The Effect of a Transition Class (Developmental Kindergarten) on Academic Parity

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THE EFFECT OF A TRANSITION CLASS (DEVELOPMENTAL KINDERGARTEN) ON ACADEMIC PARITY

by

Douglas S. McCall

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership

Western Michigan University
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THE EFFECT OF A TRANSITION CLASS
(DEVELOPMENTAL KINDERGARTEN)
ON ACADEMIC PARITY

Douglas S. McCall, Ed.D.
Western Michigan University, 1993

The purpose of this study was to investigate whether or not those students who had participated in a developmental kindergarten program, Young Fives, had attained academic parity with their age mates who had not participated in the program.

The target population of this study was 245 students who were kindergarten age in 1988 and attended school in a rural school district in southwestern Michigan. The accessible population was 141 of the original 245 students.

The total battery grade equivalent test scores achieved on the California Achievement Test by the 141 students were analyzed using an analysis of variance (ANOVA) and the Tukey post hoc analysis.

The findings of this study indicated that academic parity had not been achieved by those students who had participated in the Young Fives program.

Although insufficient data were uncovered to warrant a discontinuance of the program, it was recommended that serious consideration be given to in-depth research of all facets of the developmental approach.
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The effect of a transition class (developmental kindergarten) on academic parity

McCall, Douglas S., Ed.D.
Western Michigan University, 1993
DEDICATION

This dissertation is dedicated to my father who, in his own way, instilled in me the desire to persevere and to my mother who has always had faith in me.

Douglas S. McCall
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A list of all those people who assisted with the completion of this dissertation would be longer than the dissertation itself. Therefore, I will continue to thank them in person.

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Douglas S. McCall
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CHAPTER I

INTRODUCTION

In President Bush's 1990 State of the Union address, six national performance goals for education were unveiled. Goal 1 pledged that all children in America will start school ready to learn by the year 2000. The October 1, 1991, edition of the Detroit Free Press (cited in Aiken, 1991) cited Education Secretary Lamar Alexander's comments regarding progress towards achieving these goals as "far short of what is needed to secure a free and prosperous future" (p. 2).

However a recent poll revealed that, . . . although all six of the goals were considered to be of high priority in the Gallup/Phi Delta Kappa Poll of the Public's Attitudes Toward the Public Schools, the first goal was the only one that even one-half of the respondents considered possible to accomplish. (Kelley & Surbeck, 1991, p. 8)

This construct of "school readiness" has gathered steam as many local and state early-childhood reform efforts include emphasis on nurturing parent involvement, stressing parenting skills, and realizing the importance of appropriate early childhood education.

The U.S. Department of Education Office of Educational Research and Improvement (1991) reported in its OERI Bulletin that the Missouri Department of Elementary and Secondary Education and the Danforth Foundation established the Parents as Teachers program in 1981. "Providing parent education and family support, beginning with a child's birth, (this program) became a mandatory service for all Missouri school districts in 1984" (p. 4). "Evaluation data from the project show that
Missouri children enter school with fewer problems, test scores are up [higher test scores], and child abuse is down in the state [less child abuse]” (p. 4).

During the fall of 1991, Aiken, a social worker for the Plainwell Community Schools in Allegan County, Michigan, was the author of a grant submitted to the W. K. Kellogg Foundation on behalf of the seven school districts comprising the Allegan County Intermediate School District. If this grant, titled Early Education Services for Parents, Infants and Preschoolers, were funded, it would provide the Parents as Teachers program for all seven districts and "promote a 'Collaborative Agenda' which would focus on 'connecting schools and human service agencies on behalf of at-risk children'” (p. 7). The goal of the entire program would be to "enable all entering kindergartners to have an equal opportunity to meet the challenges of learning" (p. 6).

In her grant, Aiken (1991) submitted the following in her statement of need:

Today, children are the poorest Americans. One in five lives in a family with an income below the federal poverty level. One in four infants and toddlers under the age of three is poor. Poverty is frequently associated with poor health care which in turn can lead to more serious medical problems and/or learning disabilities which will affect the child’s ability to function in school. (p. 1)

Aiken (1991) also referred to an article from the October 1, 1991, edition of the Detroit Free Press in which Education Secretary Lamar Alexander made comments on school readiness:

Eighteen percent of one to four-year-olds in 1988 hadn’t been to the doctor in a year. Only about forty percent of three to five-year-olds from low and middle income families attended preschool compared to seventy-five percent from families earning more than $75,000. About sixty percent of
parents teach their three to five-year-old letters, words or numbers; fewer than four in ten tell their children stories. (p. 6)

The very idea that the primary responsibility for initial learning resides in the home is a difficult one with which to argue; however, "many families are struggling so hard to survive that they are not able to provide adequately for their children the type of nurturing environment which is associated with a child's ability to meet the 'challenges of learning'" (Aiken, 1991, p. 1).

If this is true, then what are schools doing to meet this challenge? How are they preparing to meet the needs of children who are of entry-level age and arrive at the school's front door in varying stages of school readiness?

These questions will continue to plague educators as long as there is variation in the criteria applied to the determination of school readiness.

Background

In the mid 1980s, elementary teachers and administrators in a rural southwest Michigan school district began raising several concerns which focused on the following issues affecting children between the ages of 4 and 6. Early elementary retention rates were increasing. Youngsters were entering school with zero to 2 years of preschool experience. Kindergarten teachers were recognizing ever widening ranges in emotional, social, and intellectual development. Motor skills varied to the extent that the presentation of prereading skills was not feasible. The school readiness range for young children appeared to be

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without boundaries.

These concerns escalated to the point that the staff and elementary administration decided that something must be done to accommodate this vast range of readiness. Although several ideas were discussed, a transition class was favored.

At the beginning of the 1988-89 school year this district established a developmental kindergarten program designed to prepare "young five" students for elementary school. Prior to the beginning of the 1990-91 school year the program was renamed "Young Fives." Teachers had heard disparaging remarks from parents, peers, and students regarding the use of the word developmental. These young fives met the state of Michigan's School Code chronological age requirement for entry into the regular public education K-12 system.

In a school district where provision is made for kindergarten work, a child, resident of the district, is entitled to enroll in the kindergarten if the child is at least 5 years of age on December 1 of the school year of enrollment. (Michigan Department of Education, 1989, p. 104)

However, following a screening process which was given to all entry level age children and included a portion of the Gesell Development Assessment Screening Battery and observations by a kindergarten teacher, these Young Fives were found to be developmentally immature, a "young five," unready for the regular kindergarten program.

This screening process, given in the spring of the year to all kindergarten age students who have enrolled in the district, is conducted by kindergarten teachers who have been trained to administer the battery and observe the child while he or she is taking the test.

After the screening process is completed, the evaluator
recommends to the parent that the student be placed in the developmental kindergarten program or regular kindergarten. The parent is not required to accept the recommendation.

This new developmental kindergarten program was designed to assist underdeveloped youngsters by concentrating on practical applications that would enhance their cognitive, socioemotional, and physical growth. (Please refer to Young Five’s Goals and Outcomes in Appendix A.) By the time this developmental year was completed the child should be prepared to enter regular kindergarten and participate in a more structured social and curricular environment. (Please refer to Kindergarten Outcomes in Appendix B.)

Conceptual Definitions

Young Fives (YF): This designation is also known as developmental kindergarten, a transitional, prekindergarten program designed to meet the needs of those kindergarten age children who have been found not to be ready for a regular kindergarten program. This determination is made through the use of a screening program that employs the Gesell School Readiness test as the basic instrument.

Regular kindergarten (RK): This traditional program is designed to meet the needs of those kindergarten age children who have been found to be ready for the traditional educational track. This determination is made through the use of a screening program that employs the Gesell School Readiness test as the basic instrument.

Opt-out of Young Fives (OOF): This phrase refers to those students who were found through the screening process to be eligible
for the Young Fives program but whose parents decided not to place them in the program. They entered the regular kindergarten track.

**Academic parity:** This indicates the condition of having obtained the same academic level as one's age mates as measured by the total battery grade level equivalent scores on the California Achievement Test.

**California Achievement Test (CAT):** This test is designed to measure the achievement levels of basic academic skills.

**Total battery grade level equivalent:** This composite score of all the subject areas in the California Achievement Test is reported in terms of nationally normed grade equivalents. Example: A student took the test in the second year, fourth month (2.4). The student's total battery grade equivalent was 3.5. This means that the student obtained a composite score for the entire test battery equivalent to the score that would be expected of a student at the third grade, fifth month (3.5).

