and to widen interests where they appear to be restricted. Utilization of an out-of-school activities survey could be useful in providing the teacher with the needed information (see Appendix). Such a survey could be completed in a large group with older children, or individually with the help of classroom aids in the case of younger children.

Following the administration of the survey, the teacher could use the information obtained as a catalyst for expanding interests. Time might be allotted for each child to share his or her special activities with classmates. Collections could be displayed for all to see, and expansion of collections might be noted throughout the year.

The classroom teacher might also introduce various hobbies to be adopted by the students. Hobbies could be introduced through the use of books, stories, or films, or incorporated into art, language, and content area subjects.



The fact that below-level readers often enjoyed making things might also be capitalized upon by the teacher. "How-to" books may be made available to demonstrate the connection between creating and reading. Self-improvement books and articles might also be displayed to show older students constructive means of furthering their skills.

Generally, the teacher who knows his or her students both in and out of school will be able to provide more meaningful classroom experiences. These experiences will in turn act as a basis for creating new needs and purposes for students' reading, as well as providing a wider schema of information to draw upon when reading.

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## Appendix

## Appendix A

## Survey of Out-of-School Activities

Name: \_\_\_\_\_ Date \_\_\_\_\_

SAT Reading Comprehension subtest stanine \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_

1. Do you have any brothers or sisters?            Y        N  
     What do you like to do with them? \_\_\_\_\_
2. Do you belong to any clubs?                    Y        N  
     Which ones? \_\_\_\_\_
3. Do you have any hobbies?                    Y        N  
     What are they? \_\_\_\_\_
4. Do you collect anything?                    Y        N  
     What? \_\_\_\_\_
5. Do you like to make things?                    Y        N  
     What? \_\_\_\_\_
6. Do you take any lessons, like swimming, out of school?    Y    N  
     What ones? \_\_\_\_\_
7. Do you belong to any teams?                    Y        N  
     Which ones? \_\_\_\_\_
8. Do you like to do things by yourself?            Y        N  
     What? \_\_\_\_\_
9. Do you like to do things with friends?            Y        N  
     What? \_\_\_\_\_
10. Do you have a pet?    Y    N    What is it? \_\_\_\_\_  
     What do you like to do with your pet? \_\_\_\_\_
11. Do you have any jobs at home?                    Y        N  
     What jobs? \_\_\_\_\_
12. What do you like to do best indoors? \_\_\_\_\_
13. What do you like to do best outside? \_\_\_\_\_
14. What do you like to do best alone? \_\_\_\_\_
15. What do you like to do best with a friend? \_\_\_\_\_
16. What do you like to do best with a parent? \_\_\_\_\_
17. What is your favorite place to go:  
     alone? \_\_\_\_\_  
     with your friends? \_\_\_\_\_  
     with an adult? \_\_\_\_\_