**Statement of the Problem**

This developmental kindergarten program has been in place for the past 4 years; 1992-93 is the fifth year. Students who followed the regular track, regular kindergarten students (RK) in 1988-89, are now in the fourth grade. Those students who were screened into the program but whose parents did not wish for them to participate are labeled for the purpose of this paper Opt-Out of Young Fives (OOYF) students. They are also in the fourth grade. Students who were screened into the program and participated, Young Fives (YF), are in the third grade.

To date no formal evaluation of the Young Fives program has taken place, yet legitimate concerns have been raised; for example, how
are the students who have participated in the program doing academically as compared to their peers who did not? Are the consequences of placing students in this type of transition program too severe?

Research, to be discussed in the review of literature, also indicates that serious concerns have surfaced as to the appropriateness of transition classes. Developmental kindergarten is referred to in the literature as a transition class.

**Research Questions and Purpose of the Study**

When questions began to arise pertaining to the effectiveness of the Young Fives program, one of the primary reasons for instituting the program was reviewed. Had the developmentally immature (Young Fives) students been provided with an educational opportunity that was effective and had allowed them to attain academic parity with students in their age group? To begin the search for the answer to this question, several specific questions, the answers to which could be supported by research and data analysis, had to be asked. Did a relationship exist between student participation in the Young Fives program and their future academic success? Even more specifically:

1. Would those students who participated in the Young Fives program attain the same academic level as those in the regular kindergarten program?

2. Would those students who participated in the Young Fives program be more academically advanced than students whose parents had opted them out of the Young Fives program?
3. Would those students who were opted out of the Young Fives program be able to attain the same academic level as those in the regular kindergarten program?

4. Would the academic level attained by all three groups be similar?

The objective of this research was to ascertain the answers to the questions posed in the preceding paragraph and to ask a fifth question: Was this parity attained and, if so, to what degree? This would be accomplished by comparing the total battery grade level equivalent data for each group on the California Achievement Test. The data gathered were taken from the CAT given on February 2, 1991, to RK and OOYF students when they were in the second grade and to YF students on March 31, 1992, when they were in the second grade.

Significance of the Study

In many parts of the country transition grades began to gain favor in the late 1970s. This school district (1988 Fourth Friday student enrollment, 2,500), like many other small-to-medium size school districts, often initiates new innovations or programs several years after their introduction in bellwether districts. As indicated earlier, the developmental kindergarten (Young Fives) program (a transition grade) was introduced in this district in 1988.

Natale, assistant editor of The Executive Educator magazine indicated in the January 1991 edition,

In the 1980's, many educators looked on the transitional class--often, an extra year between kindergarten and first grade--as the white knight of primary school reform. Set up
to rescue developmentally immature pupils from the academic jolt of first grade, transitional classes would stave off school failure. (p. 17)

Natale (1991) noted, however, that there is a growing body of educators who believe that these programs "might be giant leaps backward" (p. 17). "Many districts have them, but we oppose them, basically," said French (cited in Natale, 1991, p. 17), dropout prevention specialist for the state education department (Massachusetts). Most of the research, French said, shows "that transitional programs are no better than being retained. They're only effective when [the participating children] rejoin their age-appropriate counterparts at the end of the year" (Natale, 1991, p. 17). The relationship between retention and transition classes is discussed in Chapter III.

When school begins for the Holland Public Schools in the fall of 1993, "the district's special alternative kindergarten program for 5-year olds who aren't ready for school will be eliminated. Instead, those students will enter regular kindergarten classes that have been revamped under the new approach" (West, 1993, p. L1).

West (1993), in an article written for the Grand Rapids Press, quoted Cecelia Mobley, consultant for the Michigan Department of Education, who referred to this new approach as "a 'developmental' approach, the method calls for 'touchy, feely, concrete experiences' to learning basics" (p. L1). "She [Mobley] notes a growing number of districts are taking the 'developmental' approach to make kindergarten classes appropriate for all learning levels" (West, 1993, p. L1).

Although the emotional, academic, and social problems that transition programs may inflict on students are of major concern to school
personnel, the economic burden of this extra year enlarges the shadow of doubt that is cast on these programs. According to Shepard and Smith (1990), "The annual cost to school districts [nationwide] of retaining 2.4 million students per year is nearly $10 billion" (p. 86).

The ramifications of the perceived and real problems inherent in transition programs cannot be ignored. If the opinions of Shepard and Smith (1990), along with those of other educational researchers, are acceptable and the research conclusions of this study validate their concerns, then the program should be seriously studied for restructuring to meet the primary needs of the entry level student.

Overview of the Study

Presented in this chapter, Chapter I, Introduction, are the following: the background, conceptual definitions, purpose of the study, research questions, and the significance of the study. Chapter II, the Review of Literature, contains discussion of the following: development and characteristics of primary-age children; restructuring at the primary level; school readiness; readiness testing; and developmental placement, transition, and retention. The methodology of the study outlined in Chapter III provides the details of the subjects, the measurement instrument, data collection, data organization, data analysis, and the hypotheses. Reported in Chapter IV are the data analysis and findings; and Chapter V, the Conclusions and Recommendations, contains discussion on the findings and makes recommendations for further study.
CHAPTER II

REVIEW OF LITERATURE

Introduction

The purpose of this study was to investigate whether or not those students who had participated in a developmental kindergarten program, Young Fives, had attained parity with their age mates who had not participated in the program.

Attempting to discover answers to the various questions that arise when researching the relationship between a transition class and its effect on the academic parity of those who participated in it compared to other students in the same age group required an extensive review of literature. This chapter presents the following topics, related to this study: (a) the development and characteristics of primary-age children; (b) restructuring at the primary level; (c) school readiness; (d) readiness testing; and (e) developmental placement, transition, and retention.

Development/Characteristics of Primary-Age Children

When children reach kindergarten age, 5 or 6, according to Piaget (cited in Gullo, 1992), their thinking can be characterized as intuitive in nature. That is, they rely more on their visual and auditory perception for knowledge than they do on logical thought processes. The results of this are that these children can focus only on one or two variables of a situation at a time, and the variables they focus on are usually some perceptual characteristic of the situation. Children of this age rely on their own point of
view of things for information, and they seldom are able to take another person's perspective. Kindergarten children also can be characterized by the wide variability found in their rates of development. Because of this wide variability, not all five- or six-year-olds are doing or can be expected to be doing the same thing at the same time. The variability in developmental rates affects all areas including cognitive, language, socio-emotional, and physical. The differences in rates of development are due to the differences in maturation found among children at this age and the differences in the types and quality of experiences that these children have had in their lives.

Children at this age are curious about the physical and social worlds around them and deeply involved with their peers. Their language ability is expansive, and they rely on this as a primary means for social interaction and exploration. They constantly are asking questions and are striving to make more sense out of their environment by interacting with it. (p. 238)

Gullo (1992), in the same article, provided examples of instructional techniques demonstrated by exemplary teachers who believe in the existence of the aforementioned characteristics and who strive to provide an appropriate educational program.

Use concrete props and visual aids whenever possible to illustrate ideas and help children understand what adults are talking about;

Make instruction relatively short, using actions as well as words;

Make sure that the activities are relevant to the life experiences of the children;

Give children a great deal of physical practice with the facts and skills that will serve as building blocks for later development;

Encourage manipulation of physical objects during instructional activities; and

Encourage language and social interaction among children when they are engaged in instructional activities. (p. 238)

In addition, Derman-Sparks (cited in Gullo, 1992) stated:
Hurrying children to acquire skills more quickly than is developmentally appropriate, overemphasizing competition and comparison among children, and stressing the mastery of narrowly defined academic skills also sabotage healthy growth. Such adult expectations can produce fragmented development, lessen children's optimism about their own abilities and about school, stifle their motivation to learn, and threaten their motivation to use acquired skills. (p. 239)

As concerns continue to mount regarding the primary educational delivery systems in the nation's school districts, the need for restructuring becomes more obvious. As plans for restructuring begin to emerge, it is extremely important that the adults responsible pay sensitive attention to the developmental needs of the primary-age child.

Restructuring at the Primary Level

During the past 5 years, a focus on restructuring "our public education system so that we do not remain 'a nation at risk'" (Kelley & Surbeck, 1991, p. 7) has become a major component of nationwide school reform. In a 1991 Phi Delta Kappa Fastback, Kelley, assistant professor of early childhood education in the Division of Education and Human Services at Arizona State University West, and Surbeck, assistant professor of early childhood education in the College of Education at Arizona State University, wrote "restructuring, unlike reform, suggests a complete overhaul in the ways schools are organized and operated" (pp. 7-8). Proponents of educational restructuring have pointed to the importance of successful early childhood education experiences as being the key to future educational success.

In the May 1989 edition of Phi Delta Kappan, Mitchell, associate dean of the Division of Research, Demonstration, and Policy at Bank...
Street College of Education and co-director of the Public School Early Childhood study, wrote, "Ten years ago, the care and education of young children was not the major political issue it is today" (p. 666).

The current high level of interest in early childhood programs stems from at least five different sources: (1) the increased demand for child care from the growing numbers of working mothers in all income groups; (2) concern about present and future productivity, international competitiveness, and the changing nature of the work force, which will include more women and be characterized by greater ethnic and racial diversity, as the minority becomes majority; (3) the centrality of child care to efforts to move mothers off [Aid to Families with Dependent Children] AFDC support and into the labor force; (4) a desire to provide a better start for poor children in school and in life; (5) an accumulating body of evidence that high-quality early childhood programs have long-term positive effects for disadvantaged children and high cost/benefit ratios (on the order of 5 to 1). These varied motivations for interest in programs for young children are strong and intertwined with one another. Alone and in combination, they have already resulted in new policies and programs and will lead to still more. (Mitchell, 1989, p. 667)

Earlier in this paper the Holland Public Schools was cited for changing its kindergarten delivery system to a developmental style (West, 1993).

Hallmarks of the new approach include eliminating set learning times for each subject and traditional materials like flashcards and work sheets. This, educators say, allows all kindergartners to learn at their own pace, rather than forcing them to conform to set curriculum.

"If we're working on numbers, the child who still can't recognize numbers will get that training, while children who are able to handle more than number recognition will get those concepts," said Dana Root, a kindergarten teacher at Maplewood Elementary School in Holland. "You get them where they are and take them as far as you can." (West, 1993, p. L1)

Although a myriad of questions, topics, and problems to be asked, considered, and solved during the restructuring process persist, the concept of school readiness must be a fundamental consideration.
School Readiness

"Every September in the United States more than three million children begin formal schooling with their first day of kindergarten. These children differ tremendously in their readiness to learn and their ability to follow directions" (Shepard & Smith, 1986, p. 78).

Kelley and Surbeck (1991) stated the belief that defining readiness "depends on how one views the nature of children and their development. On the one hand, readiness can be broadly viewed as the motivational, emotional, physical, and intellectual capacities that each child brings to a learning situation. Defined as readiness for learning, this perspective suggests that children bring varying levels of readiness capacity, which need to be nurtured" (Kagan, 1990). In contrast, a much narrower, finite view of readiness is that of school readiness. School readiness has been defined as, "the capacity to simultaneously learn and cope with the school environment" (Gesell Institute, 1987, p. 7). This definition suggests that there is a predetermined set of capabilities that all children must have acquired before entering school, which clearly places the burden of proof on the child. (p. 11)

In July of 1990 the National Association for the Education of Young Children (NAEYC) adopted a position statement on school readiness. In the preamble to the statement, the following factors were listed as critical considerations for any discussions regarding school readiness: "(1) the diversity and inequity of children's early-life experiences, (2) the wide range of variation in young children's development and learning, (3) the degree to which school expectations of children entering kindergarten are reasonable, appropriate, and supportive of individual differences" [emphasis added] (p. 21).

In the position portion of the statement, the NAEYC (1990) also stated the belief:
that those who are committed to promoting universal school readiness must also be committed to (1) addressing the inequities in early-life experience so that all children have access to the opportunities which promote school success; (2) recognizing and supporting individual differences among children, and (3) establishing reasonable and appropriate expectations of children's capabilities upon school entry [emphasis added]. The current construct of readiness unduly places the burden of proof on the child. Until the inequities of life experience are addressed, the use of readiness criteria for determining school entry or placement blames children for their lack of opportunity. Furthermore, many of the criteria now used as readiness measures are based on inappropriate expectations of children's abilities and fail to recognize normal individual variation in the rate and nature of development and learning. (p. 21)

If the position of the NAEYC (1990) is acceptable, then schools should not be as concerned about the readiness of students as they should be about their readiness to accept students. "It is the responsibility of the educational system to adjust to the developmental needs and levels of the children it serves; children should not be expected to adapt to an inappropriate system" (Meisels, 1987b, p. 73).

According to Feenstra (cited in West, 1993), Holland Public Schools' director of the district's Early Childhood Center, "At the heart of the change is different thinking on a basic educational philosophy. . . . The old school of thought is kids must be ready for school. The new school of thought is school must be ready for kids" (p. L1).

As important as it is to consider school readiness when restructuring primary educational levels, it is equally important that the methods used to determine this readiness factor be carefully structured and monitored.
Readiness Testing

The assessment and evaluation of primary age children has been surrounded by controversy. This was particularly true in the 1980s. Concern began to arise over the increased use of standardized readiness tests and developmental screening tests used for assessing the placement of kindergarten age children, especially when their use resulted in the retention of children in kindergarten or placing them in transition classes.

The fact is that young children grow rapidly but not at a predictably steady pace. They respond differently in different settings and with familiar or less well known people. There is a gap between their competence and their capacity to communicate within limited time allotments. These characteristics suggest that valid assessment and evaluation require time, a commodity that is scarce in massive institutions and the practices associated with standardized tests. At the same time, there is a considerable body of evidence that teacher observations over time often are valid forms of evaluation. (Fromberg, 1992, p. 275)

Kindergarten age children in this district participate in the Gesell School Readiness Test as a portion of their primary assessment prior to the start of school. The Gesell School Readiness Test fits well within the Gesell Institute's philosophy that readiness is a matter of maturity or behavioral age rather than chronological age or IQ. The test is primarily intended as a means of helping to place children appropriately in school based on the belief that the number of school failures will be reduced if appropriate placements are made. A broad array of competencies is examined using the Gesell School Readiness Test, with perhaps a disproportionate share being given to perceptual-motor capabilities. An important feature of the test is that it is conducted in a generally
comfortable, nonthreatening style for the child being examined.

According to Bradley (1985) in the Ninth Mental Measurements Yearbook, the writers of the Gesell manual for the test indicated that:

the School Readiness Test might be useful for a number of purposes. However, they provide little specific information with regard to the test's validity in accomplishing each of these purposes.

The information gathered on this test is not, in fact, directly relatable to many of the curricular experiences that children are typically involved in. The test developers do provide some evidence that performance on the Gesell Test is valid in terms of agreements with teacher ratings of children's performance at the end of the school year.

As one might expect, the highest levels of agreement between Gesell Test scores and later teacher ratings of student performance were those for children at the extremes. (p. 609)

Meisels (1987b), professor in the School of Education and research scientist in the Center for Human Growth and Development at the University of Michigan, stated:

As a brief sorting device, readiness tests can be loosely considered screening tests. But, because of the type of information they yield and their lack of predictive validity, they cannot correctly be considered developmental screening tests. Readiness tests should be used to facilitate curriculum planning, not to identify children who may need special services or intervention. (p. 6)

In the March 1993 edition of The Beacon, a newsletter of the Michigan Association for the Education of Young Children, Gaskill, teacher educator at Central Michigan University, cited three researchers who voice concerns regarding the validity of the Gesell test.

The Gesell School Readiness Test (GSRT) was normed twenty years ago using a sample of only fifty boys and fifty girls per age level, most of whom were white children from Connecticut. The GSRT has predictive validity correlations of only .28 to .64. In other words, the Gesell School Readiness Test could possibly incorrectly identify one-third to
one-half of the children tested as not being ready for kinder­
garten (Bredekamp & Shepard, 1989; Nason, 1991). (p. 4)

The importance of using readiness tests to assist with the place­
ment of children in appropriate programs must be emphasized. Inappro­
priate placement can have long lasting detrimental effects on a child.

Developmental Placement, Transition, and Retention

May and Welch (1984), State University of New York at Albany, stated that the "developmental placement theory does not propose a particular curriculum, but rather suggests that the developmentally young child take an extra year to mature" (p. 381).

It is important to point out that there is a difference in the context in which this extra year is considered. Developmental kindergarten or pre-first-grade programs are referred to as transitional grades. The cur­riculum for these programs is intended to be different from the regular kindergarten or first-grade programs. This is in contrast to the concept of retention in grade, which intends to subject a student to the same curriculum 2 years in a row.

Shepard (1992b), however, viewed "kindergarten retention" as a generic term "used to refer to several different extra-year programs that include transition classrooms before first grade, 'developmental' kinder­garten before kindergarten and repeating of kindergarten" (p. 279). She went on to say, though, that "unlike retention for academic failure, an extra year before first grade is intended to prevent subsequent failure" (p. 279).

Research does indicate, however, that the problems inherent in
retaining students may also be found in screening students into transition classes. Slavin, Karweit, and Wasik (1992-1993), Center for Research on Effective Schooling for Disadvantaged Students, Johns Hopkins University, in an article in Educational Leadership stated that:

Studies comparing students who experienced an extra year of school before 2nd grade have generally found that these students appear to gain on achievement tests in comparison to their same-grade classmates but not in comparison to their age mates. Further, any positive effects of extra-year programs seen in the year following the retention or program participation consistently wash out in later years (Karweit and Wasik, in press; Shepard and Smith, 1989). Clearly, the experience of spending another year in school before 2nd grade has no long-term benefits. (p. 13)

Although proponents of the concept do not refer to it as retention, the negative effects of these transition programs in many instances produce the same results. "Controlled studies do not support the benefits claimed for extra-year programs, however, and negative side effects occur just as they do for retention in later grades" (Shepard & Smith, 1990, p. 87). Gaskill (1993) wrote in The Beacon, "The children in transitional rooms are often labeled as 'slow' an image that may stay with them their entire academic career (Peck, McCaig, & Sapp, 1988; Bredekamp & Shepard, 1989)" (p. 3).

Gaskill (1993) provided additional research that continues to shed concern on the subject.

Bell found that children in transition rooms or extra-year programs had a lower self-concept than children who were at-risk, but were not retained. The self-concept of children who were in the extra-year programs actually declined the year they were in this special class (Shepard & Smith, 1988). Parents also reported that they felt their children had poorer attitudes toward school. "Retained children were aware that they were not making the same progress as their age-mates, even when their special classes were called by a different name" (p. 142), and, "contrary to popular belief,
children do recognize that they are not making normal pro-
gress" (Bredekamp & Shepard, 1989, p. 20). (p. 5)

In another article related to this subject, Shepard and Smith
(1989) described parental views:

Parent interviews reveal both short-term and long-term dis-
tress associated with the retention decision such as teasing
by peers, tears because friends are going on, and references
years later like, "If I had only been able . . ., I would be third
grade now." The conclusion of "no benefit" holds true even
where a special transition curriculum was offered rather than
repeating regular kindergarten. (p. 87)

In addition to the emotional problems suffered by these students,
evidence exists that those students who have been retained, in whatever
manner, are more likely to drop out of school at a later date. Shepard
and Smith (1990) stated: "Dropouts are five times more likely to have
repeated a grade than are high school graduates" (p. 86).

Slavin et al. (1992-1993) wrote: "Studies of students who have
been retained before third grade find that controlling for their achieve-
ment, such students are far more likely than similar nonretained students
to drop out of school (Lloyd, 1978)" (p. 13).

Gaskill (1993) quoted researchers of the drop-out phenomena who
found that "correlational evidence that suggests 'holding children back
increases rather than decreases their risk for dropping out of school'
(Grissom & Shepard, 1989, p. 34)" (p. 5).

In the Holland Public Schools,

Much of the impetus for dissolving the alternative kindergar-
ten program came through research on how children who are
held back in school tend to drop out later. That applied to
the situation in alternative kindergarten because once those
students enter their regular grade level, they are a year
behind their peers and often labeled as low achievers.
(West, 1993, p. L1)
Although considerable evidence in the research raises legitimate concerns regarding the practice of establishing developmental programs, many in the profession believe they are beneficial. Uphoff (1990), director of the Office of Laboratory Experiences in Education, College of Education and Human Services, Wright State University, in an article in *Young Children* wrote of concern about the slow change taking place in the field of education. He stated the belief that the "unready" children will suffer unless something is done. "Well-designed transitional programs greatly reduce this suffering. Furthermore, such programs can actually help speed the move to developmentally appropriate practice by demonstrating how well the approach works" (p. 19).

In the same issue of *Young Children*, Brewer (1990), associate professor at Northern Arizona University's Center for Excellence in Education, cited a portion of Shepard's 1989 article, which discussed the results of 16 controlled studies indicating that extra-year programs made no difference. Following this citation, Brewer made this comment:

However, it is not clear to all educators concerned with this subject that the transitional program experience affects the child's self-esteem and subsequent school performance in the same way that repeating kindergarten does. In fact, there are several positive reports of children who have been successful in later school experiences after a year in a transitional program (Solem, 1981; Kilby, 1984). (p. 17)

Various related topics were reviewed in this chapter. They included development and characteristics of primary age children; restructuring at the primary level; school readiness; readiness testing; and developmental placement, transition, and retention.

The major findings in this review indicate the following:
1. A wide variability in the development of young children exists. Because of this expanse in the developmental process, it is imperative that adult expectations be tempered with a sensitivity to the needs of the primary child (Aiken, 1991; Gullo, 1992).

2. This sensitivity, combined with an increasing realization of the importance of successful early childhood educational experiences, is leading to restructured developmental delivery systems at the kindergarten level (Meisels, 1987b; NAEYC, 1990; West, 1993).

3. Inherent in every child is some degree of readiness for learning. Although the capacity of this readiness varies from child to child, the need for nurturing remains constant. Keeping these concepts in mind is necessary to establish reasonable and appropriate expectations of a child's capabilities when the child enters school (Gullo, 1992; NAEYC, 1990).

4. Readiness testing should be used to assist with the proper placement of children in appropriate programs. It should not be used as a sole determining factor (Fromberg, 1992; Gaskill, 1993; Meisels, 1987b).

5. Placement of children in transitional programs must be carefully considered. The long-term negative effects may outweigh the positive intentions designed to prevent subsequent failure (Gaskill, 1993; May & Welch, 1984; Shepard, 1992b; Slavin et al., 1992-1993).

In Chapter III, the methodology of the study used to research the data relative to this study is discussed in detail. Chapters IV and V contain the data analysis and findings and conclusions and recommendations for further study.
CHAPTER III

METHODOLOGY OF THE STUDY

Introduction

This study was conducted to investigate the relationship between the achievement of academic parity and placement in a transition (Young Fives) class. This chapter consists of the following areas: (a) introduction to ex post facto research, (b) hypotheses, (c) subjects, (d) measurement instrument, (e) data collection, (f) data organization, and (g) data analysis.

According to Ary, Jacobs, and Razavieh (1985), in their textbook, Introduction to Research in Education, generally four categories are used to classify educational research. They are experimental, ex post facto, descriptive, and historical. "None of these methods is necessarily superior to the others. The method used in a research study is dictated by the nature of the problem and the kinds of data required" (p. 26). In ex post facto and experimental research, the "interest is focused upon discovery or establishment of relationships among the variables in one's data. Ex post facto research, as well as experimental research, can test hypotheses concerning the relationship between an independent variable, X, and a dependent variable, Y" (Ary et al., 1985, p. 298). The basic difference between these two types of research lies in the ability to manipulate the independent variable. An independent variable that can be manipulated is referred to as an active variable, while an independent
variable that cannot be manipulated is called an attribute variable. An attribute variable is a characteristic that a subject possesses before a study begins (Ary et al., 1985). Ex post facto studies involve attribute variables. In this particular study, the independent variable is school readiness placement and, for obvious reasons, cannot be manipulated by experimental means.

Kerlinger (1986), University of Oregon, defined ex post facto research quite succinctly as:

systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables. (p. 379)

Hypotheses

The conceptual hypothesis for the study was that a relationship existed between the future academic success of students and their participation in the Young Fives program.

The operational hypotheses included the following:

1. The mean total battery test scores on the California Achievement Test (CAT) for those who participated in the Young Fives (YF) would be greater than the mean total battery test scores on the CAT for those who opted out of Young Fives (OOYF).

2. The mean total battery test scores on the CAT for those who participated in the Young Fives (YF) would be equal to the mean total battery test scores on the CAT for those who participated in regular kindergarten (RK).
3. The mean total battery test scores on the CAT for those who opted out of Young Fives (OOYF) would be less than the mean total battery test scores on the CAT for those who participated in regular kindergarten (RK).

The null hypothesis of this study would be that the mean total battery test scores on the CAT in all three groups would be equal.

Subjects

The Michigan Department of Education Fourth Friday count for September 30, 1988, indicated that there was a target population of 245 children participating in this school’s kindergarten programs. The accessible population for this study consisted of 141 students from that Fourth Friday count. The remaining 104 students were not included in the study for the following reasons: 28 had been retained, 61 had moved from the district, 10 had been placed in special education programs prior to the administration of the second grade CAT, and 5 had incomplete test scores.

As indicated in the introduction to ex post facto research, in studies such as this one, the researcher cannot control the independent variable (school readiness placement). Because of this lack of control, it was imperative that other factors that would influence the dependent variable (CAT total battery test scores) be eliminated. For this reason those dependent variable scores that were influenced by the factors of retention, placement in special education programs, and incomplete scores were not used.
Given the nature of this study and the data involved, the research of test scores of unnamed subjects, the Human Subjects Institutional Review Board of Western Michigan University (WMU) granted exempt research status to this project. The investigator was able to record the information in such a manner that subjects could not be identified, directly or through identifiers linked to the subjects.

Measurement Instrument

The California Achievement Tests, given to students in Grades 2 through 6 every year in the spring, are norm-referenced tests. They are "designed to measure achievement in the basic skills commonly found in state and district curricula" (CAT Examiners Manual, 1985, p. 1). CAT Forms E and F are used in this school district. The subject areas measured by these test forms are reading, spelling, language, mathematics, and study skills. A total battery score is also given (CAT Examiners Manual).

In The Tenth Mental Measurements Yearbook, Forms E and F of the 1985 California Achievement Tests were reviewed by Airasian (1989), professor of education, Boston College, who wrote:

The California Achievement Tests (CAT) have been a well respected test battery for over 50 years. The latest version of the CAT, Forms E and F, is a revision of the 1978 Form C and D edition and is designed to provide "valid measurement of academic basic skills." As has been the case with past revisions, the publication of Forms E and F of the CAT represents an improvement on an already creditable test battery. (p. 126)

In this summary, Airasian (1989) noted that "the CAT, Forms E and F, is technically state of the art, well constructed, and well
documented" (p. 128).

In another portion of the summary, Airasian (1989) noted:

The CAT is strong in all areas associated with the construction of a standardized achievement test battery and compares very favorably to other achievement batteries of its genre such as the Stanford Achievement Tests, the Iowa Tests of Basic Skills (155) and the Metropolitan Achievement Tests (200). (p. 128)

Wardrop (1989), associate professor of educational psychology, University of Illinois at Urbana-Champaign, also reviewed the CAT test in the same yearbook. Although he summarized some concerns in the text of his article, he did write, "this latest revision of the CAT is one of the best standardized achievement batteries available" (p. 133).

For the purpose of this study, the mean total battery CAT test scores of the three groups of students were compared.

Data Collection

The first step was to identify kindergarten students from all three groups who were still in the school district when the 1991 and 1992 CATs were given. When those individuals were identified, the data were collected by gathering the CAT results for 1991 and 1992. From the 1991 results, the total battery test scores for each second-grade student, identified as an RK or OOYF student on the 1988 Fourth Friday membership list, were recorded. This process was repeated for each second-grade student in 1992 who was identified as a YF student on the 1988 Fourth Friday membership list. For ease of data entry, time constraints, and compilation of scores, Q&A computer software was employed and the data were organized on a personal computer.
Data Organization

When the data collection was completed, the total battery test scores for \( n = 9 \) OOYF, \( n = 21 \) YF, and \( n = 111 \) RK students were entered into the Western University VAC system using the Statistical Package for the Social Sciences (SPSS) (Norusis, 1990) program. This system presented the data in a tabular form and allowed for the more complex analyses of data required for a study of this kind.

Data Analysis

To analyze the accumulated data, the SPSS software was accessed through the VAC system at Western Michigan University. "SPSS is a comprehensive tool for managing, analyzing, and displaying data" (Norusis, 1990, "Preface").

The first inferential procedure used was an analysis of variance (ANOVA). This initial use of the ANOVA was employed because it involved a procedure for testing the hypothesis that \( K \) population means are equal while analyzing one independent variable with two or more levels (RK, YF, OOYF) (Hinkle, Jurs, & Wiersma, 1988). The level of significance was set at .05. This initial analysis indicated that the \( F \) ratio of .6909 did not exceed the critical value of approximately 3.07 at the \( p = .05 \). Because of this finding, the null hypothesis could not be rejected.

A more thorough review of the assumptions underlying the ANOVA, however, revealed that the fourth assumption may have been violated. The fourth assumption states that the variances of the
populations are equal. This assumption is referred to as the assumption of homogeneity of variance and, along with the normality assumption and the null hypothesis, provides that the sampled populations have the same shapes, means, and variances (Hinkle et al., 1988).

Hinkle et al. (1988) stated, "Generally, failure to meet these assumptions changes the Type I error rates" (p. 347). Glass et al. (cited in Hinkle et al., 1988), in an article titled, "Consequences of Failure to Meet the Assumptions Underlying the Use of Analysis of Variance and Covariance," stated, "If the population variances differ, there may be a serious problem when sample sizes are unequal. If the larger variance is associated with the larger sample, the F test will be too conservative" (Hinkle et al., 1988, p. 347).

In this case the larger variance .8488 was associated with the larger accessible population size RK = 111.

To correct the violation of this assumption, a random sample of the RK population numerically closer in size to the YF population was needed. Using the SPSS system, 20 random samples were taken of the RK population. The mean and standard deviations of these 20 samples were calculated. A matrix was established using the N, mean, and standard deviations of the OOYF and YF, and the new N-equals-20 mean and standard deviation of the RK.

A second ANOVA was then performed using SPSS. Anticipating that there might be a statistically significant F value made it necessary to conduct the Tukey range test for multiple comparisons between means. The analysis of variance indicated that the F ratio of 3.2237 did exceed the critical value at the $p = .05$, which meant that a difference between
the means of the three groups did exist. The Multiple Range Test provided further verification. This test indicated that the YF and RK means were significantly different at the $p = .05$ level. After reviewing the data, a WMU statistician wrote, "The difference between your YF and RK groups is worthy of comment."

The Tukey, Newman-Keuls, Tukey/Kramer, and Scheffé post hoc multiple comparison tests may be employed to determine which means are significantly different after a significant $F$ ratio has been found in the ANOVA. Of the four tests, the Tukey and the Newman-Keuls methods are applied to identify which pairs of means differ when the group sizes are equal. The Newman-Keuls method considers the differences between the ranked means (Hinkle et al., 1988). Because the means were not ranked in this analysis, the Tukey method was utilized.

In this chapter several topics relative to the actual study were reviewed. The type of research conducted and the hypotheses tested were defined. The subjects, the data relevant to these subjects, and the measurement instrument employed to produce these data were explained in detail.

Chapter IV, Data Analysis and Findings, provides an in-depth interpretation of the data analysis and the subsequent findings relative to the study.
CHAPTER IV
DATA ANALYSIS AND FINDINGS

In this chapter the data will be interpreted and compared to the expectations of the study in narrative and table form. It is imperative to keep in mind that this was a definitive study designed to examine the relationship between the achievement of academic parity and placement in a transition (Young Fives) class. Sections presented in this chapter will include data interpretation and a summary—a section that contains a review of the hypotheses in relation to the statistical analysis and interpretation.

Data Interpretation

In Table 1 the grade level relationship of the three groups of students is displayed.

Table 1
Grade Level at Each Year

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>YF</td>
<td>21</td>
<td>YF</td>
<td>RK</td>
<td>1</td>
<td>2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>RK&lt;sup&gt;1&lt;/sup&gt;</td>
<td>111</td>
<td>RK</td>
<td>1</td>
<td>2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>OOFYF</td>
<td>9</td>
<td>RK</td>
<td>1</td>
<td>2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<sup>a</sup>Indicates the year in which that group of students took the CAT.

32
Those students who were screened into the Young Fives (YF) program in 1988 spent the 1988-89 school year in the developmentally structured Young Fives program. They then proceeded on a regular primary-grade track. Those students who were screened into the Young Fives program but whose parents opted them out of the program and those students who were screened into the regular kindergarten program are represented in the next two rows. Both of these groups began a regular primary-grade track in 1988.

The mean grade equivalents and standard deviations of the total battery test scores on the CAT are presented in Table 2. The mean grade equivalent scores differed among the three groups. The OOYF students had the highest score of 3.0778. The RK students were the next highest with a score of 3.0189. They were followed by the YF with a score of 2.7762. The standard deviations for the three groups were RK .9213, OOYF .6160, and YF .8803. The total group had a mean grade equivalent score of 2.9865 and a standard deviation of .8985.

The first ANOVA was conducted to ascertain the differences among the three groups and to determine, if the differences existed, whether they were statistically significant in testing the hypothesis. Table 3 presents the ANOVA for the total battery test scores.

This analysis indicated that the F ratio did not exceed the critical value at the .05 level of significance. This information led to the rejection of the null hypothesis, which stated that the mean total battery test scores would be equal. However, a concern was raised (please see
Table 2
Mean Grade Equivalent Scores and Standard Deviations of the Total Battery on the CAT

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>OOYF</td>
<td>9</td>
<td>3.0778</td>
<td>.6160</td>
</tr>
<tr>
<td>YF</td>
<td>21</td>
<td>2.7762</td>
<td>.8803</td>
</tr>
<tr>
<td>RK</td>
<td>111</td>
<td>3.0189</td>
<td>.9213</td>
</tr>
<tr>
<td>Total</td>
<td>141</td>
<td>2.9865</td>
<td>.8985</td>
</tr>
</tbody>
</table>

Table 3
Initial Analysis of Variance of the CAT Total Battery Test Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F ratio</th>
<th>F prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td>1.1205</td>
<td>.5602</td>
<td>.6906*</td>
<td>.5029</td>
</tr>
<tr>
<td>Within groups</td>
<td>138</td>
<td>111.9039</td>
<td>.8109</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>140</td>
<td>113.0244</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p > .05, \( \alpha \) = 3.07.

Chapter III, Data Analysis) about the differences in the accessible population sizes. To correct the violation of this assumption, a random sample of the RK population numerically closer in size to the YF population was needed.

This concern prompted a decision to randomly select 20 samples from the relatively large RK population and compute the mean and...
standard deviations of the 20 samples. The ANOVA of this new mean and standard deviation and the means and standard deviations of the OOYF and YF, as shown in Table 4, indicated that a statistically significant difference did exist between the means of the three groups.

Table 4
Analysis of Variance of the CAT Total Battery Test Scores With 20 Random Samples of the RK

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F ratio</th>
<th>F prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td>4.6843</td>
<td>2.3421</td>
<td>3.2237</td>
<td>.0488</td>
</tr>
<tr>
<td>Within groups</td>
<td>47</td>
<td>34.1473</td>
<td>0.7265</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>38.8316</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As this analysis confirms, the F ratio of 3.2237 suggests that the critical value at the $p = .05$ had been exceeded. Therefore, the null hypothesis could be rejected.

"After the hypothesis is rejected, we are still faced with the problem of deciding which pairs or combinations of means are not equal" (Hinkle et al., 1988, p. 367). Post hoc multiple-comparison tests are procedures that were developed to determine which means differ significantly. In this analysis the Tukey post hoc test was administered. The results, as shown in Table 5, indicated that the RK and YF total battery grade equivalent test scores were significantly different at the .05 level.
This difference causes the second operational hypothesis, which stated that the YF scores would be equal to the RK scores, to be rejected.

Table 5
Multiple Range Test Tukey Procedure Matrix

<table>
<thead>
<tr>
<th>Mean</th>
<th>Group</th>
<th>Group 2</th>
<th>Group 1</th>
<th>Group 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7762</td>
<td>Group 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0778</td>
<td>Group 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4520</td>
<td>Group 3</td>
<td>*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Denotes pairs of groups significantly different at the .05 level.

Because the accessible population of the OOYF is small and significantly different from that of the other two groups (9 versus 20/21), making inferences about OOYF student performance on the CAT is inappropriate. Keeping these differences in mind, the researcher rejected the two hypotheses related to the OOYF students as legitimate considerations for this study.

Summary

Four hypotheses were tested in this study. Of the three operational hypotheses, Hypotheses 1 and 3 were unacceptable for use in this group. The second operational hypothesis was rejected. The mean total battery grade equivalent test scores for the RK students referred to in
this hypothesis were found to be significantly higher than those scores of the YF students.

The null hypothesis, which stated the mean total battery test scores on the CAT in all three groups would be equal, was also rejected.

The findings of this study indicate that in this particular school student academic achievement was not positively affected by placement in a Young Fives program. Academic parity had not been attained.

In Chapter V, Conclusions and Recommendations, the research hypotheses are restated and reviewed. The remainder of the sections relate the findings to the expectations of the study, discuss the limitations of this particular study, and suggest the next steps for further research.
CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This dissertation was written in response to concerns that were raised as to the effectiveness of a transition program. The specific purpose of the study was to determine if a relationship between the achievement of academic parity and the placement of Young Five children in a transition program existed.

Research Hypotheses

The data analyzed for this study were gathered from the standardized tests given to three groups of students: those students who had been screened into the Young Fives (YF), developmental kindergarten; students who had been screened into the program but whose parents had opted them out of Young Fives (OOYF); and those students who had been screened into regular kindergarten (RK). Four hypotheses had been selected for consideration, three operational hypotheses and a null hypothesis. The three operational hypotheses made inferences about the relationships of the three student groups’ mean scores on the total battery grade equivalent portion of the California Achievement Test (CAT). The first hypothesis, that the mean total battery test scores on the CAT for those who participated in the Young Fives (YF) will be greater than the mean total battery test scores on the CAT for those who opted out of Young Fives (OOYF), and the third hypothesis, that
the mean total battery test scores on the CAT for those who opted out of Young Fives (OOYF) will be less than the mean total battery test scores on the CAT for those who participated in regular kindergarten (RK), were found to be unacceptable for use in this study because of the inadequate accessible population size of the OOYF group. The second operational hypothesis, that the mean total battery test scores on the CAT for those who participated in the Young Fives (YF) will be equal to the mean total battery test scores on the CAT for those who participated in regular kindergarten (RK), was rejected. The only discovery in the data analysis of statistical significance indicated that the RK students' performance on the CAT was higher than the YF students. In this particular study, this analysis is interpreted to mean that those students who participated in the Young Fives program, the addition of an extra year of school, did not attain academic parity with their age mates who participated in the regular kindergarten program (RK).

The initial statistical procedure used to determine the existence of any statistical significant differences between the group's CAT mean scores was the analysis of variance (ANOVA). This procedure revealed no significant differences. However, because of concerns relative to one of the group's accessible population size, a second ANOVA was performed after 20 random samples of the larger RK accessible population were taken. This ANOVA, coupled with a Tukey multiple-range test, did indicate a statistically significant difference between the means of two of the groups, the YF and RK. This difference is discussed in the next section, Findings Relative to the Study.
Findings Relative to the Study

As indicated in the preceding paragraph, the data collected and analyzed for this study indicated a statistically significant difference between the mean test scores of those students who participated in the Young Fives program and those who participated in the regular kindergarten program. The mean test scores of the YF students were lower than the RK students' mean test scores.

District educators had developed the Young Fives program to address a major concern regarding the vast range of readiness that was being exhibited by children of school entry level age. This wide range included emotional, social, and intellectual development. A portion of the anticipation devoted to this program expected that this extra or transition year would enable students to attain academic parity with their age mates. The results of this study do not confirm this expectation.

The statistically significant findings of this study, which raise doubts as to the contributions to the academic success of those students who participated in a Young Fives developmental program, also serve to highlight the serious concerns raised by those critics of extra-year programs. "Clearly, the experience of spending another year in school before 2nd grade has no long-term benefits" (Slavin et al. 1992-1993, p. 13). "Controlled studies do not support the benefits claimed for extra-year programs, however, and negative side effects occur just as they do for retention in later grades" (Shepard & Smith, 1990, p. 87). "The children in transitional rooms are often labeled as 'slow,' an image that may stay with them their entire academic career (Peck, McCaig, &
Sapp, 1988; Bredekamp & Shepard, 1989)" (Gaskill, 1993, p. 3).

Freeman (1990), associate professor at Ohio State University, wrote an article in the May issue of Young Children, a portion of which referred to research that Shepard and Smith did in 1986. This was a review of research on children who spent 2 years in school prior to the first grade. It concluded, "Children in these programs show virtually no academic advantage over equally at-risk children who have not had the extra year. . . . There is often an emotional cost associated with staying back" (p. 85).

In the same article, Freeman (1990) noted, "Similar results have indicated that retained children were still behind their nonretained counterparts on measures of achievement during elementary school, and, therefore, the benefits of retention have been questioned (May & Welch, 1984)" (p. 31).

Although the results of this study address the inability of students in this particular developmental program, Young Fives, to attain academic parity with their age mates, the research cited extends that concern to the overall effectiveness of extra-year programs in general. In the next section of this chapter, recommendations for further research will be made for those districts and individuals who believe that developmental programs should be continued.

Recommendations for Further Study

The recommendations for further study of the effectiveness of developmental programs include an evaluation process, review of developmentally appropriate kindergarten curriculum, and the collection and
analysis of data representative of the affective as well as the cognitive portions of the developmental process. It would also be beneficial if the academic achievement of the students involved in this study were recorded and monitored, at least through the remainder of their elementary career. Comparisons of the achievement levels of these students and other students involved in this district's developmental program would be advantageous.

Future studies in this area must also give careful consideration to the manner in which children are screened into these programs, particularly the use of screening tests.

For years the evaluation of programs has often been confined to the administration of achievement or assessment tests to students, following a defined learning period. Examples of this type of evaluation in Michigan include the Michigan Educational Assessment Program, the California Achievement Test, and the Iowa Test of Basic Skills. In her doctoral dissertation, Mohr (1990/1991) stated:

> Evaluation process, procedures, and implementation should become a required component to educational program design, development, and implementation. The evaluation plan should be required at the time the program is proposed. Planning and implementation of evaluation processes and procedures are necessary to determine whether or not the program met the initial proposed outcomes and expectations. (pp. 62-63)

Authentic evaluation of educational programs which employ appropriate evaluation methods, for example, the 30 standards set forth in the Standards for Evaluations of Educational Programs, Projects, and Materials (Joint Committee on Standards for Education Evaluation, 1981), should provide invaluable information. This information could
save time, money, and human resources.

Reviewing the Young Five's Goals and Outcomes (Appendix A) indicates that there is evidence that the curricular orientation leans more toward the developmental, child-centered approach rather than the academic, content-centered approach of the Kindergarten Outcomes (Appendix B). For example, the Young Five's outcomes suggest that the child "develop a positive attitude toward learning," "enhance learning skills," "expand logical thinking skills," "expand verbal communication skills," "experience a sense of self-esteem," and "use all senses to increase physical capabilities."

In the article Freeman (1990) wrote for Young Children, she supported the importance of developing this type of curriculum, a curriculum that is designed "to meet the needs and interests of the child rather than forcing young children to meet the demands of 'pushed down' curriculum" (p. 33). "Play, creativity, curiosity, self-esteem, and interest must be returned to kindergarten classrooms. In addition, research is needed to determine the effects of both developmentally appropriate and inappropriate curricula on children" (p. 33).

As the results of this study are reconsidered, it is important to keep in mind that the promotion of the three R's was not the sole purpose of this rural school district's Young Fives developmental program. Attending to the needs of the child's socioemotional and physical growth were also major components. A complete assessment as to the effectiveness of the program should also include measurement of these areas.

This study involved three groups of students who were approximately the same age and all eligible to start a regular kindergarten
program at the same time. To determine whether the observed effects of the study were "true" effects, a replication of this research is recommended.

Replication is the process of repeating a research study with a different group of subjects using the same or similar methods. Results of a study are more "significant"—in the sense of inspiring confidence that they represent differences or relationships in the population—if a new study yields similar results, or if the present study repeats the findings of past research. (Borg & Gall, 1983, p. 383).

Test result data from the students in this rural district who began school in the years following 1988 could be analyzed in the same manner.

An important component of this program and one that must be reviewed in future studies is the use of the Gesell School Readiness Test. Is it appropriate to use the Gesell test as one of the main determinators for classifying a student?

In an article written for Educational Leadership, Meisels (1989) wrote about high-stakes testing.

The use of readiness or achievement tests for the classification, retention, or promotion of students qualifies them as high-stakes tests: "Those whose results are seen—rightly or wrongly—by students, teachers, administrators, parents or the general public, as being used to make important decisions that immediately and directly affect them" (Madaus, 1988, p. 87). (p. 17)

Further on in his article, Meisels (1989) reviewed the Gesell test which he considered to be a high-stakes test.

Problems with the Gesell test (Haines et al., 1980) are extensive and have been described at length elsewhere. The test's principal fault lies in the discrepancies between its stated purposes and the empirical evidence available to support those statements. Its developers claim that it can identify children who are at high-risk for school failure and that it can be used to determine when children should begin
school, which children should be promoted, and which should be retained in grade. Clearly, the Gesell is a high-stakes test.

Unfortunately, there are no data to support these assertions. In a study that paradoxically claims to validate the Gesellian concept of developmental age, Wood, Powell, and Knight (1984) found that more than half of those kindergarten-age children considered "ready" by the Gesell did not have successful kindergarten experiences, as reported by their classroom teachers. A second study by May and Welch (1984b) also revealed major problems with the Gesell's accuracy and found no support for the effectiveness of an extra-year program recommended on the basis of Gesell test results. (p. 18)


Shepard (1992) provided this insight in her article "Psychometric Properties of the Gesell Developmental Assessment: A Critique": "Given the dogmatism in current practices [screening of students into programs] and the seriousness of extra year placement decisions, it is important to be unambiguous about the technical limitations of the Gesell test" (p. 52).

In the March 1989 edition of Young Children, Bredekamp and Shepard commented on the predictability of the Gesell test. "In the case of the Gesell test, predictive correlations from .18 to .64 have been reported (Kaufman & Kaufman, 1972; Popovics, 1982). Using even the most favorable data, the Gesell test misidentified 1/3 to 1/2 of children said to be unready" (p. 16).

The concerns generated by individuals who have spent a great deal of time researching this subject are noteworthy and should be taken into consideration in follow-up studies.
Although the findings of this study did not substantiate the academic expectations of the Young Fives program, data are insufficient to warrant the discontinuance of the program. However, if this program or similar developmental programs are to be continued or established, serious consideration should be given to in-depth research of all facets of the developmental approach, proper evaluation of the program, screening methods, and review of the professional research that has been conducted in this area.
Appendix A

Young Fives Goals and Outcomes
Cognitive Growth

1. To develop a positive attitude toward learning:
   a. to be successful in learning activities
   b. to make discoveries
   c. to take risks
   d. to continue with a task after making a mistake

2. To enhance learning skills:
   a. to ask questions
   b. to use perceptual/motor skills, such as figure/ground discrimination, part/whole discrimination, and configuration
   c. to explore and investigate something new in the environment
   d. to recall experiences

3. To expand logical thinking skills:
   a. to identify similarities and differences among objects (e.g., shapes, colors, sizes, textures)
   b. to sort objects according to common characteristics (e.g., things that look alike, things that belong together)
   c. to identify common characteristics of objects and events
   d. to arrange events in a sequence (e.g., what happened first, second, and last)
   e. to arrange objects in a series (e.g., smallest to largest)
   f. to recognize patterns and be able to repeat them
   g. to explain simple cause-and-effect relationships on the basis of concrete experiences
   h. to identify solutions to problems

4. To acquire concepts and information leading to a better understanding of the immediate world:
   a. to demonstrate an understanding of time concepts (sequence of the day's activities; yesterday, today, and tomorrow)
   b. to use concepts of quantity, volume, and mass to solve problems
   c. to identify and use the names of objects and things in the environment (e.g., plants, animals, people)
   d. to make comparisons (e.g., more/less, larger/smaller, taller/shorter)
   e. to identify and use words to describe the characteristics of objects (e.g., colors, sizes, shapes)
   f. to identify the roles people play in society (e.g., family members, doctors, construction workers, grocery clerks)
   g. to identify where objects exist in space (below, inside, under)
   h. to use numbers in correct sequence
   i. to match one-to-one when counting
5. To expand verbal communication skills:
   a. to listen to a story and explain what happened
   b. to recall words in a song or finger play
   c. to identify word order and sentence patterns
   d. to follow simple directions
   e. to use words to explain ideas and feelings
   f. to talk with other children during daily activities
   g. to use correct grammar
   h. to participate in group discussions

6. To acquire beginning written communication skills:
   a. to make increasingly representational drawings
   b. to move from scribbling to using some letters and numbers
   c. to recognize written names
   d. to print one’s name
   e. to demonstrate an interest in using writing tools for a purpose (e.g., making signs, sending letters)

**Socio-Emotional Growth**

1. To experience a sense of self-esteem:
   a. to identify oneself as a member of a specific family and cultural group
   b. to demonstrate confidence in growing abilities
   c. to demonstrate increasing independence
   d. to stand up for one’s rights

2. To exhibit a positive attitude toward life:
   a. to demonstrate interest and enthusiasm in classroom activities
   b. to try new activities
   c. to demonstrate trust in adults
   d. to be able to separate from parents
   e. to participate in routine activities easily

3. To demonstrate cooperative, pro-social behavior:
   a. to seek out adults and children
   b. to identify and appreciate differences
   c. to accept some responsibility for maintaining the classroom environment
   d. to help others in need
   e. to respect the rights of others
   f. to share with others and be able to take turns
   g. to interact positively with others
   h. to work cooperatively with others on completing a task
Physical Growth

1. To enhance large muscle skills:
   a. to use large muscle skills with confidence
   b. to walk up and down steps
   c. to run with increasing control over direction and speed
   d. to jump over objects without falling
   e. to use large muscles for balance (e.g., walk on tiptoe, balance on one foot)
   f. to catch a ball or bean bag
   g. to throw an object in the intended direction
   h. to ride and steer a tricycle
   i. to climb up or down equipment without falling

2. To enhance and refine small muscle skills:
   a. to use small muscle skills with confidence
   b. to coordinate eye and hand movements (e.g., assemble puzzle pieces of increasing difficulty, string beads, use scissors)
   c. to use small muscles to complete tasks (e.g., build with blocks, stack graduated cylinders, place pegs in pegboards)
   d. to use small muscles for self-help skills (e.g., pour without spilling, use eating utensils, zip and button)
   e. to manipulate objects with increasing control
   f. to use writing and drawing tools with increasing control and intention

3. To use all senses to increase physical capabilities:
   a. to identify similarities and differences in sounds
   b. to identify how things are visually alike and different
   c. to identify foods by taste
   d. to identify how things smell
   e. to balance with increasing skills
   f. to respond to rhythm
   g. to use directionality
   h. to refine eye-hand coordination
Appendix B

Kindergarten Outcomes
KINDERGARTEN READING OUTCOMES

Decoding and Phonic Skills
1. Recognize and name colors
2. Match a part to its whole
3. Match words-colors-common labels
4. Identify and complete a sequence
5. Match capital to lower case letters
6. Identify capital and lower case letters
7. Recognize initial consonants
8. Discriminate among initial consonant sounds
9. Identify same/different words and word sequences

Comprehension and Vocabulary Skills
1. Form categories
2. Match picture to oral statement
3. Identify a sentence describing a picture orally
4. Define words using oral language and context clues
5. Complete a sentence using context clues orally
6. Identify sequence of events
7. Listen for information: Determine sequence of events
   a. recall details
   b. main ideas
   c. draw conclusions
8. Predict outcomes
9. Identify the cause of an event
10. Recognize rhyming words
11. Recognize the 12 basic sight words

Study Skills
1. Follow two-or three-step directions
2. Recognize alphabetical order of the letters
3. Recognize left to right, top to bottom orientation
KINDERGARTEN MATH OUTCOMES

Numbers
1. Use one-to-one matching to determine which group is more, less, or matching
2. Given any number through ten, show that many objects
3. Identify the greater or lesser of two numbers between zero and ten
4. Identify how many objects are in a group of zero through ten
5. Recognize and name the numbers zero through ten
6. Put numerals through ten in order
7. Write the numerals zero through ten
8. Count to 25
9. Identify what number comes before or after another number when given a number 0-10
10. Identify the number that comes between two given numbers from 0-10
11. Use the idea of addition
12. Use the idea of subtraction
13. Name the symbols plus, minus, and equal (+, -, =)

Geometry
1. Name shapes: circle, triangle, rectangle, square
2. Identify objects that are alike in shape, size, or color
3. Make comparisons of objects (more/less, larger/smaller, taller/shorter)

Measurement
1. Identify long and short
2. Use non-standard units for measuring
3. Recognize clock and term o’clock
4. Recognize calendar
5. Understand terms shortest, longest, smallest, largest, before and after

Problem Solving
1. Recognize and continue patterns of objects
2. Arrange objects in a series (smallest/largest, longest/shortest, tallest/shortest)
KINDERGARTEN LANGUAGE ARTS OUTCOMES

Oral Language Skills
1. Describe experiences
2. Recall stories
3. Dictate sentences and stories
4. Participate in discussions
5. Ask and answer questions
6. Participate in creative dramatic activities
7. Memorize songs and simple poems
8. Say their complete name
9. Express thoughts and feelings
10. Speak in complete sentences
11. Develop good listening comprehension

Identify Following Spatial Relationships
1. First/Last
2. First/Next/Last
3. Left/Right
4. Top/Middle/Bottom
5. In Front/Behind
6. In Front Of/In Between/Behind
7. Near/Far
8. Big/Little
9. In/Out
10. Up/Down
11. Around/Through
12. Around/Under
13. Above/Below
14. Over/Under
15. On/Off
16. Front/Back
17. First...Fifth

Pre-handwriting - Spelling
1. Assemble a variety of manipulative activities
2. Develop eye-hand coordination (clay, pegs, beads, cubes, blocks, puzzles, etc.)
3. Place colors in a given space
4. Cut on a given line
5. Paste neatly
6. Trace and draw lines and shapes
7. Trace and write letters
8. Print their name correctly
9. Show interest in spelling simple words (cvc)
10. Recognize left-to-right, top-to-bottom orientation on paper

Creative Beginning Writing
1. Will enjoy looking at books
2. Will express interest in listening to stories and poems
3. Will creatively express something about self, a situation or a story
4. Will use various mediums (drawing with markers, crayons, paints, etc.)
KINDERGARTEN SOCIAL STUDIES OUTCOMES

**Personal Relationships**

1. Identify how people help one another in their family, school, and community
2. Identify and classify behavior which is appropriate for school, both indoors and outdoors
3. Develop an awareness of the importance of manners
4. Develop an awareness of safety rules at home, school and play

**Cultural**

1. Recognize the importance and uniqueness of each person and recognize ways in which people are alike and different
2. Develop an awareness of how Native Americans and other cultural groups influence society
3. Develop an awareness for the traditions, customs, and cultures of holidays

**Geography**

1. Develop an awareness of the world and Earth and how to care for our own environment
2. Recognize a map and a globe

**History**

1. Develop an awareness of the United States regarding people, symbols, and places
KINDERGARTEN SCIENCE OUTCOMES

I. Earth Science
   A. The Seasons:
      1. Identify four seasons of the year
      2. Communicate that living things change from season to season
      3. Recognize fall, winter, spring and summer
      4. Give examples of events and changes that happen during each season
   B. Weather:
      1. Recognize and describe kinds of weather
      2. Communicate that water as rain and snow is a component of weather
      3. Determine the need for predicting the weather
      4. Communicate that wind is moving air
      5. Infer that the speed of wind affects weather
   C. Space:
      1. Identify a globe as a model of Earth
      2. Recognize that the sun, Earth and moon are in space
      3. Identify ways we can learn about space
      4. Communicate that people can go out and work in space

II. Physical Science
   A. Matter:
      1. Recognize that the senses are used to learn about objects
      2. Recognize changes in air, water and land
   B. Forces and Energy:
      1. Infer that body parts move
      2. Infer that the body exerts energy

III. Life Science
   A. The senses:
      1. Identify parts of the body that are senses
      2. Describe what each sense allows the body to do
      3. Communicate that each of the senses is a way to learn
      4. Compare and sort objects by color, size and shape
      5. Recognize and describe different sounds
      6. Identify objects by the way they feel
      7. Identify and compare objects by association to their smell
      8. Recognize how objects would taste
B. The Body:
1. Understand the body as a whole in relationship to its parts
2. Develop an awareness of their body in the space around them
3. Identify habits that are healthful for the body
4. Observe how people grow and change
5. Relate that as people grow, they become more skillful
6. Identify emotional feelings
7. Learn to develop appropriate ways to express feelings

C. Animals:
1. Identify and compare various kinds of animals
2. Recognize that animals have different body coverings
3. Describe ways animals move
4. Communicate that animals are living things
5. Recognize some needs of living things
6. Generalize that animals change as they grow
7. Communicate that animals reproduce their own kind

D. Plants:
1. Identify plants as living things
2. Recognize differences between plants
3. Infer that many plants grow from seeds
4. Recognize and compare differences in seeds
5. Explain that seeds of plants reproduce like kinds

E. Caring For Our World:
1. Recognize that the environment has living and non-living things
2. Infer that living things get what they need to survive from each other and from their environment
3. Communicate ways to conserve energy and common natural resources
4. Demonstrate a responsible attitude toward conservation of the environment
Appendix C

Approval Letter From the Human Subjects
Institutional Review Board
Date: April 30, 1993
To: Douglas McCall
From: M. Michele Burnette, Chair
Re: HSIRB Project Number 93-04-01

This letter will serve as confirmation that your research project entitled "The effect of a transition class: Young fives, on academic parity" has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: April 30, 1994

xc: Jenlink, EL
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